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TECHMART 91

A CATALOGUE OF TECHNOLOGY OPPORTUNITIES FOR MANUFACTURING INDUSTRY

Produced by

Industrial and Technological Information Bank (INTIB)

in co-operation with

The Institute of Scientific and Technical Information of China

and The Technology Exchange, United Kingdom
The document has not been edited.

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4. Electrical
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Technology Requests

Category
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2. Light industrial machinery
3. Metal forming and treatment
4. Electrical
5. Electronics/optical

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INTRODUCTION

This catalogue has been compiled by The Technology Exchange from material supplied by the Industrial and Technological Information Bank (INTIB)/UNIDO on the technology offers and requests of both the developed and the developing countries.

Most of the entries have been co-ordinated by the UNIDO/INTIB national network in each country and by The Technology Exchange Ltd and ISTIC, the Institute of Scientific and Technical Information of China who are hosts in 1991 to the first UNIDO 'TECHMART' Fair in Beijing.

The catalogue is not simply a guide to the Beijing Fair, although many of the organisations who have submitted items for it will be attending the Beijing Fair as exhibitors or visitors, but it is intended primarily to be used as a handbook to stimulate contacts between technology sources and those with technology needs. Contact may be made by letter, telephone, telex or by fax and we have included all these details in the directory section at the back of the catalogue.

We hope that you will use this information to make contact either directly or via INTIB, but we do ask that you should only request information on licence or joint venture offers if you, or your organisation, has a positive need for the technology and could have access to the necessary resources to employ or to manufacture and market the item on offer. When making requests to the source you should describe your organisation, its size, products and resources, both human, physical and financial, and state your intentions with regard to both the manufacture and marketing of the product or process, this will enable the source of the offer to decide which responding organisations are best placed to exploit the technology in each region.

Before any confidential technical information is sent out by the source to any person or organisation, it may be necessary to obtain a signature on a confidentiality agreement, particularly if the item is not fully protected by patent or otherwise publicly available.

The entries in the catalogue are divided into five broad industrial sectors:

1. **Chemical Engineering**: The production and processing of chemicals, pharmaceuticals, rubber and plastics.

2. **Light Industrial Machinery**: Dies and tooling for ceramics, papermaking, packaging and weighing.

3. **Metal Forming and Treatment**: Casting, welding and heat treatment.

4. **Electrical**: Domestic electrical appliances.
5. **Electronics/Optical**: High grade microcomputers, electro/optical instruments, semi-conductor devices, materials and equipment. Medical electronics, lasers and photo-typesetting systems, infra-red sensors and telecommunications.

In compiling the catalogue we have interpreted these categories as broadly as possible to include as many of the offer and request profiles as we were able in the brief period available for editing, compiling and publishing this catalogue.

Many of the entries were translated into English at source and the quality of the translations have varied widely. We have tried to interpret the meaning of those entries where the translations were ambiguous, since time does not permit the necessary queries to be made to and received from each source, but we apologise if any entries have been misinterpreted as a result.

It is recommended that all enquiries made should seek a full description of the technology being offered or requested and neither UNIDO, ISTIC nor The Technology Exchange can accept any responsibility for any misunderstandings or loss incurred as a result of using this catalogue.

The first part of the catalogue is devoted to technology offers and these are coded into licence (L), joint venture (J) or patent sales (S). The second part is devoted to requests for technology and the same codes have been applied.

In many cases both offers and the requests involve the purchase of equipment and the need for technical assistance. Although the coding does not specifically indicate this, you should bear this possibility in mind when reading this catalogue.

Perhaps more important, we have indicated the stage of development of each technology offered or requested where this has been made known to us. A full description of the codes used is given in the following section.
EXPLANATION OF CODING SYSTEM

At the head of each entry you will see the following:–

<table>
<thead>
<tr>
<th>Ref No</th>
<th>Org No</th>
<th>Cat</th>
<th>Status</th>
<th>Offer</th>
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</table>

**Ref No:** The unique catalogue reference number given to each item which should be quoted on each enquiry.

**Org No:** (eg 21.15) Gives the identity of the organisation from which the item originates and should be quoted on each enquiry. The first two digits (eg 21.) indicate the intermediary to whom enquiries should be addressed. The full contact address can be found in the directory at rear of catalogue. The second two digits (eg .15) indicate the name of the original source. See "Index of Organisations by Number".

**Cat:** indicates the industrial category as explained in the introduction:

1 = Chemical engineering  
2 = Light industrial machinery  
3 = Metal processing and treatment  
4 = Electrical equipment  
5 = Electronics/optics/computer

**Status:** indicates the stage of development of the technology or process:–

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>P</td>
<td>Patent or design only</td>
</tr>
<tr>
<td>M</td>
<td>Laboratory model</td>
</tr>
<tr>
<td>W</td>
<td>Working prototype</td>
</tr>
<tr>
<td>U</td>
<td>Pre-production units available</td>
</tr>
<tr>
<td>F</td>
<td>In current production</td>
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<tr>
<td>C</td>
<td>Commercialised</td>
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</table>

**Offer** indicates the type of agreement or co-operation being offered or sought:–

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>L</td>
<td>Manufacture under licence</td>
</tr>
<tr>
<td>S</td>
<td>Design and/or patent for sale</td>
</tr>
<tr>
<td>J</td>
<td>Joint venture offer</td>
</tr>
</tbody>
</table>

**NOTE:** Codes L and J may also include the supply of manufacturing equipment and technical assistance.
OFFERS

CATEGORY 1 - CHEMICAL ENGINEERING:

Ref No. Org.No. Cat. Status Offer
405001 1.02  1   L
Cigarette filter tow production A complete production line for cigarette filters from a specialised institute developing and operating filter production lines up to 2,000 tons/year. A technical service can be provided.

Ref No. Org.No. Cat. Status Offer
805002 1.02  LJ
Melt blown systems for microfiber non-wovens Required for integrating with production of cigarette filters and for sanitary products such as diapers, tablecloths, surgeons gowns etc from polypropylene, polyester and polyamide.

Ref No. Org.No. Cat. Status Offer
305003 1.04  1   L
Aniline production process using nitrobenzene and hydrogen gas as raw material. Nitrobenzene is reduced by hydrogen gas with catalyst to produce aniline, one of the main organic raw materials. It is the main raw material to produce MDI dyestuff, medicine and agricultural chemicals. The process gives high quality and efficient treatment for waste effluents with energy saving.

Ref No. Org.No. Cat. Status Offer
705004 1.05  1   L
The technology for producing chemical gypsum from treating the waste of phosphoric acid extraction with washing, purification, separation, drying, dewatering. The quality of product can reach national architectural gypsum standard GB9776.

Ref No. Org.No. Cat. Status Offer
205005 1.06  1   L
Manufacture of liquid flame-retardant, type LFP-86 An intermediate urea phosphate is manufactured by chemical reaction, cooling crystallisation and centrifugation using wet-process phosphoric acid and urea as raw materials. Through polymerisation and neutralisation of intermediate, an all clear liquid flame retardant is produced.

Ref No. Org.No. Cat. Status Offer
605006 1.06  1   L
Assessment of phosphate rock for the manufacture of wet-process phosphoric acid (WPPA) Filter acid containing 28% P205 is prepared by dihydrate process and then fed to a forced circulation vacuum evaporator to produce concentrated phosphoric acid containing 50%-54% P205. Two sets of phosphoric acid facilities are available with the capacity of 10 Kg P205/d and 36 Kg P205/d respectively. The evaporater is capable of treating 160 Kg P205/d.

Ref No. Org.No. Cat. Status Offer
105007 1.06  1   L
Residue chlorine analyser The instruments employs a patented polarographic cell with tubular electrodes. The analysed water is continuously mixed with KI solution in proportion. The free chlorine and chemical chlorine liberate iodine from KI. The liberated iodine is detected by the polarographic cell (Chinese Patent No 86200528). Use for the analysis of the residue chlorine level in water. Small dimensions, high sensitivity, continuous on-line analysis.
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<td>505008</td>
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The new type high efficiency cyclones and their system optimisation. This technique includes the high efficiency cyclones with new fashion structure and the software of system optimisation consisted of parallel operation or series operation. Optimisation design can be completed by the electronic computer according to the technological condition of practical productive procedure and it can predict the main performance of separation system such as separation efficiency and pressure drop and so on.

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Technology of distillation and absorption used new corrugated packings. Distillation and absorption are one of the most important unit operation in the chemical, refining, petrochem, chem fertiliser and other industries. It can increase the throughput and product quality, save energy, further to result in excellent economic benefits.

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B302Q EB-4 series Co-Mo sulphur-tolerant water gas shift spherical catalyst and sulphiding methods have been used in more than 300 ammonia plants and are adaptable to ammonia plants using sulphur containing coal or heavy oil as raw material. These catalysts have high activity at low temperature high crushing strength, high sulphur tolerance long service life and low price. The sulphiding methods can increase the activity of the catalyst about 10%.

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Deoxidised hot water unit for tire factory. The hot water unit is designed for curing system of tire production. Since the direct contact heater is selected, both heating and deoxidising process can be accomplished simultaneously. The supplied hot water is controlled in stable temp and pressure and the residue dissolved oxygen is below 0.02 ppm.

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ECSS - engineering chemistry simulation system. Financed by the natural science foundation of China, is a large scale combined software. There are about 140,000 fortran -77 sentences in all. A selected set of ECSS most - used features running on various PC or VAX. It includes 11 large software packages: physical properties, single stage processes, processes simulation, separation processes, chemical reactors, refrigeration, towers design, process synthesis of steam power, heat exchangers, economical evaluation.

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A new high performance valve tray. The HTV tray is a new type of tray which has the advantages of good performance, large throughput and high efficiency. HTV valve is a half - tube like and elongated structure with two legs and its two legs is turned down. Hydraulic and mass transfer has been studied. The industrial application of HTV tray in crude atmospheric columns were carried out. The HTV tray and its industrial applications has won the prize of Chinese national invention.
Diagnosis technique for hydraulic pump wells and portable instrument There are two methods for the diagnosis of operating condition of sub-surface unit. The first one is based on the pressure balance equation and according to the operating performance of hydraulic pump, a mathematical model is established. The second method is another mathematical model in accordance with the pressure wave caused by the valve shift of hydraulic pump, this model can present the instantaneous operating condition and performance of sub-surface unit.

Production of strontium carbonate HP SrCO₃ HP is obtained from strontium carbonate of industrial grade through a series of purification steps. Trace barium calcium chloride ions and other impurities can be removed from large quantities of raw strontium carbonate without pollution.

Zinc oxide HP of 99.7% purity from zinc ore or zincic material through wet process.

Pure gossypol and gossypol acetate These products are prepared after repeat purification and recrystallisation, with high purity and good quality as well as reliability. Both products are good in anti-tumour activity and in the use of male contraceptive medicines. It is possible that these products can cure AIDS disease. Gossypol acetate can cure the intrauterine tumour of woman.

The technology of modified starches (MS) In the dry or solution system, raw starch can be modified with one or more of these agents of acid, alkaline, cross-linking, oxidating, estarifying or etherifying through chemical reaction. Products then pass through washing, dehydation, drying and packaging stages. Several kinds of modified starch can be produced for industrial use. For example: acetylated distarch phosphate, phosphated distarch, phosphate hydronypropylated distarch phosphate, acid-modified starch.

The desulfurization and decyanization process of coke oven gas The process of smoking sulfur or strong sulfuric acid by absorbing H2S, HCN from coke oven gas and oxidation is required to purify coke oven gas for domestic use to below 0.002 g/m3 H2S.

Burdening and hydrate system of calcium lime This equipment has solved a sintering problem on the 24m2 sintering machine, improving the machine’s coefficient of performance to 1.732t/m2h. Its process energy consumption has been reduced to 71.72Kg standard coal/per ton and the annual economic benefit is 5370000 yuan. It has now been applied to over 10 metal plants.
### Offers

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<td>505026</td>
<td>1.3</td>
<td>C</td>
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<td>405028</td>
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**Coke fitted furnace used to calcine active calcium lime**

A hopper scale, disk discharging unit, three part discharging unit and adding unit was developed and a 170m³ coke-fized furnace of advanced design was built.

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<td>1.24</td>
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**Additive dosing unit**

A small size vibratory feeder and concurrent weight scale unit is used to combine weighing, metering and vibratory feeding with the lifting devices. The system is controlled by computer. So salt can be automatically added in the course of calcium lime production.

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**Hopper scale system uses computer technology for control and terminal management to meet the demands of the production process.** It has the level of similar equipments in Japan of middle and internal stages of 80s.

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**Determinaton of nitrate by gas phase molecular absorption spectrometry**

The nitrite ion can be rapidly and quantitatively decomposed into NO₂ gas by using a catalyst, then NO₂ gas will be removed into measuring system. The concentration of nitrite ion can be determined by the quantity of an ultraviolet light absorbed.

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**Manufacture of SC-05 model oxidation catalyst SC-05 model catalyst is a kind of supported catalyst, of which the support consists of inert, non-porous material and the active composition contains vanadium oxide, alkali oxides and promoters. The catalyst was prepared by 'wet' impregnation, drying and calcination.**

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**Manufacturing technique of oxalic acid Gas is produced by burning coke in a furnace, sodium formate is synthesized from gas and caustic soda under high temperature and pressure, concentrated and dehydrogenated into sodium oxalate, acidated into oxalic acid with sulphuric acid, then refined, crystallised, separated and dried to produce the end product.**
Offers

Ref No. Org. No. Cat. Status Offer
905029 1.34 1 C J

Carbon disulfide manufacture Molten melted sulfur is reacted with red hot charcoal in. an electric furnace to produce crude carbon disulfide which is then refined to produce the end product which is used to manufacture viscose fibre, glass paper, pesticides, rubber products, flotation reagents and carbon tetrachloride.

Ref No. Org. No. Cat. Status Offer
305030 1.35 1 C L

Abrasive resistant SiC sand pump The technology is for making various sizes of abrasive resistant sand pump using SiC as raw material. It is suitable for conveying liquid containing a solid medium.

Ref No. Org. No. Cat. Status Offer
805031 1.35 1 C L

SiC refractory production SiC refractory contains 90-95% of sic, burdened with 5-10% clay. After being shaped, it is sintered at high temperature of 1450-1500 deg C. Products can be made to a variety of specifications.

Ref No. Org. No. Cat. Status Offer
205032 1.36 1 C L

Producing crystalline tea-colour LiNbo3 grains The high purity niobium pentoxide are well mixed with lithium carbonate, shaped, sintered, smeltered in crucible, cooled in low oxygen conditions. The lithium niobate crystals auto crack into grains.

Ref No. Org. No. Cat. Status Offer
705033 1.37 1 C L

High calcined low soda aluminas (-AL203)
High calcined aluminas from aluminahydroxide by using special additive for electrical insulators, substrates, grinding media and wear resistant parts etc.

Ref No. Org. No. Cat. Status Offer
105034 1.37 1 C L

Synthetic energy saving technology for medium/small aluminium smelters Various techniques include lithium fluoride additives, lower operational temperatures, semigraphitic cathode, newly developed inner lining materials, programming techniques applied to cathode design and busbar design.

Ref No. Org. No. Cat. Status Offer
605035 1.37 1 C L

Technology for producing basic aluminium chloride Al(OH)3 aluminium minerals and hydrochloric acid is used to produce liquid/solid basic aluminium chloride products for water purification, sewage treatment, paper, casting and refractories.

Ref No. Org. No. Cat. Status Offer
5036 1.41 1 C L

A new technology of commercial manganese sulfate production from manganese ores The reducing roasting leaching purifying crystallising process is adopted to produce commercial manganese sulfate from manganese dioxide ore, using new tape moving bed roasting furnace.
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<th>Ref No.</th>
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<td>505037</td>
<td>1.41</td>
<td>1 C L</td>
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</table>

Extraction of vanadium pentoxide
Vanadium pentoxide is extracted from vanadium bearing titaric magnetite ore, vanadium slag, spent catalysts, carbonaceous coal, fuel oil ash etc by roasting with Na_2CO_3 Na_2SO_4 and NaCl.

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<th>Ref No.</th>
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<tr>
<td>905038</td>
<td>1.41</td>
<td>1 C L</td>
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Production of ammonium paramolybdate from molybderite middlings The unqualified molybderite concentrate can be used to produce Mo fertilisers. The process route is oxidising roasting leaching precipitating dissolving crystalising.

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<tr>
<td>405039</td>
<td>1.41</td>
<td>1 C L</td>
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Emulsion explosives production The explosives, made from ordinary industrial chemicals, are the new industrial explosives made by fine emulsifying dispersing technology.

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<th>Cat. Status Offer</th>
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<tr>
<td>705040</td>
<td>1.42</td>
<td>1 C L</td>
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Repleting technology of duplicator selenium drum A newly developed technology for preparing photosensitive materials and film forming on selenium drum to recondition selenium drums of duplicators after replating.

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<td>1 C L</td>
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</table>

Refractory fibre making technology and production lines 1) A 5-15 t/a production line for 95% aluminium oxide polycrystalline fibre. 2) A 30-200 t/a production line for mixed fibre through vacuum suction- filtering forming process. 3) A 500-1000t/a production line for refractory fibre.

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<td>605042</td>
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<td>1 C L</td>
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The ABT root growth - promoting powder A highly effective plant rooting stimulus which can promote the formation of adventitious roots of cutting and be used to increase the production of crops.

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<td>1 C L</td>
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The annealation of cellulase in oil production The application of cellulase preparation to oil production is a new biotechnique in enzymatic engineering for breeding gelatination so as to increase the oil production. Cellulase is used in CMC gelatination complex as a liqurifier.

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A completed set of new techniques for super output seed production of hybrid rice To achieve the aim of super output seed production of hybrid rice without cutting leaves, five technical indicators were established. The different cultivated methods were used following the various plant developing stage. Those methods are two couple, three big, five reform, applying certain chemicals and without cutting leaves and finally made the plants growth under the direction breeding.
Offer

Ref No.  Org. No.  Cat.  Status  Offer
5045    2 1 M L

Polypropylene dyeing. This invention relates to the coloration of polypropylene by dyeing and/or printing. The method consists of a pretreatment with a cationic solution, which is a nitrogenous base of molecular weight less than 1,000,000. A patent licence is offered.

Ref No.  Org. No.  Cat.  Status  Offer
405046  2 1 C L/S

Autoimmune disease kits. Serology kits for the quantitative estimation of autoimmune antibodies using standard 96 well ELISA method. Rapid assay (4 hours). Kits for 8 autoimmune diseases currently available and a further 4 will be ready early in 1990. Products presently being sold in the UK and other European countries. Know-how license or outright sale of business.

Ref No.  Org. No.  Cat.  Status  Offer
905047  2 1 M L

Diagnostic tests for tuberculosis. Patents and know-how are available for three gene probes and monoclonal antibodies which have been isolated for the rapid detection of TB.

Ref No.  Org. No.  Cat.  Status  Offer
305048  2 1 M L

Gene probes detection/amplification assay which can be used in conjunction with existing alkaline - phosphatase - based immuno diagnostic procedures. A highly sensitive non-radioactive method for the detection of gene probes and monoclonal antibodies. Sensitive luminometric method for the quantitative determination of alkaline phosphatase using a single pot method and commercially available reagents.

Ref No.  Org. No.  Cat.  Status  Offer
805049  2 1 W L

Detection system for explosives in luggage by passing the luggage over detectors arranged proximate to one or more neutron sources. The results are analysed in a series of 'windows'. Three devices are under development; a conveyor system, a transportable system and a small package analyser.

Ref No.  Org. No.  Cat.  Status  Offer
205050  2 1 W L

On line coal/cement analyser. Adaptable for analysing other bulk particulate materials and ores. A gamma detector with an array of scintillators acting as a pair spectrometer with software to undertake the sophisticated signal processing to produce high resolution elemental spectra. The technology has been incorporated in equipment for full on-line analysis of coal and ash sulphur and determines calorific value for coal and specific analysis for cement.

Ref No.  Org. No.  Cat.  Status  Offer
705051  2 1 W L

Electrochlorinator for water sterilisation. Produces a constant supply of chlorinated water from a salt and water feedstock. The high efficiency of this particular system results from the patented geometry of the electrochemical cell. Applications: sterilisation of drinking water and water used in food and medical processes, swimming pools etc.
<table>
<thead>
<tr>
<th>Ref No.</th>
<th>Org. No.</th>
<th>Cat. Status Offer</th>
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<tr>
<td>105052</td>
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**Hypobromination for sterilisation of water**

A process for the efficient on-site electrolytic generation of hypobromous acid from either sodium chloride/sodium bromide mixed brines or sea water dosed with sodium bromide. Applications: sterilisation particularly for cooling water and used in cooling towers and air conditioning systems.

**Viral probes for Rubella**

A small portion of the E1 peptide of Rubella virus has been identified which contains three E epitopic sites. A commercial interest and investment is sought for the development of standard antigenic peptides from this for Rubella diagnosis and vaccination.

**Mobile incinerator for hazardous toxic wastes**

Handles 0.5 to 4 tonnes of waste per hour to highest environmental standards. These trailer portable thermal destruction units incorporate a rotary kiln incinerator and new, compact, efficient and reliable scrubber technology.

**Detection of gas or vapour leakage**

From pipelines or storage facilities gives non intrusive on-line detection of leakage by acoustic monitoring. Using sensor arrays, the spatial location of the leakage source can be determined.

**Independent indication of state of valve closure**

Using an acoustic method of sensing the flow of fluid through valves which is independent of the mechanical or electrical signals of valve movement. Systems can operate in a hostile environment.

**Acoustic plant condition monitoring**

To detect bearing wear and fretting of adjacent parts gives on-line, non intrusive monitoring of plant mechanical operating condition. The system can be tailored to meet individual plant requirements including spatial fault location.

**Remote monitoring of loose heat exchanger boiler tubes**

Or other loose mechanical components in operating plant. Non-intrusive remote acoustic sensors are used to detect the failure of the tube/plate joint in a heat exchanger or boiler. A number of cheap, easily installed single channel systems can be monitored by a central processor and sensor arrays can pin-point the location of the failure.

**Remote detection of cavitation in pumps**

And flow restrictors and vibration due to acoustic or flow induced excitation. The acoustic sensors and associated measurement or alarm systems can be operated remotely for use in hostile environments.
Non-intrusive remote detection of the onset of boiling in heat transfer processes. Acoustic monitoring processes involving specially designed sensors developed to prevent heat exchanger failure in highly critical locations is now available for application to industrial processes. The spatial location of boiling and can be determined using an array of sensors.

Independent non intrusive acoustic monitoring of the progress of processes involving chemical reactions, mechanical mixing or blending. A broad range of on-line analysis techniques are employed to characterise the noise ‘finger print’ accompanying each stage of a chemical reaction or a mechanical crushing, mixing or blending process.

Combined level and specific gravity measuring system for agitated process tanks. Real time analysis calculates actual level to an accuracy of ± 3% under dynamic conditions.

Rapid response capacitive flowmeter for gas flow in pipes. Measures the flow of cooling gas by sensing the displacement of a wire mesh permanently installed across the pipe. Special electronics have been developed to allow use of long cable lengths necessary for remote measurement.

Large capacity fluid flow facility for process plant design and operation tests. Provides plant designers and operators with a wide range of experimental and analytical services in the field of fluid dynamics and heat transfer studies for natural and forced convection and boiling.

Pipework systems and components analysis. Using a variety of computer codes (ABAQUS, ADLPIPE, CAEPIPE) to undertake dynamic/seismic and elevated temperature analyses which allow material and geometric non-linearities to be taken into account.

Separation of alcohol solvents from fusel oil. The alcohols are separated by dehydration and fractionation of fusel oil with the aid of continuous rectification on the five-column plant which processes 15..20t of fusel oil per day. The separation of alcohol solvents from fusel oil enables production of high quality alcohol solvents (normal propyl alcohol, isobutyl alcohol, isoamyl alcohol). They are a valuable raw material for pharmaceutical, cosmetics and other manufactures.
Offers

Ref No. | Org. No. | Cat. | Status | Offer
---|---|---|---|---
805067 | 9 | 1 | C | L

Feeding concentrate of vitamin B 12. The feeding concentrate of vitamin B 12 is obtained by a production process by fermentation of alcohol-yeast production process waste products (post-yeast molasses distillery shop) by thermophilic methanogenic bacteria. Simultaneously produced is biogas, a production process by-product, being used as fuel. The feeding concentrate of vitamin B 12 is intended for enriching the feeds for farm animals and poultry.

Ref No. | Org. No. | Cat. | Status | Offer
---|---|---|---|---
205068 | 9 | 1 | C | L

High efficient beer rectifying still with new contact devices and air condensers. Consists of a beer column, a purifying column, a rectifying column and a distillation column. The production process of alcohol rectification and the vacuum beer rectifying still (BPY-B) are intended for producing high quality rectified alcohol from edible raw materials.

Ref No. | Org. No. | Cat. | Status | Offer
---|---|---|---|---
705069 | 10 | 1 | C | L

A new pesticide ‘Vinditat’. A new original pesticide ‘Vinditat’ created in the USSR is offered under a licence. It is a white crystalline powder with a slight odour, fast soluble in water, with little toxicity for warm-blooded, stable during storage. It is produced with the help of simple technology from raw material available for the industry.

Ref No. | Org. No. | Cat. | Status | Offer
---|---|---|---|---
105070 | 11 | 1 | C | S

Pesticides aerosol generator II-UGT. The insecticide emulsion concentrate or any other liquid is separated into particles with size up to 50 mkm by a rotor, and distributed along treated premise. The generator is used for disinfection of grain storages (in horizontal and vertical directions), green buildings, live stock farms, vessels and barges, food and other types of warehouses, aircraft, hospitals, auditoriums etc.

Ref No. | Org. No. | Cat. | Status | Offer
---|---|---|---|---
605071 | 11 | 1 | C | S

Device for washing of gluten U1-MOK. Separation of starch and husks, forming of gluten are taken place in washing chamber by mechanical influence of working body of special configuration and continuous air feeding. The device is used for determination of wheat characteristics (amount and quality of gluten) in laboratories.

Ref No. | Org. No. | Cat. | Status | Offer
---|---|---|---|---
5072 | 12 | 1 | C | L

Method of chicken oil manufacture for perfume and cosmetic industry. Method for the manufacture of chicken oil, which is used as a component of a fat base for cosmetic products: nourishing creams, shampoos, soap, make-up cosmetics. The raw material for this product is adipose tissue of broiler chickens, hens or water fowl carcasses. In comparison to the traditional method of animal fat production the offered one reduces 10 times the duration of the technological process, reduces labour costs and power consumption, improves labour conditions.
Method of chicken pepsin manufacture
Method for the production of milk coagulating chicken pepsin enzymatic preparation. It is an effective substitute of natural calf rennet. The material for this product is glandular stomachs of hens, chickens, broilers obtained during carcass evisceration. The offered method is less expensive and more economical than the known methods of animal pepsins manufacture.

Sectional extractor Extracting water-soluble components from the dry or wet raw plant material in a continuous countercurrent process under optimum temperature conditions. Diffusion juice and extract are used in the production of juice and drink concentrates, food colourants.

Continuous process of alcohol production from starch-containing raw materials with application of enzymes The technology is based on continuous processes of cooking, vacuum-cooling and saccharification with the application of malt mixtures or enzyme preparations of alpha-amylase and glucoamylase as saccharifying materials, and fermentation. The final stages of alcohol production are distillation of beer and rectification of alcohol in a beer-rectifying apparatus to produce rectified pure alcohol.

An ecologically clean reagent free water treatment plant The plant incorporates a row of contact and contactless heat and mass exchange apparatuses consecutively connected down the flow of water, heating the inflowing water to the temperature of 160 degrees C, subsequently softening the water by thermal process, and cooling it to the temperature of 70 degrees. The plant is used to obtain make up water for open heating and hot water supply systems and for thermal softening of feed water in desalinating plants.

Comb applicator. A raw applicator which can be manufactured from two plastic mouldings, can be used to apply liquid treatment to the skin of domestic animals for the control of parasites or for the application of skin treatment through human hair etc. Applications include medicine, beauty, etc.
Complete turnkey water purification and product recovery plants for trade effluents
Water purification plant which recover useful products such as protein and oils from the effluent of the food industry. The process can also be applied to pulp and paper, mineral oil, metal plating and tanning industries. Operating costs usually paid by sale of recovered material.

Anti-vibration pipe mounting A patented universal mounting for pipes, constructed in moulded plastic and steel, which reduces fretting and isolates vibration. Permits lateral and radial expansion and movement for both vertical and horizontal pipe runs, and provides electrical isolation and freedom from intermetallic corrosion. All forms of cooperation considered.

Baked thermal barrier coating A licensing agreement is offered for the production of a patented thermal insulating coating comprising hollow glass microspheres, ceramic frit and refractory filler, all suspended in a binder material. Suitable wherever an efficient general purpose thermal barrier is required.

A thermal/chemical process for oil recycling A licence/joint venture agreement is offered for the patent and know-how relating to the process for the reconditioning of mineral oils (industrial and automotive). The process removes between 95% and 98% of the carbon and metallic content at half the cost of the sulphuric acid process.

Woven tubular finger bandage which requires no applicator, scissors or tape. Tubular finger bandages are preferred in hospitals and first aid rooms, since they keep the whole area around the wound clean, allow air to reach the wound and are easy to remove without leaving adhesive on the skin. Bandage looks like a double Polo mint and six of them fit in an attractive tubular pack or 12 in a resealable plastic envelope. Can be easily self applied leaving no packaging or covering to discard.

Accurate trimming of composite materials. This invention relates to a simple method of trimming uncured composite material to a pre-defined shape. The advantage of this technique is that the composite material can be accurately cut to shape in its uncured state. This results in a trimming operation which is very quick, easy and accurate. Applications include any mould activity in glass fibre or carbon fibre reinforced material.
Offers

Ref No. Org. No. Cat. Status Offer
805085 31 M L

Landfill gas pumping system A pumping system which uses landfill gas as a power source to pump gas from landfill sites to be burned. The system is self contained and independent of electricity and water supplies. Designed to draw gas from sites to avoid environmental pollution and danger from local explosive hazards.

Ref No. Org. No. Cat. Status Offer
205086 31 C L

Biotechnology - reagents and monoclonal antibodies produced in vitro for therapeutic and diagnostic purposes. Including tests for toxins in food and for meat quality, for pregnancy, fertility, cancer, herpes and tissue-typing for patrimony and bone marrow and organ transplantation.

Ref No. Org. No. Cat. Status Offer
705087 31 W L

Well jetting rig Designed to jet water wells down to 12 metres and install a lining of corrugated drainage pipe. The hole is backfilled with gravel to act as a filter and the plastic pipe can be sleeved with polythene to stop surface water contamination. Operated by two people, the rig works best on alluvial soils.

Ref No. Org. No. Cat. Status Offer
105088 31 W L

Vermiculture plant for converting agricultural and domestic waste into compost has operated for several years on a continuous basis. Converts organic waste into a fine granular compost for horticultural use and generates a worm surplus which is converted to high protein animal feed. An ingenious breaker bar design is used to break up the digested material into granular form for discharge.

Ref No. Org. No. Cat. Status Offer
605089 31 U LS

Ceramic screen unit A range of designs for moulded construction modules and screen bricks for mass manufacture in poured concrete or ceramics for interior and exterior use in the building industry. In ceramic form or cast in concrete, these designs offer elegant solutions to large scale construction. To provide decorative partitions in multi-storey car parks, or conceal air conditioning, ventilation and heating systems.

Ref No. Org. No. Cat. Status Offer
5090 31 C LJ

Manufacturing process for absorbent cotton wool products for medical and cosmetic/domestic applications. A plant for processing bleached cotton fibres to provide absorbent cotton wool products using, in part, fully reconditioned and modified carding machinery. The offer includes supply, installation and commissioning of plant, training of personnel on site and assistance in sourcing raw materials etc.

Ref No. Org. No. Cat. Status Offer
505091 31 W L

Attractive, robust and vandal proof longlife fencing extruded from recycled plastics. A most ingenious solution to the problems of appearance, high strength and low upkeep. This fencing system will resist impact yet protects both humans and animals from accidental abrasion and infection. Designed both for public and private use and rapid installation.

13
Production of citric acid by process of submerged fermentation. Production of citric acid is based on the conversion of components, containing carbohydrates from sugar beet and cane molasses, into citric acid by a biochemical method using special strains of microscopic mycelium producers. The technology is used in biochemical production citric acid from sugar production waste sugar beet and cane molasses.

A unit for the production of extra high clean hydrogen. The unit isolates extra high clean hydrogen from hydrogen containing gas mixtures to regenerate used hydrogen and to clean argon hydrogen, hydrogen helium and other mixtures from hydrogen. The unit gives 99.9999 purity hydrogen in a high capacity facility.

Butylated melamine and UREA resins. The etherification of hexamethoxy methy melamine or dimethylolurea for industrial engines and baking enamels in quantities of 1000 and 2000 tons/year.

Silicate - acrylic casting process for manufacturing kitchen sinks and sanitary products such as vanities.

Connective tissue prosthesis. Patented design suitable for surgical replacement on augmentation of knee ligaments, Achilles tendon etc. Fully functional and mechanically compatible.

Osteogenic hip prosthesis. A new concept for hip replacement. There is a provision so that bone growth takes place in and around prosthesis. Avoids problems associated with loosening, stress corrosion and wear.

Double elastic puncture proof tyre system. The system consists of special material that avoids punctures and safeguards the life of the tyre with improved ride characteristics.

C-quin - an advanced recipe driven batch control system. It covers all aspects of batch control, including recipes, generated in Ascii text, batch scheduling, sequence control, continuous control and safety checking. C-quin was developed as a joint venture with the Paints Division of ICI.

A wide range of membrane separation technologies for water, wastewater and solvent purification. Primary applications are in the automotive, metal forming, pharmaceutical industries, institutional areas.
Offers

Ref No. Org. No. Cat. Status Offer
305101 9G 1 W J

Unleaded fuel conversion system reduces exhaust emission, fuel consumption and minimises engine power loss.

Ref No. Org. No. Cat. Status Offer
605102 91 1 M LS

Methanol directly from methane. A high pressure non-catalytic partial oxidation process produces methanol with selectivity of 80% and conversions of about 8%. Little or no formaldehyde is formed.

Ref No. Org. No. Cat. Status Offer
5103 91 1 M LS

Ethanol produced directly from ethane. The partial non-catalytic oxidation of ethane at high pressures up to 100 Atm can produce high selectivity to alcohols with ethanol/methanol ratios of 6.

Ref No. Org. No. Cat. Status Offer
305104 91 1 W LS

The abatement of indoor air pollutants. A filter coating has been developed which reacts with and removes formaldehyde, isocyanates and acidic gases such as NOx and H2S.

Ref No. Org. No. Cat. Status Offer
705105 93 1 C J

Loosening and breaking coal deposits by high pressure compressed air breaking cylinders. Application in geologically disturbed methane rich coal deposits, with a small extent in dip and stroke directions. The process is based on multiple breaking cylinders, operating with some self-controlled delay each one to another. We offer method, equipment installation and training.

Ref No. Org. No. Cat. Status Offer
5106 95 1 F L

Manufacturing plant and know-how for the manufacture of fishing yarns, tapes and ribbons by the use of multiple-minimachine set ups. This factory can be built up successively with a limited start capital.

Ref No. Org. No. Cat. Status Offer
405107 95 1 F L

Equipment and know-how for the manufacture of plastic minibags direct from the extruder by the use of multiple machine line set ups. No side weldings. With or without side gussets. Perforated roller bags or stamped, individual bags, with or without handles. This factory can be built-up successively with a limited start capital.

Ref No. Org. No. Cat. Status Offer
705108 95 1 F L

Compounding machines and know-how for the manufacture of masterbatch colour concentrate including additives, alloys and composites, also recycling of incompatible thermoplastics by the use of a compatibilizer.

Ref No. Org. No. Cat. Status Offer
105109 95 1 F L

Machinery plant for the manufacture of the patented plasticizing screws and conventional plasticizing screws for single screw extruders and injection moulding machines, including screw geometry know-how and conventional screw designs for the plastics industry. A low investment factory alternative with competitive output.
Offers

Ref No.  Org. No.  Cat. Status Offer  
305101 101 1 W S

Gazifier for wood, lignite or bituminous shales. Can be used for diesel engines of dual fuel type.

Ref No.  Org. No.  Cat. Status Offer  
705111 101 1 U LS

Vacuum dryers for apples, fish, cocoa can be used in conjunction with solar heating.

Ref No.  Org. No.  Cat. Status Offer  
5112 102 1 C J

Environmentally safe cleaners. Degreasers for industrial, professional and private applications, very powerful and economical, non toxic, biodegradable, non flammable. Can be used on all hard surfaces. Dilutions unlimited.

Ref No.  Org. No.  Cat. Status Offer  
405113 104 1 F S

Special fire extinguisher (for automobiles) This formulation requires only two chemicals which are available everywhere and needs only a small mixer. The end product is a powdery mixture which when thrown on automobile fire a carbonic gas is liberated which is heavier than air and smothers the fire instantly very effective.

Ref No.  Org. No.  Cat. Status Offer  
705114 104 1 F S

Automobile shock absorbers and brake hydraulic fluid technologies. This formulation complies closely to society of Automobile Engineers specifications and ensures the following contents: solvent, lubricant, coupling agents, inhibitors and anti oxidants. Only a good seal and small mixer required. Can be started in a room and raw materials are available everywhere.

Ref No.  Org. No.  Cat. Status Offer  
105115 107 1 F L

Cyclohexanone from benzene featured by improved oxidation treatment of raw oxidation product and ester saponification. Technology offers high selectivity and efficiency, no deposits in oxidation reactor, safety, high reliability, easy by products utilisation, improved environment protection.

Ref No.  Org. No.  Cat. Status Offer  
405116 107 1 F L

Caprolactam from cyclohexanone and hydroxylamine sulphate comprising ammonia combustion, sulphuric acid purification, NO reduction, catalyst filtration (catalyst preparation and regeneration) caprolactam synthesis, extraction, distillation, melt crystallisation and storage. Final product of best quality. Low raw materials and utilities consumption. Full control of reaction course. High reliability.

Ref No.  Org. No.  Cat. Status Offer  
805117 107 1 F L

Production of PTFE A material giving full chemical resistance, high thermal and mechanical resistance, perfect dielectric strength, low friction coefficient, anti-adhesivity. Numerous applications in chemistry, metal, automotive, aircraft industry. Technology enables production of different grades.
Offers

Ref No. Org. No. Cat. Status Offer
105118 107 1 F L

Polyaceta production technology comprises formaldehyde synthesis, formalin concentration, trioxane synthesis, dioxolane synthesis and polymerisation. 3 grades of product with different flow index are produced. Application: thick wall components made by extrusion, unlimited range of components made by injection moulding, thin wall precise technical products.

Ref No. Org. No. Cat. Status Offer
305122 110 1 F L

Design and manufacture of advanced composite products which are employed with the major aircraft manufacturers, aircraft fairings, aircraft interior components, structural assemblies and aircraft galley equipment.

Ref No. Org. No. Cat. Status Offer
505119 107 1 F L

Hydrogen cyanide production Technology comprises: preparation of a gas mixture, HCN synthesis, ammonia absorption, HCN absorption and distillation. Advantages: high HCN synthesis productivity, long life of catalyst, protection against precipitation of deposits, polymer, tar etc., reduced shut down for cleaning.

Ref No. Org. No. Cat. Status Offer
605120 107 1 C L

Epoxy resins plant product mix includes a range of standard epoxies and one proprietary type. Raw materials, bisphenol A epichlorhydrin, sodium hydroxide, toluene.

Ref No. Org. No. Cat. Status Offer
5123 107 1 C L

Recycling of polyethylene terephthalate wastes simple process of conversion of any PET scrap (used beverage bottles, x-ray film) into a number of unsaturated polyester resins for use in electro-engineering, construction and plastic processing. Standard installation for polyester synthesis including a reactor heated up to 240 degrees C.

Ref No. Org. No. Cat. Status Offer
5124 120 1 F L

Paving block absorbs oil and protects environment 'Lithosor' is particularly suited for the purification of water contaminated with hydrocarbons. The Lithosor is especially used in parking areas.

Ref No. Org. No. Cat. Status Offer
405125 123 1 C J

Development and manufacture of piece parts and assemblies made of composite material (fibre reinforced plastics) for industrial application.

Ref No. Org. No. Cat. Status Offer
705126 124 1 FC S

Pharmaceutical units have been either a preserver of multi-nationals or as cottage industry, both detrimental to the health. One in cost and other in quality. This integrated pharmaceutical technology offer bridges gap, giving best of both, with computer aided compliance to GMP.
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<td>105127</td>
<td>125.01</td>
<td>1 C L</td>
<td>Additive DMM It is made of sugar cane. The technique is not complicated and needs low energy consumption. This additive improves the resistance, the impermeability of concrete and mortar, increases their fluidity and preserves this property for long even in dry-hot climatic conditions.</td>
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<td>405128</td>
<td>125.03</td>
<td>1 C L</td>
<td>Adhesive The main material for the production of this adhesive is cassava starch. The product is a powder with following characteristics: white, light weighted, porous. It can substitute gum arabic and is easy to be stored.</td>
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<td>805129</td>
<td>125.05</td>
<td>1 MC L</td>
<td>Rare-earth mixed barium ferrite The latest technology is used for producing rare-earth mixed barium ferrite from raw Fe2O4, BaCO3, and R2O3. The main products are isotropic magnetic powder with (BH)max = 1.2 MGOe and heterotropic magnetic powder with (BH) max = 3.5MGOe.</td>
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<tr>
<td>5130</td>
<td>125.05</td>
<td>1 C L</td>
<td>Tribasic lead sulphate stabiliser The chemical formula of the product is 3PbO.PbSO4.H2O in the form of powder with white colour.</td>
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<td>405131</td>
<td>125.06</td>
<td>1 C L</td>
<td>Bitumen with high melting temperature (100 - 110 deg C) is prepared with different additives such as rubber, PE, PVC, epoxy etc. The product is in form of filament or solvable and can be used as adhesive or paint, resistant in atmosphere, sea water, HCl and H2SO4 and some inorganic salts.</td>
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<td>705132</td>
<td>125.06</td>
<td>1 C L</td>
<td>Treatment for the junction of telephone cables After soldering at once of the coupling ends (150 pairs), soldered knots are covered with special AQ-CS resin with high dielectric properties and resistant in all climatic conditions.</td>
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<tr>
<td>105133</td>
<td>125.07</td>
<td>1 C L</td>
<td>Roofing board from cement, sand, jute fiber. The process line and the technology allows to produce roofing boards having the compressive strength of over 70 kg/cm2, withstand a water column of over 24 m, the water absorption of 16, and its utilisation longevity is of over 10 years.</td>
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<tr>
<td>405134</td>
<td>125.07</td>
<td>1 C L</td>
<td>White Portland cement in small vertical furnace - it is made from limestone, kaolin, gypsum. The coal powered process line is mechanised. The product attains 60-68% of the whiteness of standardised BaSO4 and its compressive strength is above 300 kg/cm2.</td>
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Offers

Ref No. Org. No. Cat. Status Offer
805135 125.08 1 C L

Brake oil from castor oil Castor oil will be neutralised, mixed with ethanol, butanol. It is used for brakes and other hydraulic equipment.

Ref No. Org. No. Cat. Status Offer
105136 125.08 1 C L

Activated carbon from coconut shell The coconut shell is fired under controlled carbonisation to become activated carbon. The technical specifications are: carbon - 73%, ash - 1.9%, water - 6-8%, volatile substances - 15-17%.

Ref No. Org. No. Cat. Status Offer
126 125.08 1 C L

Shampoo The technology composes of mixing lauryl sulphate minerals with ingredients, adding aromas, colouring and packaging.

Ref No. Org. No. Cat. Status Offer
205139 126 1 M L

High temperature insulation Bulk fibres from ZRO(2) for heat insulation in high temperature devices with working temperature 1800-2000 deg C.

Ref No. Org. No. Cat. Status Offer
305140 126 1 M L

Powder from Zirconia for preparation of ceramic components by different fabrication processes, sintering, extrusion, injection moulding, isopressing and others.

Ref No. Org. No. Cat. Status Offer
705141 126 1 F S

Fine biochemicals A series of aminocarboxylic acids, of analogs, derivatives and antimetabolites of the amino-carboxylic acid. Application: in scientific experiments, in human and veterinary medicine.

Ref No. Org. No. Cat. Status Offer
405143 126 1 F S

Anti-tumour drug Cis-diaminodichloroplatinum (III)/cis-platinum, platino1, platidiam, etc - ciplatan/ - an antitumour drug with wide application in the world. It is used in the chemical treatment of cancer - independently or in combination with other cytostatics.

Ref No. Org. No. Cat. Status Offer
5142 126 1 F S

Ant - it - tumour - d r u g

C i s - d i a m i n o - d i c h l o - r o - p l a t i n u m

A n t i - t u m o u r - d r u g

C i s - d i a m i n o d i c h l o r o p l a t i n u m

Super low noise GA AS field effect transistor (FFT) with an n-channel schottky gate, designed for use in S to KU-band amplifiers. The FET fabricated by molecular beam epitaxy to give state of the art performance. Reliability and uniformity. Available in three noise figure ranks.
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**Activated carbons VMK** obtained from apricot stones (VMK-1) and coconut shells (VMK-11) by the processes of carbonisation and activation from water vapour and other reagents. Temperatures (500-700 deg C). Physicochemical properties and absorption characteristics: specific surface area according to BET, ball pen hardness 82-98% etc.

**Non-caloric natural sweetener stevioside** - this product is a mixture of diterpene oligosacharides, about 150 times sweeter than sucrose. It can be used in the food industry, simple and effective technology for isolation and purification of stevioside was developed. The obtained product is comparable with the best products of this type.

**Marble-like glass crystalline material** the technology for its production comprises: producing the glass frit through water stream granulation, filling the glass frit into refractory moulds, and sintering at appropriate temperature, cutting to given dimensions and grinding.

**Melt cast colour stones** Artificial colour mineral products the structure of which resembles those of the natural rock materials. Can be applied in decorative and monumental arts. Architecture and household for creating colour modules, plastic forms, mosaics, panels, doors, furniture components.

**Purification of waste waters containing aniline and nitrobenzene** - the method is based on a combination of distillation and following biodegradation of pollutants by microorganisms, either for mixed streams or separately by fixed biomass of a suitable strain.

**Absorption systems for purification of waste gases** for purification of waste gases from NH(3), NO(X), SO(2), H(2)S, HCL. The gas treatment capacity of one absorber unit is up to 1.5 million NM(3)/H, absorption efficiency is up to 100%.
Offers

Ref No.  Org. No.  Cat.  Status Offer
705153  126  1  F  S

Removal of SO(2) and NO(X) from industrial waste gases 'lnitech' A process of simultaneous reduction of concentration of NO(X) and heat recovery of 13% of the heat produced in the boiler. SO(2) is transformed into a 100% gaseous or liquid product.

Ref No.  Org. No.  Cat.  Status Offer
105154  126  1  F  S

Pertrex - separation by liquid membranes Pertrex is a highly efficient liquid membrane method designed for removal or recovery of valuable metals or other species from industrial effluents or waste water. It is also suitable for removal of toxic substances from various liquids.

Ref No.  Org. No.  Cat.  Status Offer
405155  126  1  M  S

Glucomacropeptide (in lyophilised form) it can be used for the determination of neuraminidase activity of bacterial and viral origin. Amount of bound sialic acids: in the range of 5-8%. Low level of free sialic acids. Good solubility in distilled water and in buffered solutions.

Ref No.  Org. No.  Cat.  Status Offer
805156  127  1  M  LJ

New type of beehive by a partner willing to manufacture this beehive, made of plastic and wooden parts at third of the manufacturing cost of a standard hive.

Ref No.  Org. No.  Cat.  Status Offer
105157  129  1  F  J

Glycerine, stearin, olein toilet soaps manufacturing technology offered.

Ref No.  Org. No.  Cat.  Status Offer
505158  132  1  C  SJ

Plastic converting industry Transfer of technology and sale of machinery/plastic for cast and blown mono and co-extruded film, injection and blow moulding, compounding, sheet extrusion, rotomoulding, thermoforming etc. Technical assistance in plant installation and start-up, personnel training, plant rehabilitation, modernisation, feasibility studies.

Ref No.  Org. No.  Cat.  Status Offer
705159  135  1  U  J

Refuse derived fuel for cement industry A company specialised in transformation of refuse product from industry (polymerisation refuse, oils, paints, varnishes, solvents) is looking for an industrial partner who wants to develop a production plant for auxiliary fuel for cement and lime kilns. Already used in Belgium, it reduces fuel consumption, improves klinker and does not cause secondary pollution.

Ref No.  Org. No.  Cat.  Status Offer
5160  136  1  C  L

Artificial building materials Based on special cementious mortars with a superior mechanical strength it is possible to produce artifical products eg sculptures, wall coverings etc. The surface could be designed according to natural construction materials or according to the requests of artists. The surface can be metalised or coloured.
Offers

Ref No. Org. No. Cat. Status Offer
305161 136 1 W L

Uniform powder production by plasma processing innovative process to produce spherical, crackfree, solid and homogenous powder particles in defined sizes by energy saving plasma processing to realise uniform particles. Compared with traditional manufacture processes, the energy consumption is only 25 to 35% and classification by screening is excellent.

Ref No. Org. No. Cat. Status Offer
705162 137 1 C L

Continuous fermentation of molasses to ethanol uses a special strain of yeast which self immobilises during its growth phase making it reusable without centrifuging. The strain can be used for several months without any significant drop in activity. The process gives increased yield of ethanol by 15-20% and is adaptable in existing distilleries.

Ref No. Org. No. Cat. Status Offer
5163 137 1 F L

Centchroman A novel, once a week, non-steroidal, oral, female contraceptive pill having unique post ovulatory action. Approved by the Indian Authorities for use in the family welfare programme.

Ref No. Org. No. Cat. Status Offer
405164 137 1 F L

Gugulipid A novel hypolipidaemic agent derived from natural plant - commiphora mukul - the drug is equipotent with clofibrate without any side effects.

Ref No. Org. No. Cat. Status Offer
705165 137 1 F L

L-ephedrine hydrochloride a broncho dilator in cough mixtures; process uses a new yeast strain and is simple and economical.

Ref No. Org. No. Cat. Status Offer
105166 137 1 U L

Enzyme for dehauling of animal hides A new strain of Aspergillus Flavus an alternative to conventional method of using lime and sulphide which causes environmental and water pollution. Strain exhibits activity over a wide pH range of 6.5 to 10 and is non-toxicogenic. Extensively tested for its efficacy on commercial scale in existing tanneries.

Ref No. Org. No. Cat. Status Offer
405167 138.12 1 C J

Natural rubber vibration isolation for buildings base isolation techniques for low cost housing equipment and buildings with emphasis on earthquake protection. Longer lasting, cheaper and higher capacity to absorb both vibrational forces and seismic forces. Protects buildings, machineries, more effectively and cheaper than the cast iron or metal bearings.

Ref No. Org. No. Cat. Status Offer
805168 138.13 1 C L

Hard gelatine capsule manufacturing technology and plants fully automatic machine and process makes capsules from edible gelatine by dip process to international standards in sizes 0, 1, 2, 3, 4, 5 and 00'. These capsules are easy to handle and fill, protect drug from light and ultraviolet radiation. This process is low cost compared to tablet and soft gelatine capsulation method.
Zinc oxide Zinc metal is melted and directly oxidised in a crucible furnace to form zinc oxide (by using French process). Extensively used in rubber industries (as an accelerator/activator, paints (as pigments), cosmetics (in face powder, prickly heat powder), electroplating (zinc salts), phosphating chemicals (anti-corrosive formulations), animal feeds (micro nutrients), ceramic (glaze), abrasives and pharmaceutical industries.

Manufacture of paints, varnish and allied products The entire range of paints including synthetic enamel, primers, plastic emulsion paint, cement paint etc. The basic process is grinding and mixing and the equipment required varies from ball mills to sand mills for enamels etc.

Processing of zinc secondaries to produce zinc sulphate hepta-hydrate or monohydrate with options to recover brass fines or copper - this process is a very efficient hydrometallurgical route involving operation like ball milling, tabling, cementation, reaction, filtration, evaporation/salting, crystallisation, pulversing sieving and ingotting (pyrometallurgical). Process heat is provided using agrowastes and thermic fluid (dowtherm) heating.
Enzyme preparation of D-p-hydroxyphenylglycine an important side chain to the semi-synthetic B-lactam antibiotics. An enzyme method directly converts DL-5-p-hydroxyphenylhydantoin into D-p-hydroxyphenylglycine with a highly active strain of Pseudomonas sp. 2262 isolated from the soil. The enzyme method is simple to use, involves common equipment, low consumption of energy and raw materials, high yield at low cost and a high spectral purity.

Manufacture of poly pallets from plastic scrap fabricated using in house plastic scrap which is reprocessed. Material is extruded as plastic members and tubes which are rivetted together to specific sizes and designs depending on load bearing capacity required and also other use such as dunnage and fork lift operations.

Ethylene from industrial alcohol the process is based on catalytic vapour phase dehydration of ethanol to ethylene and its subsequent upgrading to high purity ethylene for polyethylene manufacture. Purification is in two stages by distillation. Heavier fractions are removed in the tailing column and lighter fractions in the topping column. Purified ethylene emerges partly as gas which is sent to a gas holder and the balance as liquid which is sent to a temporary insulated storage.
Ref No. Org. No. Cat. Status Offer
705183 138.58 1 F L

High silica fabric production back up weld tapes, carbon cloth production for use in very high temperature applications.

Ref No. Org. No. Cat. Status Offer
105184 138.6 1 F L

Rubberising of rubber rollers

Ref No. Org. No. Cat. Status Offer
405185 138.64 1 F L

Cork products Corksheets, rubberised cork sheets, rubberised cork frames components, decorative cork sheets.

Ref No. Org. No. Cat. Status Offer
805186 140.01 1 C L

Production of sodium sulphide from sodium sulphate Sodium sulphide is manufactured on the basis of sodium sulphate and hard coal. Production method: sodium sulphate is reduced by carbon in rotary kiln, temperature 1000-1200 deg C.

Ref No. Org. No. Cat. Status Offer
105187 140.01 1 C L

Production of phosphoric acid from elemental phosphorus The production of phosphoric acid is based on the combustion of yellow phosphorus and water absorption of phosphoric anhydride from gases. The technology assures high grade of phosphorus utilisation with comparatively low investment cost.

Ref No. Org. No. Cat. Status Offer
505188 140.01 1 C L

Molecular sieves The production consists of: production of zeolites 4A or 13X, production of zeolites at another cation form, ie 3A and 5A, forming of sorbents of the type A (3A, 4A, 5A) and of the type X (13X).

Ref No. Org. No. Cat. Status Offer
805189 140.01 1 C L

Production of sodium tripolyphosphate from thermic phosphoric acid Phosphoric acid is neutralised by soda ash to the triply point and then exposed to dehydration and calcination.

Ref No. Org. No. Cat. Status Offer
105190 140.01 1 C L

Chlorosulfuric acid SO2/OH/C1 is produced in the synthesis process between the gaseous sulfur trioxide (100% SO3 and hydrogen chloride (100% HCl).

Ref No. Org. No. Cat. Status Offer
405191 140.01 1 C L

Precipitated calcium carbonate Precipitated calcium carbonate is obtained by carbonisation with gaseous carbon dioxide of calcium hydroxide solution. Main usages: for production of rubber, in plastics industry and paper industry as a white filler for production of dyestuffs and paints.

Ref No. Org. No. Cat. Status Offer
805192 140.01 1 C L

Calcium chloride from post-distillation slurry from soda ash production Calcium chloride is manufactured on the basis of post-distillation slurry coming from the ammonia soda process. The final product is a 76-78% CaCl2 in flakes or a 70-72% CaCl2 in cast form.
Ref No. Org. No. Cat. Status Offer
105193 140.03 1 C L

Building materials Technology of production of concrete blocks, prefab columns and beam elements by using local materials and industrial wastes. Usages: Low cost housing Advantages: Production of building materials based on local resources.

Ref No. Org. No. Cat. Status Offer
505194 140.04 1 C L

Coloured slag-polymer plasters produced from a mixture of mineral binder and organic binder. That mixture consists of a granulated blast furnace slag modified with pigments and polymer binder of aqueous dispersion of resin. Advantages: Simple and fast manner of preparation, possibility of colouration in varied colours, resistance to chemical corrosion and low price.

Ref No. Org. No. Cat. Status Offer
805195 140.04 1 W L

Alkali-activated slag binders These are slag binders without clinker. The substance of technology is the alkalic activation of vitrified calcium and magnesium aluminicates present in blast furnace slag. Advantages: High strength and low porosity of concrete, good chemical resistance, deformation properties and physical resistance.

Ref No. Org. No. Cat. Status Offer
205196 140.04 1 C L/S

Alumina and cement production by self-disintegration method The Polish basic self-disintegration method for aluminium oxide manufacture invented by Prof J Grzymek consists of parallel and simultaneous production of aluminium oxide and high-quality portland cement, ensuring thus the best possible waste-less utilization of raw materials.

Ref No. Org. No. Cat. Status Offer
505197 140.04 1 C L

Briquetting of brown coal in the roll press. Usages: Application of finely-ground brown coal for the commercial purposes. Advantages: High efficiency and lower exploitation costs for example in comparison with stamp presses.

Ref No. Org. No. Cat. Status Offer
905198 140.04 1 C L

Electromagnetic coagulation of suspended matters Part of the sludge removed from the settling tank is activated in electromagnetic coagulator. The activated sludge becomes the medium of aggregating suspended solids causing the coagulation of even smallest particles. Usages: May be efficiently applied for treating effluents from the metallurgical processes and from steel plants, rolling mills, blast furnaces.

Ref No. Org. No. Cat. Status Offer
105199 140.05 1 C L

Self-setting sands Technology of self-setting sands with water glass and an ester hardener. Hardeners characterized by different binding times are manufactured and the bench life of sand varies from several to tens of minutes. A process of sand reclamation has been developed. Usages: Manufacture of moulds and cores for casting.
<table>
<thead>
<tr>
<th>Ref No.</th>
<th>Org. No.</th>
<th>Cat.</th>
<th>Status</th>
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<tbody>
<tr>
<td>905200</td>
<td>140.06</td>
<td>1</td>
<td>M S</td>
<td>Granulated PVC/PE pneumatic transport installation. Storage in silos applied to take deliveries in cisterns, containers, bags; unloading by means of the medium pressure pneumatic transport, distribution to production departments by means of the pumping type medium/high pressure transport. Usages: Granulated product transport.</td>
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<tr>
<td>905204</td>
<td>140.07</td>
<td>1</td>
<td>Biofilters The Biological treatment of the waste water on the biofilters with plastic packings. For treatment of industrial wastes and municipal wastes.</td>
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<tr>
<td>205201</td>
<td>140.07</td>
<td>1</td>
<td>Cl</td>
<td>Nitrification of the Ammonium compounds. Method for the removal of biochemical ammonium compounds from waste water occurring in high concentrations in the range of tens to hundreds g/m³. Usages: Treatment of municipal wastes, industrial wastes, especially fertilizer industry and nitrogen compounds industry.</td>
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<tr>
<td>105205</td>
<td>140.07</td>
<td>1</td>
<td>Waste water treatment including complete treatment of sludges and garbage. Treatment by the two-stage activated sludge method in a compact installation performing combined functions of equalization, aeration, sedimentation and sludge recycling. Advantages: Reduction of the capital costs and operating costs due to the compactness of installation. Production of compost.</td>
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<tr>
<td>405202</td>
<td>140.07</td>
<td>1</td>
<td>Water demineralization through ion exchange resins method. Obtaining pure water displaying conductivity less than 0.5us/cm with cocurrent and counter-current ionite regenerants with low ionite regeneration consumption.</td>
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<tr>
<td>305206</td>
<td>140.07</td>
<td>1</td>
<td>Municipal and industrial waste water treatment in two-stage system. Industrial waste water denitrification process using municipal waste water as a source of organic carbon. Advantages: Reduction of the operating costs owing to the application of nutrients contained in municipal waste water.</td>
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<tr>
<td>705203</td>
<td>140.07</td>
<td>1</td>
<td>River water infiltration intakes by means of horizontal drain pipes laid by underwater opencast method. Usages: Production of potable water and process water. Advantages: Suspended solids and plankton removal enhancing quality of water, reduced cost of the treated water production.</td>
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<tr>
<td>605207</td>
<td>140.07</td>
<td>1</td>
<td>Sludge thickening by the acid flotation method. Sludge thickening through application of the protein denaturation process caused by acidifying the sludges of the suspended solids. Advantages: Reduction of the capital costs by about 30% and operating costs by about 25%.</td>
<td></td>
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</tbody>
</table>
Offets

Ref No. Org. No. Cat. Status Offer
805208 140.07 1 C L

Biological waste water treatment
Combination of three processes such as the organic contaminants oxidation, nitrification and denitrification in one equipment. Technology removes organic and nitrogen compounds, reduces capital costs as well as sludge quantity compared with conventional methods.

Ref No. Org. No. Cat. Status Offer
105209 140.07 1 C L

Equipment for waste water aeration
Technology for production of ceramic diffusers for fine bubble waste water aeration. The diffuser watt-hour efficiency lies in the range of 2-3kg O2 from 1 kWh.

Ref No. Org. No. Cat. Status Offer
205210 140.08 1 C L

Production of sorbitol syrup by the Catalytic hydrogenation of D-glucose. Advantages: Good efficiency, reliability of operation, good quality of products, simple process.

Ref No. Org. No. Cat. Status Offer
505211 140.08 1 C L


Ref No. Org. No. Cat. Status Offer
705212 140.08 1 C L

Polyether polyols production by the polycondensation of propylene/ethylene oxides. Usages: Production of polyurethanes.

Ref No. Org. No. Cat. Status Offer
5213 140.08 1 C L

Propylene glycols production by the hydrolysis of propylene oxide. Usages: Non ionic detergents, solvents, anti-freeze fluids, brake fluids, polyether polyols, polyester resins.

Ref No. Org. No. Cat. Status Offer
205214 140.08 1 C L

Adipic acid production by the Catalytical oxydation of ammonia, reaction of cyclohexanol with nitric acid. Usages: Production of nylon 66, polyesters. Advantages: Good efficiency, reliable and safe operation, good quality of product.

Ref No. Org. No. Cat. Status Offer
405215 140.08 1 C L

Vinyl acetate production by the catalytic reaction of acetylene with acetic acid. Usages: Production of polyvinylacetate as well as different kinds of copolymers.

Ref No. Org. No. Cat. Status Offer
605216 140.08 1 C L

N-butyl alcohol Production by a continuous process consisting of aldolization, crotonization, synthesis of butanol, hydrogenation of butanol. Usages: Production of solvents and brake fluids.

Ref No. Org. No. Cat. Status Offer
905217 140.08 1 C L

Maleic acid anhydride production by the catalytic oxydation of benzene. Usages: Production of polyesters, fumaric acid, agricultural chemicals, surface coatings, plasticisers.
Rehydrat - preparation for veterinary use. Production of electrolytical preparation in powder form for dilution in the water and for use per os. Rehydrat is used in alimentary canal disease with diarrhoea symptoms and with appreciable loss of water. Shows synergic action in chemotherapy, can be used also in other diseases with loss of electrolytes and metabolic acidosis appearance.

Pollisulfalent - drug for veterinary use. Solution of sulphonamides for injections. Pollisulfalent has prolonged and strong bacteriostatic action against sulphonamides sensitive bacteria, streptococci, staphylococci, corynebacteria, Gram-negative bacteria.

Vaccine L - vaccine for veterinary use Oral Vaccine for Newcastle disease control for poultry. When vaccine L is used for immunisation of healthy chicken, turkey and guinea fowls in flocks without any disease symptoms.

Warrosect - preparation for veterinary use Tablets for diagnostics and control of bees varroase caused by parasites Varroa jacobsoni. Warrosect successfully controls parasites Varroa jacobsoni present on external shells of bees. Contains malathion, no effect on bee larvae or on the queen.
Offers

Ref No. Org. No. Cat. Status Offer
805226 140.12 1 C L

Grain mills, wheat, maize - capacity 12-100t/h Grain delivered in lorries or bags to hoppers by means of lifters, cleaned, washed, conditioned, scrubbed and milled.

Ref No. Org. No. Cat. Status Offer
5227 140.12 1 C L


Ref No. Org. No. Cat. Status Offer
305228 140.13 1 C L

Production of technology gluten-free food concentrates. Mixing of the gluten-free ingredients and stabilizing and binding components, following strict recipes to obtain concentrates for baking bread, pastry and flour dishes. Usages: Food and pharmaceuticals industries for producing concentrates for people with coeliac disease.

Ref No. Org. No. Cat. Status Offer
505229 140.13 1 C L

Technology of producing powdered baby foods for infants and children. Methods of producing instant cereal products by drum-drying and modified milk formula for infants.

Ref No. Org. No. Cat. Status Offer
705230 140.13 1 C L

Technology for production of instant ersatz corn coffee. Method of producing instant corn coffee using vegetable ingredients of high carbohydrate contents applying such procedures as roasting extraction extract processing, spray drying. Patented technology permits considerable lowering of investment cost as well as exploitation costs.

Ref No. Org. No. Cat. Status Offer
905231 140.13 1 C L

Technology of producing protein hydrolysates. Hydrolysis of protein raw materials, neutralization, decuring, maturing. Usages: Production of seasoning for soups and dishes (liquid, paste or lumps), basis for production of boiled and roasted meat flour preparations and powdered seasoning.

Ref No. Org. No. Cat. Status Offer
205232 140.13 1 C L

Technology of production of roast meat flavour product. Hydrolysis of protein raw material, interreaction of the hydrolysate and remaining components, condensation, drying. Production of the roast meat flavour product (in the form of paste or powder) as a substitute for meat extract in food concentrates or as an additive to products requiring meat flavour.

Ref No. Org. No. Cat. Status Offer
405233 140.13 1 C L

Technology for the production of boiled meat flavour product. Hydrolysis of albuminous raw material, interreaction of the hydrolysate and remaining components, condensation, drying.
Offers

Ref No. Org. No. Cat. Status Offer
705234 140.13 1 C L

Production of liquid hydrolysate, spray-drying, with other ingredients, agglomeration. Production of powdered seasoning for soups and sauces, intermediate product for seasoning lumps and broth.

Ref No. Org. No. Cat. Status Offer
805235 140.14 1 C L

Production of wallpaper (PMS). Process consists of chemical and thermal treatment of potato starch in the mixer of loose materials, drying and roasting. No waste products. Also used in concrete base and in paper making industry to increase the resistance of paper pulp. Wallpaper adhesive shows high bonding power, short structure and high resistance of bond between wallpaper and base.

Ref No. Org. No. Cat. Status Offer
105236 140.14 1 C L

The technology of production of linen finish. The modification (chemical and thermal) of potato starch oxidized with sodium hypochlorite takes place in water suspension and during further drying on the rollers. Preparation is applied as linen finish in the household and by the cleaners. The technology is easy to control. The linen finish has high quality and is convenient to use (soluble in cold water).

Ref No. Org. No. Cat. Status Offer
305237 140.14 1 C L

Production of ELTEX textile dressing. Process of manufacturing: moistening of potato starch with a chemical solution in the mixer for loose materials, drying and roasting. No waste products. ELTEX is applied as dressing hydrophilic warp, wool, cotton in textile industry. ELTEX is insoluble in cold water, after heating water suspension, it forms a gel with neutral reaction and high stability.

Ref No. Org. No. Cat. Status Offer
605238 140.14 1 C L

Product for paper surface sizing. The process of manufacturing consists of moistening of potato starch with a chemical solution in the mixer for loose materials, drying and roasting. No waste products. Applied in the paper making industry for paper surface sizing. The preparation is white powder, easily soluble in water. It shows good optical property and increases the paper abrasion resistance.

Ref No. Org. No. Cat. Status Offer
705239 140.14 1 C L

Starch preparation for drilling fluids. The process consists of the chemical and thermal treatment of potato starch and maize starch in the paste mixer and drying on rollers. No waste products. The preparations for the drilling industry are of high quality, easily soluble in cold water, lowering the filtration of drilling fluids.
**Offers**

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<tr>
<td>905240</td>
<td>140.14</td>
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**Manufacture of glue and adhesive tapes.** Process consists of potato starch oxidation with sodium hypochlorite in water suspension and esterification with acid anhydride. Drying in pneumatic drier. Use for gumming paper and for production of abrasive paper and gives good adhesion of coating, gloss and elasticity.

**Production of gelling starches.** Depending on the preparation gelling starch, the potato starch is oxidized with sodium hypochlorite and dried in pneumatic drier. Applied in food industry for making desserts gelatine and as additive to custards and cakes. The gelling starch forms gels of high transparency, as compared with natural starch. These gels don't retrograde and can be easily cut like other gels obtained from pectins and gelatine.

**Production of pre-gelatinized starch.** Obtained by oxidation of potato starch, mixing with food additives and thermal treatment on drying rollers. Applied in food processing industry as a thickener for cream, sauces and as an additive to puddings and custards. The technology is easy to control. The preparation of high quality easily soluble in water, milk and cream.

**Continuous process for acid hydrolysis of starch in water suspension.** The starch is liquefacted in nozzle stream heater and hydrolyzed in the continuous tubular reactor at 140-150 C pH=1,7-2,0. The continuous technology can be practically applied in potato starch syrup plants. The process has the virtue of high quality of hydrolysates and lower waste of stream compared with the batch method.

**The continuous production of starch syrup.** The process comprises acid hydrolysis in the tubular converter, refining of liquors in the cascade containers, filtration in pressure filters thickening in evaporator and thin layer cooler, storage and transport of syrup. The continuous method can be practically applied in syrup plants. The technology shows good use of raw and subsidiary materials, low waste of water and stream and high quality of syrup.

**The preparation of glucose by the enzyme-enzyme method.** Two enzymes are applied in the production of glucose - the alpha-amylase and glucoamylase. With this method a product, with parameters corresponding to world standards can be obtained. The process is efficient and modern.
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<td>Status</td>
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<tr>
<td>Referral Notes</td>
<td>Preparation of maltodextrins. The production of maltodextrins by enzymatic method with bacterial alpha-amylase comprises of two processes, the liquefaction and saccharification 6-35DE. The maltodextrins are applied as an additive to sugar bakery products, gelatine, ice-creams, mayonnaises. The enzyme-enzyme method is more efficient and selective, compared with the acid-enzyme method.</td>
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<td>Status</td>
<td>C L</td>
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<tr>
<td>Referral Notes</td>
<td>Potato starch mill. Preparation of potato starch consist of desintegration of potatoes, separating starch granules from rasped potato, refining, dehydrating and drying.</td>
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<th>Offer</th>
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<td>Status</td>
<td>C L</td>
</tr>
<tr>
<td>Referral Notes</td>
<td>Epoxy resin compositions. Mixing of liquid and solid components epoxy resin, hardeners, curing accelerators, modifiers, fillers etc. The compositions are used as coatings, putties, seamless flooring adhesives, electroinsulating materials, polymer concrete, reinforced plastics and many others.</td>
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<td>Referral Notes</td>
<td>Unsaturated polyester resins (UPR). Process of manufacturing a broad assortment of UPR's from maleic anhydride, glycols, styrene etc. The UPR's are used for the production of glassfibre or cellulosic fibre as jute, sizal, reinforced plastic's, roofs, tubes, containers as well as artificial marble and varnishes for wood.</td>
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<td>Referral Notes</td>
<td>Polyurethane moisture-cured adhesives (ARGOPOL). Polyaddition of disocyanate and polyol at relevant temperatures in the reactor. Usages: Bonding polystyrene or polyurethane foam with various materials, especially in sandwich-panels or in insulation. Advantages: ARGOPOL adhesives are solventless and single component formulations.</td>
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<td>Referral Notes</td>
<td>Moisture-cured elastic polyurethane sealants and coatings (ELASTIFIX PU). Blending fillers with polyol + polyaddition with disocyanate at high temp in the reactor and blending with thixotropic agent or bitumen-isocyanate adduct depending on the grade mfg. ELASTOFIX PU products are single-comp form cured with moisture, but special curing agents can accelerate the rate of curing.</td>
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<td>Referral Notes</td>
<td>Anaerobic sealants (KOLFIX). KOLFIX products are used for sealing, locking and retaining metal parts e.g bolts and nut collars, pins in machine and automobile industry. KOLFIX products cure quickly in the absence of air, but stable in when stored in bottles.</td>
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</table>
Liquid polyurethane gasket (MOTOFIX). Polyaddition of polyol with disocyanate and addition of thixotropic agent an inflammable solvent. MOTOFIX is used with or without solid gaskets in the machine and automobile industry for sealing the metal parts. MOTOAX can withstand up to 2MPa flat joints or 6 MPa threaded joints and temperature ranges from -50C to 250C. Resistant to motor and gear oils, greases, combustion greases, cold water, fuel oil and gasoline.

Solvent based polyurethane adhesives (IZOKOL). Polyaddition of disocyanate with polyester polyol at high temperature in the reactor. Usages: In the footwear industry for bonding shoe soles to shoe uppers. Generally it can be used for bonding leather, rubber, PVC, aluminium, textiles etc. Advantages: Final product is obtained directly from reaction of polyols and isocyanate in the solvent mixture.

Plant for the manufacture of washing powders. Manufacture of the fully formulated washing powders by cold mixing of particulates with liquid raw materials. The whole process takes place on one apparatus from which packaged ready product is obtained. Advantages: Several processes carried out in one apparatus; very small amount of air to maintain the fluidized bed; savings of energy in the manufacture of powders as compared with the spray drying process.

Production of nubuck leather through thermal grain processing. Nubuck leather is produced by removing the grain layer in thermal processing prior to proper tanning. Advantages: Elimination of buffing process, decrease of labour and time consumption, improvement of defibration regularity, leather is finished in single phase process.

Tannery waste water treatment. Waste waters are mechanically treated, then biologically and finally are processed chemically. High level of waste treatment BOD over 90, COD over 80, chromium and sedimentary solids over 98, sulfides 100. Excess of activated sludge can be utilized in agriculture.

Utilization of untanned hide wastes. Production of protein feed stuff and technical fat from hide wastes - raw and limmed on very simple equipment. Advantages: Feed meal of standard value for poultry farming and technical fat for chemical processing are obtained from hide wastes - reduced environmental pollution.

Enzymatic depilation of pig skin. Technologies include preparation of skin, dynamic depilation and bristle recovery. Advantages: Good degreasing and uniform dyeing of skins, better surface yield, recovery of bristles of standard value, lower toxicity of tannery waste waters.
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**Technology and installation for desalting of saline waters.** The desalting process is based on selective crystallisation of sodium chloride and calcium sulphate and subsequent utilisation of postcrystallisation lies in commercial products such as iodine, bromine, potassium and magnesium. The process takes place in a multistage evaporator system with brine adiabatic expansion, and afterwards in elementary processes based on desorption, absorption, concentration and crystallisation.

**Biogas production.** Utilises manure from animal breeding farms. The process of generation from organic material is conducted in biogas plants according to the method of anaerobic digestion without oxygen. Biogas production is the best known method of utilising energy potential of organic waste. This technology enables output of high quality organic fertilizer for agriculture and makes sewage less harmful for environment.

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**High pressure diamond synthesis.** Machine shop organisation, raw materials preparation, synthesis process know-how, chemical treatment for purification, grain separation and qualification. Usages: Abrasive diamond production.

**Acid method of aluminium oxide preparation from clays and flyashes.** Machine shop organisation, raw materials preparation, know-how of technical treatment and purification, grain separation and qualification. Usages: Metallurgical and electronic grade aluminium oxide production. Electronic grade with very low sodium content.

**Container sewage treatment unit type ‘Energopol 125’.** Biological treatment of communal sewage. Capacity 14-31 cu.m of sewage per day for one unit. Possible jointing of units in series of 12 containers. Environmental protection by compact, easy assembled unit.
### CATEGORY 2 - LIGHT INDUSTRIAL MACHINERY:

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<td>Sewing machine factory Manufacture of main parts such as machine head, arm processing and assembly. Technology steps are as follows: foundry, machining, painting, electroplating, assembling. Good appearance, lightweight, easy to operate with wiring, even stitch.</td>
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<td>The moisture determination apparatus type JSZ-111 with electronic computer for ceramic powder Our computer - controlled moisture determination apparatus is capable of swift, accurate, continuous on-line check of the moisture of material. The apparatus is able to process data, deviation compensation, over-moist warning and data printing. The moisture determination apparatus is mainly used in the testing of ceramic powder in the production of architectural ceramics.</td>
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Offers

Ref No.  Org. No.  Cat. Status  Offer
205268    1.18    2   C   L

Low relaxation pre-stressed wire stabilising line and tester New stabilising equipment and tensile tester, part of a complete set of process for the production of low relaxation pre-stressed high strength wire.

Ref No.  Org. No.  Cat. Status  Offer
505269    1.18    2   P   J

Steel wool production To take advantage of available raw material they wish to purchase advanced equipment to produce steel wool for brake pads for automobile and other uses.

Ref No.  Org. No.  Cat. Status  Offer
605270    1.25    2   C   L

Automatic point changeover technology for railways in factories and mines For transport operation by rail in factories and mines, the points usually need to be changed to change direction. As the vehicle is moving forward the points can be changed either from the vehicle or from the ground automatically by using this technology.

Ref No.  Org. No.  Cat. Status  Offer
905271    1.25    2   C   L

Processing of steel - plastic composite material for thread protectors The sheet is punched, cut, formed, welded and rounded off into a steel ring as a die insert. Then the die insert is put into the mould and the steel plastic composite thread protector is fabricated on the plastic moulding machine.

Ref No.  Org. No.  Cat. Status  Offer
105272    1.32    2   C   J

Superheavy duty universal coupling of high torque transmitting and overload capacity in a limited space. Its loading capacity is the highest of the universal couplings commonly used. It can be used as universal spindle in all types of heavy duty rolling mills, levelling machines, shears and etc.

Ref No.  Org. No.  Cat. Status  Offer
405273    1.52    2   C   L

General mechanical workshop equipments Lathe, miller, boring lathe, planing machine, driller, grinding machine.

Ref No.  Org. No.  Cat. Status  Offer
605274    1.58    2   C   L

Equipment for dropping of bitumen from drums The equipment is used for heating bitumen and dropping of bitumen from drums. Dropping of bitumen from drums is helped with waste heat produced directly in gases. In the process of loading and unloading drums, heat energy of gases for dropping bitumen from drums may be transferred to the lower chamber for heating bitumen.

Ref No.  Org. No.  Cat. Status  Offer
705275    1.62    2   C   L

Design and manufacture of the caterpillar lock core groove-broaching machine and groove-broach is one of the basic and key processes for various locks. It uses a new construction and adopt a continuous process in manual ball-loading, mechanical clamping and chain driving.
Design and manufacture of underwater grain cutter. An accessory tool for grain cutting and forming machine of chemical fibre raw material. The specification and size can be designed in accordance with the different machine types of customers.

Design and manufacture of fibre cutter. The fibre cutter is an accessory tool of chemical fibre strip-forming machine. The size of cutter can be designed in accordance with the different machine types of customers.

Coloured glaze fired only once using coal instead of firewood.

Tunnel kiln burning coal with residual heat utilisation technology.

Feigh iron pottery clay series new products.

Heat resisting porcelain cooking utensils

Ceramic plate activation technology before chemical nickel plating technology for activation and chemical metalisation of ceramic articles of different size eg capacitor laminations, resistors, microcircuits, including the selective metalisation. Advantages: cost reduction through metalisation using nickel-phosphate and nickel-copper-phosphate coating instead of silver, excluding the costly activator chloride-palladium, saving of 1 ton of silver for the program/40 min articles per year.
Improved steels The presence of good carbide-forming elements such as vanadium and particularly titanium in the proposed steel brings to highly firm and highly solid carbides formation. This results in microstructure improvement, wear resistance, impact elasticity and strength increase. Improvement of the complex of properties - wear resistance and impact elasticity - provides considerable increase of die stability.

Multipurpose greenhouse with fully rollable film covering The greenhouse has a prefabricated frame consisting of galvanised steel members and a two-layered film covering. The greenhouse is equipped with water or electric heating, plant irrigation, natural and forced ventilation systems. It has also a convertible thermal screen.

Method of dewatering of industrial sites, territories of towns and populated areas with radial drilling used includes shaft sinking, drilling of radial horizontal drainholes out of the shaft, installation of a pump house in it and the diversion of drainage water. Method is used in industrial and civil engineering, mining, for protection of industrial sites, territories of towns and populated areas against underflooding, stabilisation of landslide slopes.

Self-propelled drilling rig for horizontal drainhole drilling in pit walls and slopes The rig is a modification of the rig -130 mounted on a push-loading tractor -110A. Hole drilling is performed simultaneously with two telescopic columns. The rig is hydraulic powered, equipped with power drive of a tractor. Holes of diameter 135-210 mm and depth up to 130 m are drilled using this rig. Rig is used in mining, industrial and civil engineering, usually in the absence of well made roads and power supply systems. The rig may be used for horizontal hole drilling.

Mechanical flotation machine Flotation machine is used for an effective coal preparation with a high specific throughput of the pulp 11,0 cub m/hcub m, of the solids 1,76 t/hcub m and with the low specific energy consumption 0,6-0,9 kwh/t. Main advantages: high throughput and a low energy consumption with a high quality of flotation products.

Portable dust meter A portable device with autonomous electric power supply. It is based on infra-red photometry method according to the International Standards (ECE Regulation 24, EC Directive 72/306 and ISO DIS 3173). The device is provided with automatic adjuster of base readout and recorder of peak smoke density. Limit of main deduced measuring error is not more than 2. Overall mass is not more than 2 kg.
Ref No.  Org. No.  Cat. Status Offer
805293  22  2 C  SL

Refractory metal carbides Characterised by stability of batch properties and can be produced with various grain size (from 0.001 up to 50 mm). Free carbon content in carbides amounts to 0.1-0.5. Microhardness of carbides - 18000-32000 MPa. The chemical composition and mechanical properties of carbides in delivered batches are practically invariable.

Ref No.  Org. No.  Cat. Status Offer
105294  26  2

A device for suppression of radial vibration of the turbo machine rotor A new method of combating vibration which consists in discontinuous variations of the shafts rigidity during transition through the resonance zone. Application of the present method allows to decrease the amplitude of shafts radial displacement in the resonance zone and in the zone of operating rotational speed several times, which results in a higher effective net efficiency of the turbo machine.

Ref No.  Org. No.  Cat. Status Offer
205295  26  2

A power transmission The link reduction gear is designed to transmit rotation between two parallel or coinciding axes with both stepping up or stepping down the output shafts. In heavy engineering industry, incorporated into cargo winches drive mechanism, into that of cranes, underground escalators, conveyors, vessel shaft lines, speed gearboxes, be used as a moment multiplicator for tightening threaded connections etc.

Ref No.  Org. No.  Cat. Status Offer
505296  28  2

Process of multiple-thread infeed grinding of tap threads The process is based on 'all at once' thread cutting on hardened blanks made of high speed steel or other tool steel by the infeed method on thread grinding machines using multi rib grinding wheels made of elbor (borazon) in the course of 2 to 3 revolutions of the workpiece. The process is intended for making taps with diameter from 3 to 10 pitch from 0.5 to 1.5 mm and length of working part from 10 to 30 mm in batch and large lot production.

Ref No.  Org. No.  Cat. Status Offer
605297  29  2 C  SL

Collet chuck for bar stock feeding The collet chuck consists of a hollow cylinder, a guiding element and keying action and feeding elements of original design. It is possible to feed bar stocks of different (within 2 mm) diameters in certain range, one and the same collet chuck is used for feeding bar stocks of both round and polyhedral section, it is possible to ensure the stability of the feeding force and also its adjustment.

Ref No.  Org. No.  Cat. Status Offer
905298  30  2 C  SL

Measurement method and device for magnetic inclusions control in ground materials Based on measurement of magnetic permeability for materials with magnetic inclusions. The device operating in weak magnetic alternating fields transforms the parameter to be measured into proper reading on a pointer type indicator. The device is equipped with built in calibration unit, and ensures full metrology control.
Ref No. Org. No. Cat. Status Offer
105299 30 2 C SL

Synthesis control for superhard materials (diamonds, cubic boron nitride, polycrystalline compacts, and composite materials on their base). Control devices and automatic control facilities are used to control extreme pressure chamber, synthesis conditions and quality of finished product.

Ref No. Org. No. Cat. Status Offer
905300 30 2 W SL

Manufacturing process for circular saws with cutting inserts made of superhard composite materials to machine chip wood boards and other non-metal materials. Manufacture of circular saw bodies, brazing of cutting inserts, assembling, sharpening. Automatic transfer lines for cutting out blanks of wood materials etc. Cutting inserts sharpening and re-sharpening in multisater fixtures before assembling. Circular saw bodies are re-usable.

Ref No. Org. No. Cat. Status Offer
105301 30 2

Manufacturing process for CBN abrasive tools with vitrified bonds. The process is identical to common abrasive tools manufacturing process including bond and moulding mixture preparation, moulding, drying, curing, finishing and quality control. The special features of the process are bond and moulding mixtures formulation, equipment design.

Ref No. Org. No. Cat. Status Offer
205302 30 2 C SL


Ref No. Org. No. Cat. Status Offer
405303 31 2 M L

Mitreing joint system for picture frames etc. This novel design of clamp for the accurate production of mitre joints for picture frames, drawers, etc., comprises two adjustable-angle clamps and a saw guide. A router on a second machine produces the slots for a concealed wooden key. No finishing operations required.

Ref No. Org. No. Cat. Status Offer
405304 31 2 W S/L

Tray packing machine. This fully automated tray erector/loader is designed for collating bottles, cans, cartons etc., and loading them on to a cardboard blank, which is then formed into a tray for the storage and distribution of the products. Its compact dimensions and standard conveyor heights enable it to be integrated onto existing production lines with the minimum of alterations.
Variable clamping system A compact, light, easily assembled clamp which extends up to 7ft. Transports in case 10in by 8in by 2in and weighs 3kg. Replaces cumbersome sash cramps and also be used as a vice. Ideal for woodwork, sheet metal working, furniture restorers, shop fitters, etc.

Broken stud extractor Patent licence is offered for a simple device to retrieve broken studs and broken drill bits from casting etc. No drilling is required and the exercise can be carried out in situ in a confined space without the need to disassemble machinery.

Small scale clay brick manufacturing technology. The equipment is aimed at less developed countries and produces high class bricks using technology methods. It is suitable for low wage economies and produces from 4000 to 20000 bricks per week. The equipment supplied consists of clay crushers, portable clay hoppers, brick presses, brick carrying frames, 3 wheel and 2 wheel carrying trucks, clamp fire doors.

Small scale fibre-concrete tile manufacturing technology This revolutionary technology produces the world’s lowest cost durable roof covering suitable for less developed countries with low wage economies. The equipment centres on a small 12v d.c. powered vibrating table that produces a cement screed which is transferred to a mould for setting. Plant sizes are from 250 tiles/week (20 sq metres/week) up to 2000 tiles/week (16000 sq. metres/week) employing from 1 to 30 workers.

Small scale concrete block equipment A small 12v d.c vibrator, the Multi-vibe, can be attached to wooden or metal former for wall blocks and interlocking concrete water tank blocks. By the use of vibration the cement content of these products can be kept as low as possible.

Self-clarifying fermentation vessel. A plastic or glass fermentation vessel incorporating an automatic sediment collecting section which enables wines and other liquids to be clarified quickly and with minimum loss of liquid. It minimises filtering operation time and cost.
Waste paper recycling machine for the production of egg packaging, biodegradable plant pots, food trays etc. A manually operated plant with simple maintenance procedures. Low floor loading, low initial capital cost, easy operation - high standard finished products. All electrics 220/240V single phase. Production output eg egg trays 4 moulds x 60 strokes = 240 per hour. Materials required waste paper, water waxes (emulsified) and dyes. Training course available.

New hose clip design to prevent leakage during thermal cycling whilst retaining full pressure capacity. When cold, thermally cycled rigid clips can lose the interference fit between spigot and hose so allowing fluid to dribble out. This does not happen with resilient clips. However, they are unable to resist significant internal pressure. This clip meets both requirements at the same time.

Improvements in threaded couplings between pieces of different hardness. Specifically between a hard piece and a soft piece, as for example a metallic piece and a plastic piece, improvements aimed at protecting the soft piece, the object being that its thread will not be damaged by the hard piece in the coupling between them.

Automatic pallet making machine This low cost flexible machine will manufacture most types of pallet from pre-cut wood sections at the rate of 60 per hour. The machine uses standard nailing guns and automatically stacks the finished pallets after assembly. Facilities for branding and trimming can be added.

Bevel gear transmission systems A family of transmission systems, based entirely on combinations of internal and external bevel gears, with all meshing gears concentric to a through-axis shaft, has been designed. Compact, high performance gearboxes result with advantages wherever axially aligned input and output shafts is a preferred objective.

The application of the versatile knock-down fixture tooling system for positioning and clamping blanks when they are machined by metalworking and like equipment The system consists of standard parts and assembly (elements) for various functional purpose which serve to assemble by the method of machine tool devices for positioning and clamping blanks. Rapid tooling up for manufacture, reduced expenses on manufacture tooling, flexibility.

Multipurpose hose and cable clamps for automotive use Complete manufacturing, involving new machinery, technical information and engineering for 15 million units for year.
Offers

Ref No. Org No. Cat. Status Offer
105318 43 2 F J

Crane/hydraulic mechanical equipment and steel construction including complete manufacturing, technical erection, consultancy and detailed engineering/design.

Ref No. Org No. Cat. Status Offer
105319 74 2 P L

Equipment for new baking process
Equipment in stainless steel, requiring electrical power and gas or other form of heating, for production of bread or other baked goods using new levitation method on a warm air cushion.

Ref No. Org No. Cat. Status Offer
205320 74 2 P L

Food products made by new process New patented process for baking bread, cake, biscuits, crackers supported by levitation on a warm air cushion. Shorter bake times, improved thermal efficiency, any fuel for heating.

Ref No. Org No. Cat. Status Offer
305321 80 2 C L

Rail to sleeper fastening assembly Triple elastic nature for concrete and other type sleepers for high speed and heavy density routes. With minimum laying cost and maintenance and novel.

Ref No. Org No. Cat. Status Offer
505322 88 2 W L

Instant attachment/detachment device incorporates male and female elements that lock securely when pushed together. Pushed together again, they snap apart. Units can be of metal or plastic. Applications include securing detachable items to vehicles and assembly of blind access or difficult to join items such as ropes, hawsers, cables etc. Easy operation by the disabled or infirm, or by robotic actuation. No rotative motion necessary.

Ref No. Org No. Cat. Status Offer
605323 92 2 P J

Machine for the production of fork arms for battery-powered or diesel fork-lift trucks A newly designed fully automated machine for a wide range of fork arms. Guarantees high productivity and reliability. Easily operated. This novel design shortens the production cycle and increases the output.

Ref No. Org No. Cat. Status Offer
705324 94 2 C L

Tanks Know-how licence is offered for a complete range of tanks for storage of water, wastewater, animal slurry etc. The tanks are produced from pre-casted concrete elements. More than 10000 tanks are installed in Denmark.
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Equipment and know-how for the manufacture of polymer concrete and polymer marble products like wash-hand trays and tables, bath tubs and other synthetic marble products using high content and fillers like calcium carbonate or quartz sand or similar together with polyester, polyurethane or similar polymers.

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Software programs designed to study log saw-milling to optimise the log breakdown and to prepare for the best production program.

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Log carriage of saw-mills Overhead end dogging carriage allowing for the best optimisation of log breakdown with high productivity.

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Automatic control for log carriage drive Senses the blade deviation and automatically monitors feed speed accordingly.

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Circular saw edger for sawing boards Movable blades set to dimension either automatically or by operator.

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System to measure log length and diameter Gives log volume and allows for log sorting or log breakdown optimisation.

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Production of universal backhoeloaders for civil engineering works.

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Machine for handling papertowels, handkerchiefs etc automatic 3 shifts, replaces totally human work, 36 packages per minute.

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Machine for the assembling of writing utils up to 4000 per hour - 3 shifts possible - modular designed for high quality writing utils.

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Machine for the complete assembling of reel belts modular designed for optimal quality and safety 2.4 mill seatbelts per year.

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Modular linear transfer system Each module is a welded steel frame, the workpiece is carried out on a pallet, the pallet can be placed exactly (+/- 0.1 mm) the system has been designed for production of high quality articles.
Manufacture of metalworking machines including plate edge milling machines, tube cut-off machines, deslagging and deburring machines.

Motormowers, mowing tractors and universal transporters with various implements for hillside farming and area maintenance and municipal services as well as universal seed drills and foundry products.

Paper from hevea wood Following this technology, the remained latex (about 1.5%) will be diluted in water by additives and then flow out with the waste water. The quality of it is similar to other one made from normal materials but its mechanical properties are higher.

Moulding packings The so-called TM process is an ingenious method for counter pressure injection moulding of structural foam parts with the possibility to control the diefilling process and the foaming of the polymer melt. All types of thermoplastics, polystyrene, polyethylene, polypropylene, polycarbonate etc.

Patented head for fluffing yarns and proposed production and marketing or licence opportunities. Proposals for production of hand knitwear with clients yarn could also be considered. Additional information is available.

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Industrial valves cooperation and joint venture in the production and marketing of industrial valves, throttles and flaps.

Film and paper coating technology Various types of polyester film and papers are coated to manufacture sensitized paper, sensitized polyester film. Diazo film, clear sensitized film and reproduction on copiers and xerox. Once the coating is completed, it is then converted in the form of reels, rolls, cutsheets as desired by the customer.
A comprehensive range of planetary gear box is consisting of a gear system, housing and flanges to suit the planetary drive to machinery where the drive is applied. The concept is to produce the core at licensors workshop in cost saving series and in a high quality. Assemblage and adaption to the customised requirements should be done locally by the licensee. Applications include mining, crane and hoist construction, sugar processing plants, iron and steel mills environmental engineering, rubber and plastics industries, building industry, wind turbines.

Paper board production unit consists of 4 machines such as beater, pulp storage and cylinder mold machines etc., 2 pumps and 3 tanks. Suitable for small scale industries to create job opportunities. Raw material is unbleached pulp or waste paper. Boxes are made for packing food, ceramics, glass, hard cover of books etc.

Machinery for making plastic containers
Blow moulding machine which produces hollow plastic containers in various sizes ranging from 1,000 to 3,000 cc or 5 to 30 litres capacity for applications such as cosmetic, medical, food stuff and soft drinks. Machines are high speed, fully automatic, easy to operate and low investment.

Diecast sealing device for underground telecom cables Consists of butterfly nut to tighten the device, main body coupling, coupling and rubber seal. Except for rubber seal, all the components are produced by die casting and high sealing pressure compared to plastic materials.

Highgrade handmade paper and board
Small scale process uses materials such as waste paper, cotton waste, cotton cloth cuttings and jute waste. Equipment includes hollander beater, calendering and paper cutting machines etc. The recommended economic scale 150 tonnes of high grade paper from 60 gsm upwards and boards/year.

Crankshaft vibration dampers

Process production of seals for hydraulic cylinders. Pressure range up to 75 MPa. Working temperature range for seals 233-333 K. Diameter range for pistons up to dial 250mm. Diameter range for piston rods up to 200mm. Hydraulic fluids: mineral oils, water-in-oil emulsion. Piston velocity: up to 0.5 m/s

Cu-Ni alloy plating. Type of galvanizing bath pyrophosphate. Coating thickness obtained 40-50 um. Coating rate 0.4-0.6um/min. Cathode efficiency 76-96. Coating hardness HV200.
Technology and equipment for rapid field testing of rock properties. New testing method based on unconditional drill-core treatment in specially designed point load strength tester. Saves 50% of costs compared with laboratory testing and cuts time of testing by 70%.

Water jet cutting technology. Equipment and wide range of applications. Rock, ceramics and metal cutting.
CATEGORY 3 - METAL FORMING AND TREATMENT:

Ref No.  Org No.  Cat.  Status Offer
205355  1.22  3  C  L

Converter slag quenching and pelletising process Converter slag is usually abandoned, is difficult to process and occupies a large amount of space. This technology uses simple equipment to quench converter slag into size 0.3-5 mm pellets which can be used as burden for sintering ore.

Ref No.  Org No.  Cat.  Status Offer
405356  1.22  3  C  L

Technology for low pressure burning of pellet shaft furnace With the technology, the problems such as uneven burning and low output etc of pellet shaft furnace to produce pellets to be used to melting iron can be solved. A high output and quality can be achieved.

Ref No.  Org No.  Cat.  Status Offer
305357  1.22  3  C  L

Heating furnace of 3 sections choke and end discharging and short landslip The heating furnace has reasonable design, lower energy consumption, higher heat efficiency, even and fast heating, lower burning damage, and high product rate. It is used to heat bloom and slab of a rolling mill.

Ref No.  Org No.  Cat.  Status Offer
505358  1.22  3  C  L

Short hydraulic tap gun with inclined foundation for blast-furnace The short hydraulic tap gun with inclined foundation for blast furnace was a special machinery of oblique gun, a roll back machinery corresponded to it and a day beating machinery. It can be adapted to operate with blast furnace under high pressure and machinery operating before the furnace. The hydraulic system can compensate the circuit to guarantee the working reliability of the tap gun. Great social and economic profits have been made.

Ref No.  Org No.  Cat.  Status Offer
605359  1.24  3  C  L

Rod rolling and control technology without space demand for medium duty and small size continuous rod rolling mill Control discharging rod unit on the high speed slide cooling bank, cut to length and looping controller. It realised the rolling without space demand for medium-duty and small size high speed rod rolling mill.

Ref No.  Org No.  Cat.  Status Offer
705360  1.24  3  C  L

Disk discharging unit can be conveniently operated outside the kiln without stopping the air blower. The disk discharging unit will discharge the time whilst running in either direction and the discharging speed is adjusted automatically. So it helps the adjustment of kiln state, the air flow distribution in the kiln tank.
The repairing and re-using of mould copper wall for billet continuous casting. The repairing and re-using of mould copper wall cannot only reduce copper consumption and energy consumption but also improve the inner quality of steel billet.

Heat recovery system from hot air ovens of blast furnace by water media. Heat is received by a closed circulation system in which the fume after combustion in the oven transfers the heat to inlet combustion air via water heat exchangers.

Controlled atmosphere of oxidation for heat treatment. The atmosphere for heat treatment of a piercing rod is not generally non-controlled making the rod of low and unstable quality and of short life. By controlling the atmosphere of oxidation for heat treatment, the rod can meet the requirements of piercing higher grades of seamless oil well tube above 55 deg.

Water-resisting lubricant for thermoplastic processing of steel. The lubricant is a stable, homogeneous, dispersed and concentrated liquid, composed of graphite powder and organic compounds. When diluted and sprayed on the dies, it can be used for the hot processing of steel as a water-resisting lubricant.

The temperature distribution measure of the liquid metal surface inside a blast furnace by infra-red scanning. The infra-red radiation is accepted by an optical scanning camera, then converted to temperature values. The temperature distribution of the liquid metal surface is displayed on a colour TV monitor in real time. Various operations are carried out by a computer, the image data of temperature and other control signals can be outputted.

Manufacturing technology of wear-resistant bronze slipper exerted appropriate heat treatment, the slipper metal of a rolling mill slipper type universal coupling is made of special aluminium bronze casting and it has excellent mechanical properties and heat treated with tensile strength 740MPa and over, yield strength 430MPa and over, more than 10% and hardness 210-240HB gives a 3 fold improvement of service life.

A technology for improving abrasive resistance of fans. Materials will show different resistance to erosion when abrasive particles impact on them at different angles. To improve abrasion resistance measures include bonding wear-resistant ceramic blocks with high strength adhesive, bead welding and spraying etc onto different sections of the fan according to the impact angle.
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<td>Stainless steel surface treatment technology</td>
<td>Stainless steel surface treatment technology Stainless steel material is used in ultrahigh vacuum instruments and equipment. After the surface of stainless steel is treated, the quantity of product and its surface finish can be improved.</td>
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<td>T2 copper coil pipes for refrigerators</td>
<td>T2 copper coil pipes for refrigerators Copper coil pipes with a mirror-smooth and extremely clean inner wall are produced by means of the floating plus tub drawing technique. The pipes passed the test of JISH-3300 standards by the Sumitomo Light Metal Industrial Ltd of Japan.</td>
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<td>New on-line measuring and monitoring technology for FeO in sinter</td>
<td>New on-line measuring and monitoring technology for FeO in sinter A newly developed technology for achieving consecutive on-line measuring and monitoring for FeO content in sinter has been used in production. This process solves the problem of measuring and monitoring on the sintering machine and is being spread and used in sinter plants of large and medium scale steel enterprises in China.</td>
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<td>Wind screening and separating unit in the charging system of blast furnace</td>
<td>Wind screening and separating unit in the charging system of blast furnace Air is used to suspend particles smaller than 3-5 mm diameter in the sinter before entering the furnace to screen out and remove them.</td>
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Project design of 300 M2 blast furnace |
Design includes screening and separating facilities in charging system, building of blast furnace body and the cooling equipment, all the equipment in the furnace top, hot stove with high blasting temperature and its waste heat utility facilities, slag utility design, iron caster system etc. |

Noise eliminator of wide frequency spectrum and high volume level |
This unit is a new type sound absorber housing installed around the noise source. It has good advantages of absorbing sound of wide frequency spectrum and good results of noise drop. It can both eliminate sound and absorb sound (mainly for eliminating sound). Ventilation system is used in this unit for heat extraction so as to reach the purpose of noise drop and guarantee the proper performance of the unit. |

The production technique of the coated compound material tube piercing point |
A new piercing point - coated compound material piercing point developed using the special vacuum fusion technique which solves the problem of nose deflection and steel binding of piercing point in the production of seamless steel tubes. The service life of piercing point and the quality of tube can be improved and the efficiency of tube production can be increased. |
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**Cold isostatic pressing and hot isostatic pressing**
The isostatic pressing equipment puts isostatic pressure on the pressed parts. Cold isostatic press (CIP) can form and compact products, it works with the fluid. Hot isostatic press (HIP) is an advanced processing equipment of shaping, compacting and heat-treating for parts under the gas of high temperature and high pressure simultaneously.

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**GL-69D Ion beam thinner and production technique**
Ion beam thinning is a new technique which has been developed since 1970s. We have developed and produced the technique and instrument for more than 10 years. The GL-69O ion beam thinner developed by us won international bidding in 1988 and awarded gold medal in 1989.

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**Ceramal compound plating**
Non-metallic particles are added into electrical or chemical solution in advance and metallic ions are deposited simultaneously on substrate metal. The non-metallic particles give the ceramal compound coating special features that substrate metals do not have ie high hardness, good wear resistance and excellent mechanical performance. This technique is chiefly Ni-P-SiC compound plating.

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**High temperature coated oxygen blast pipe for steelmaking**
For steelmaking is carbon steel pipe treated both outside and inside pipe surface by first plating a special primer coating then coating with a fire-resistant compound oxide followed by treatment at low temperature. It can also be obtained by directly coating a fire-resistant oxide (type III-CHT) on its surface.

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**Technology and equipment of continuous hot dipping Zn-5%Al-Re coated strip**
The technology of improved Sendzmir process is used in the production of hot dip Zn-5%Al-Re coated strip. The behaviour of the coated strip meets ASTM requirements. Strip width: 600 mm, thickness 0.3-1.5 mm, coating thickness: 30-50 mm.

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**Production line of continuous hot dipping Al-Zn coated strip**
By the nonoxidation reduction process Using this process, the reduction ability to the strip surface is significantly improved compared with the usual slight oxidation reduction process. It can be used to obtain different products such as Al, Al-Zn and Zn-Al coated strips.

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Hydraulic screw-down and automatic gauge control of plate and strip mill Main uses of hydraulic AGC include eliminating the longitudinal tolerance of rolling parts, improving the precision of products, realising fully rolling of negative tolerance, increasing the rate of finished products, preventing the incidence of roll breakage and rolling parts from deviating.

Micro-computer controlled double motor type automatic electrode regulator for electric arc furnace (WKSD regulator) This product is an automatic regulating device used in the electric arc furnace for steel smelting to control the raising and lowering of the electrode. It consists of a special micro-programmed computer, a control panel and special AC double motors. It can increase the productivity by about 3-5% and save about 20/60KW of energy per ton of steel. The device has a strong resistance to interference, perfect stability and high reliability.

Hot changing technique and material for the inductor of channel induction furnaces melting copper The material is a dry unshaped silica refractory (SiO more than 98%). Silica sand is graded by different grain sizes, baked separately and then mixed with ceramic low-temperature heat set bond, according to requirement, followed by a full mixing. Hot changing material consists of hardening, parting compounds and sealing tapes. Available for mechanical and manual installation.

Copper and its alloys high precision strip - upgrading a rolling mill for high precision thin strip requires the following improvements which can be licenced: 1) automatic gauge control system, 2) hydraulic screw down, 3) roll cooling system, 4) roll system modification, 5) machine parts modification, 6) electronic parts modification, 7) technology technique.

Continuous casting technique for copper and copper-based alloys The continuous casting line consists of low frequency channel type induction furnaces and a horizontal continuous casting machine, producing tube, rod, bar, two channel tube, excentral tube, U-shapes and other shapes with uniform cross-section. Complete melting and casting equipment, drawings, schematic diagrams of tooling, description of technological process, technical consultancy and service available.

Zinc rectification furnace with large scale column to refine crude zinc (Pb 0.2-8%, Cd 0.03-0.1%, Fe 0.02-0.08%) in a large scale column (1370 x 762 mm) using either solid or liquid zinc and generator gas or natural gas as the fuel. The daily output of liquid zinc is 30-36 T of purity: 99.996-99.998% and low energy consumption.
Production of fine quality zinc oxide with zinc refined column in the process of zinc refining, zinc vapour is drawn out directly and oxidised by the indirect method zinc oxide is produced of purity 99.7% min.

Production of superfine zinc powder in a fractionating column crude zinc is heated and evaporated and then pure zinc vapour is lead to a closed and cycled condenser fitted with inert gas and then to a dust collector. In this way -120 mesh ordinary zinc oxide and <10μ superfine zinc powder are produced.

Pyrogenic process for cadmium rectifying crude cadmium is covered with alkali and melted, then it flows into rectifying column where it is evaporated and condensed, thus refined cadmium of 99.995% min is obtained.

Horizontal continuous casting process for making zinc wire Horizontal continuous casting process is used to convert liquid zinc into about 12 mm dia wirebars, which are heated to homothermal temperature, about 8 mm dia wirebars are pulled by the wire drawing benca to the wire reel, then by cold drawing 6-1 mm dia zinc wire are obtained.
Production of Al-Ti-B alloy The Al-Ti-B alloy series (Ti: B 5/1, 5/0, 2 etc) are produced with fluoride salt method in this process. Products form are cubes or filiform to refine aluminium alloys for diecasting and extrusion.

Equipment for preparing starting sheet for copper electorefining. A special equipment for preparing starting sheets during copper electrolysis. It has seven functions: delivering copper sheets across rods and cathode loops, flattening copper sheets, riveting cathode loop, pressing grooves to enhance its strength, turning 90 deg, placing products vertically on preparation shelves. Cost RMB 200,000 per set.

Equipment for preparing start sheet for lead electorefining. Special equipment used for cathode sheet of lead electorefining process. It performs 12 functions of liquid supplied rolling sheet, pulling, cutting, feeding sheet, picking up and feeding sheet, picking up and feeding and cicle rod, pressing and binding, straightening, delivering, spacing etc. Capacity is 720w/h. The price of this plant is RMB 800,000.00.

The production of gold with the mixture of copper concentrates with gold lump in a sealed blast furnace. The charge of gold can amount to above 50% of total feed, when smelting the copper concentrates mixture with gold lump in the furnace, the gold is enriched in matt, precipitated in the slime during the electorefining, and then is converted by the conventional treatment of the slime. The cost is below RMB 1000/kg. The sulphur in flue gas can be converted into sulphur acid.

Crude lead anode casting wheel. This machine is used for electorefining of lead anode. It performs six casting functions namely: disc and rotating, mould unloading, picking up, flattening and spacing etc. The capacity of process is 240w/h. The price of this machine is RMB 1000,000.00.

Computer controlled system for extracting tungsten. In the process of producing APT, this system automatically measures records and controls the flow of several liquids, the tungsten content, the liquid position of storage tank and the temperature of reaction.

Baiyun copper smelting process. It is a new technology for smelting copper involving half the fuel and twice the efficiency of the reverberatory furnace.
One stage segregation process for treating copper oxide ore. A simple low energy, low pollution process recovers more than 30% copper grade from copper oxide ore containing 2-3% copper with the rotary kiln. Recovery 80%.

Production of hard magnetic material strontium or barium ferrite. For production of presinter materials for permanent magnetic ferrites, magnetic powders of ferrite and sintered permanent magnets of ferrite.

Coal injection technology for blast furnace consists of the coal storage and conveying system, coal pulverising system and coal injection system. Both bituminous coal and anthracite coal are used as raw material. Direct or indirect injection can be performed. Programmable controllers are used to obtain automatic operation and anti-explosion measures are adopted for safety operation.

Bukkat continuous caster type MY F. Featured by rigid dummy bar, it is equipped with complete mechanical and electrical equipment and auto control system. Accessories and utilities are fully furnished. Hot transfer, hot charge and direct reduction systems can also be provided.

Energy saving technology for the re-heating furnace. A highly efficient waste heat recovery rate. A new type of burner use 100% pre-heated high temperature air for a better heat exchange in the furnace and consequently a high combustion efficiency, with optimal design of bottom cooling piping to reduce the system heat loss to a minimum.

High efficiency BF gas fired reheating furnace for rolling mills. Waste heat fully recovered, high heat emission rate and high temperature resistant burners and high temperature gas combustion air preheating process to be adopted, furnace profile, burners structure etc to be modified.

Type ML-1 curtain shaped flame ignitor. High temperature direct flame instantaneous ignition, burners of simple construction operated in diffusion secondary combustion mode, flame passages installed at the burners head and provided with secondary air cooling, flame shaped to give uniform temperature distribution along the width of the sintering pallet, clearance between the pallet and the seal plates of the two sides adjustable. Flame ignitor on movable carriage to be replaceable in whole.
Molybdenum wires (including molybdenum rods) production First prepare molybdenum powder through baking and decacidising ammonium molybdate and molybd strip by pressing and sintering, then produce molybdenum rods and wires of all specifications through hammering, rough drawing and fine drawing.

Dunlet wires After being heat treated and copper coated, nickel iron core of dia 8 mm is drawn into wires of different specifications by drawbench with single or multi-die, then treated with oxidisation and boron coated.

Series of hard facing electrodes In mining, metallurgical, sand dragging, mine coal and mechanical industry, it can be used as surfacing welding of the workpieces which is to be worn.

Manufacturing technology of high chromium cast iron grinding balls and lining plates This is a product of high chromium hypo-eutectic white cast iron containing chromium of about 13% to 18% and processing the best combination of wear resistance and impact toughness in addition to the good castability and heat-treatability. It therefore makes certain the satisfactory resistance to wear, breakage, spalling in field operations.

Auto or semi-auto rolling mill machine and rolling tool for water tank radiating band The rolling mill machine and the rolling tool are advanced equipment and tool used in the production of automobile water tank radiating band. The performances of tool and equipment have reached or exceeded the equivalent products introduced from abroad. This is, nowadays, the most advanced equipment for water tank radiating band production in our country.

Novel scratch resistant and crack resistant coatings allow thermoforming or flexing. A polysiloxane, scratch resistant coating with improved extensibility. This allows the substrate to be thermoformed or flexed without cracking the coating.

Electromagnetic flowmeter for liquid metals Two types of flowmeter of simple robust construction cover pipe and bulk or open channel flow measurement. A range of induced voltage meters cover flow in pipe diameters from 6 mm to 100 mm to a 3% accuracy. They use permanent magnets for temperatures up to 500°C and refractory materials at temperatures above 500°C. Special designs for larger pipes and open channels.
Offers

Ref No. Org. No. Cat. Status Offer
105416 3 3 W LJ

Tube brazing using medium frequency internal induction heater. Cased in Inconel with a power control system to control temperature distribution and give specified heating, hold and cooling rates inside the tube being brazed or heat treated. Temperatures of 1100°C, pyrometer monitored via built in optical fibre, can be held to ± 20°C over the exact length required inside a 15 mm diameter tube.

Ref No. Org. No. Cat. Status Offer
105417 3 3 F LJ

Digital inductive gauge for liquid metal level measurement gives an unambiguous direct digital output in binary code and operates at temperatures up to 900°C. Its resolution can be varied over the measuring span to suit operating requirements. Housing in refractory material, it is of rugged construction with no moving parts.

Ref No. Org. No. Cat. Status Offer
105418 3 3 F LJ

Flowmeters for liquid metal. These simple, reliable flowmeters have no moving parts and use materials suitable for high temperature and high radiation environments. They have been developed for use on liquid metal cooled reactors. They are non-invasive and hence do not apply any obstruction to the flow.

Ref No. Org. No. Cat. Status Offer
5419 3 3 F LJ

Inductive level meters for liquid metal are available in a variety of configurations and include analogue, digital, set point, high and low trips in any combination. The maximum length is only limited by handling difficulties of long and thin components. Special versions are available eg an 11 metre long portable electronic dipstick.

Ref No. Org. No. Cat. Status Offer
5420 3 3 F LJ

Liquid metal temperature measurement devices. Ranging from 3 mm dia conventional thermocouples to 1 mm dia coaxial thermocouples with a time constant of less than 50 ms to even smaller diameters for faster response. The ultimate for rapid response is the inductive sensor available in 8 mm dia.

Ref No. Org. No. Cat. Status Offer
5421 3 3 F LJ

Liquid metal purity measuring system. Comprising a pump, flow meter, heat exchanger and temperature measurement. To determine purity, the temperature is automatically controlled and maintained at the precipitation temperature.

Ref No. Org. No. Cat. Status Offer
105422 3 3 F LJ

High accuracy, non-contacting surface inspection system for use in extreme environments. Non-contacting, wear free, capacitive sensors are used for rapid surface topography measurement with a lateral resolution of 200 um and a depth resolution of 5 um. Remote measurement utilises special electronics to compensate for long cable lengths.
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### Two capacitive liquid level meters for a) short range very high resolution and b) long range 0.1% resolution

Liquid level sensing can be carried out in conducting, non-conducting or a mixture of both liquids. Glass, ceramic or plastic encapsulation allows operation in aggressive liquids.

### Shot flow control device

Used in the processes of finish-strengthening treatment by surface-plastic deformation method. The device can be used to control stable operation of shot-blasting and shot peening units and consists of a sensor, located in the working chamber and of a measuring unit, generally installed near control panel.

### High temperature electron beam brazing technology

Developed for manufacture and repair of components and units from high-alloy steels and Nickel-, Cobalt- and Titanium-based alloys. Based on a local heating in vacuum of required areas of the component using composite powder or compact solders. This technology may be used to repair components of different thickness and with thin walls, including those with thermal barrier coating on the surface.

### Gear quality control and gear finishing technology

Based on the method of gear generating by cutting and abrasive tools involves computer preliminary simulation of machining processes and machining, and for quality control electronic equipment, linked with electronic computer.

Machining is performed by cutting, chemical-thermal hardening and subsequent grinding or honing with a diamond tool. Process provides about 3-4 times reduction of equipment quantity, about 2 times reduction of machine for bevel gear manufacturing.

### Technology and tooling for precision billets

Isothermal forging (IF) is performed in hydraulic presses with controlled operation travel under static deform load. Isothermal conditions are formed by special devices to provide heat treatment temperature (400-1100 °C). High precision billets. Tolerance and allowance values are reduced by 3-5 times eliminate, as a rule, rough cutting operations. Machining of non-aligned parts surfaces is eliminated.
Automated stand and technique for surface residual stresses control. Technique developed for evaluation residual stresses profile (curve, diagram) in parts surface layers is designed for quality control of coated and uncoated parts and mechanisms eg gas turbine engine blades. Distribution curve of residual stresses in metal parts, including coated ones, can be produced within only 15-20 minutes.

Industrial vibrodiagnostic analyser ‘SPECTR-4’ (spectrum). Designed for analysing the state and real charge of the mills. For grinding units. Controlling the charge degree with the high precision. Diagnosing the state of the mill lining and grinding bodies of the units in operation. Protecting the mills from overloading and underloading.

Wire production line with non-acid surface preparation. Acid pickling is eliminated from the in-line production of wire. Wire rods 6.5-8.0 mm diam are mechanically descaled, underlubricating coating (lubricant carrier) being applied simultaneously. The line output is 1000 kg/h when processing wire 4.0 mm diam at drawing speed 500 m/min. Line overall dimensions, m: 31.5 x 6, 3 x 3.8. Main uses of technology: the line is used in the wire production for wire rod descaling.

Electrodes for welding steel structures at subzero temperatures. Basic coated electrodes (grade BCO-50CK) 3 mm in diameter and 350 mm in length are intended to be used for welding from above to down the root layer of joints from low-alloy carbon steels with a tensile strength of 540-590 N/mm. Advantages: the possibility of welding in all positions, high linear welding speed, the formation of a uniform back bead on the weld seam, which excludes the necessity for applying an inside backing weld.

Method and 24-strand direct resistance heating unit for wire heat treatment. Comprises the operations of wire patenting and preparation of its surface for drawing. The process of wire surface preparation for drawing is carried out in traditional ways. When wire patenting the resistance heating is carried out by passing current through the wire. The unit output up to 2000 kg/h, wire diameter, mm - 1,8-4,5, wire travelling speed up to 0.5 m/s, power consumption for resistance heating - 250kW h/t, unit dimensions, mm - 7000 x 3000 x 2000.
Offers

Ref No.  Org. No.  Cat.  Status  Offer
105434  17  3  C  S  

Rope twisting machine preformers for 12-41 and 41-90 mm diam untwisting ropes. Each preformer consists of three discs with a certain number of deforming rollers. The preformer for 12-41 mm ropes permits to produce 6-strand, 7-strand or 12-strand ropes. The preformer for 41-90 mm ropes permits producing 6-strand and 7-strand ropes without dismantling. The threading and setting of the preformers takes 1-2 minutes. The preformer reduces the threading time and makes the worker labour easier.

Ref No.  Org. No.  Cat.  Status  Offer
105435  17  3  C  S  

Continuous process and units for bright patenting and hot galvanising of steel wire. Includes heating for patenting, isothermic quenching, hot galvanising and cooling, applying of an underlubricating coating and drying. There have been developed two models of 24-strand units for wire diameters 2,0-4.5 mm and 0,8-2.0 mm. Wire speed: 8-25 m/min according to wire diameter. Distinctive feature: combining of surface preparation with heating for patenting.

Ref No.  Org. No.  Cat.  Status  Offer
105436  17  3  C  S  

Technology for steel wire combined patenting and hot galvanising process. Comprises wire heating in a chlorous salt melt followed by galvanising in a combined flux - Pb - Zn bath. The unit consists of two baths in which all the technological operations are carried out. Specifications: output, kg/h: up to 1800; number of threads to be treated - 24, diam of process wire, mm, 1,6-4.0 speed of wire treatment, m/min: 12-30.

Ref No.  Org. No.  Cat.  Status  Offer
205437  18  3  S  

Forsterite tuyeres for metal blowing with inert gases. A refractory material of magnesia-silicate composition is used. Tuyeres can be manufactured in 2 types: single layer and two layer of types and sizes with consideration of requirements and wishes of the licensee. The technology achieves a metal and slag resistance increase due of a lower extent of the wetting ability, a possibility of using less expensive refractory materials, simplification of the technological process for the manufacture of tuyeres, reduction in costs.

Ref No.  Org. No.  Cat.  Status  Offer
5438  19  3  S  

Alloys on the base of silicon, iron and calcium. Methods of making alloys on the base of silicon, iron and calcium and containing alloying elements by a one-stage carbothermic process carried out in large submerged-arc furnaces, using a mixture of quartzite, lime, a carbonaceous reductant, scrap steel and alloying additives. The methods are performed in accordance with the inventions patented by the Author's Certificate of the USSR N 1109458 and proposed in Application Nos 4689284/02 and 475313/02.
Alloys on the base of silicon, iron, and calcium for deoxidation and alloying of steel and inoculation cast iron by a silicothermic process. The commercial production of the alloys is carried out in electric arc furnaces equipped with ceramic roofs. The process is carried out in two stages 1) the carbothermic production of ferro-silicon and 2) the silicothermic production of alloys on the base of silicon, iron and calcium and containing other alloying, deoxidising and inoculating elements.

Product of surface technology: equipment for rolling of racks. The technology is for production of racks having various types of gear teeth: involute, pin, spiroid etc. The racks are made as one piece details with any required lengths and with the module of 4-24 mm by rolling heated billets using rolls of special configuration. The technology ensures accuracy of teeth geometry and high quality of their surface. The pitch of teeth is in error by no more than 0.3 with the 4-8 mm module and 0.5 with 10-24 mm module.

Horizontal continuous casting machine: The machine consists of steel teeming ladle, a tundish, joined to a mould in an air-tight fashion, a secondary cooling system which ensures uniform cooling of the surface of cast billets and their solidification. Withdrawal of the billet is performed in a withdrawal stand and cutting of the billet into lengths is carried out by an oxygen cutting device with which each strand is equipped. A driven roller table conveys lengths of billet into a cooler.

Production process for rails of high service strength. The technology applies carbon hypereutectoid steel (0.82-0.92 C), deoxidised and modified by effective elements, combined thermal treatment of rails. Rails produced according to the technology possess properties distributed differentially among the section's elements, high strength of the metal in hardened layer of rail head and at the same time high plasticity and viscosity of the metal in rails web and foot.

Technology, equipment and tool for selective abrasive conditioning of rolled products: The machine ensures quick and accurate positioning of defective spots of rolled products in the required position and their subsequent effective treatment. The technology can be employed for removal of surface cracks, including hair line cracks, flaws and other local surface defects of billets, rolled products, tubes etc.
A vibration absorbing alloy and technology for its production. The alloy has a fine-grained structure, providing the increase of damping ability with the increase in vibration amplitude during cyclic loads and operating temperature changes. Process involves the production of iron-copper-based powder, processing with heat, sizing, cold moulding, sintering, quality control, packing and handling. Use of this material is highly beneficial at vibration amplitudes more than 50 Ns/mm and temperature above 350°C.

Electrolyzer for production of misch metal. A new electrolyzer with pre-baked anodes is offered under a licensing agreement for producing misch metal from fluoride-oxide electrolytes, it can also be applied for production of alloys of rare-earth metals with magnesium, aluminium and other metals. The design of the electrolyzer ensures recovery of 90-93% of rare earth metals into misch metal. Three men per shift can operate 15 electrolyzers.

High quality cast iron grades for fabrication of ball-forming tools. High quality grades of yttrium-modified cast iron for application to fabrication of ball-forming tools used in ball bearing production. The casting of the ball forming tools are produced under specific conditions using special moulds and equipment. The technology permits control of cast iron structure which fact makes it possible to attain present correlations between the wear resistance and the throughput of the ball forming tools.

Modifier for aluminium casting alloys. Modified silumin have tensile strength in the range of 215 to 235 MPa and hardness HB in the range of 115 to 120. The modifier comprises predetermined quantities of phosphorus, sulfur, hexachloretane and special additions. The modifier is fabricated as cylindrical tablets. The peculiarity of the modifier under discussion is its ability to withdraw hydrogen from the melt.

Cast iron for tillage tools fabrication. High strength, good wear resistance and relatively simple fabrication procedure are characteristic of the material. The cast iron has the following physical and mechanical characteristics: tensile strength, *10 MPa up to 70, Elongation * up to 10, Hardness, HB-140-380. The characteristics listed are attained by cast iron treatment with a number of a rare earth elements. Can be used, for example, for fabrication of tilling tools.

Fabrication of self-sharpening forming implements. The technique proposed provides for fabrication of self-sharpening blades, the base material strength being kept high. The method is free from base metal penetration and through blanch which fact makes it possible to obtain hard layer of constant thickness over a rather thin section (up to 3mm).
Tin based silver free solder for low temperature brazing Manufacturing of electro and radio equipment by tinning and rosin brazing of articles, working under different weather conditions under permanent and cyclic temperature grad of -70 C to +200 C.

Protective technological high temperature coating For protection of ti alloys semi-finished items while heating in furnaces under oxidizing atmosphere. On stamping the coating is a lubricant and heat isolating material. Provides stable chemical composition, protection of Ti alloys at the temperature up to 1300 C.

Polyethylene insulation of pipes The technique is based on creating long term bonding of polyethylene with metal by means of adhesive materials available for general use. Insulated pipes can widely be used for gas manifolds and water supply systems and also for other pipelines operating at temperatures of surroundings and transported products up to 60 degrees C above zero.

The technology of repairing coating defects The technique allows in line repairing with the help of epoxy compound. Repairing is performed by means of the application of fast hardening epoxy composition onto a preliminary heated spot of defested coating. Heating is done with the use of a high effective heater of original design.

Vitreous enamel coating line of pipes The technique allows two and three coat powder electrostatic enameling of inner and outer surfaces of pipes at single heating. Enamel coating line is designed for diameters of 108-426 mm and of length 12 m employed for laying pipelines of various destinations. The equipment makes possible both inner and outer surfaces coating simultaneously.

Anticorrosion shock proof coating of pipe outer surface The technique consists of applying two layer coating. The first layer of thickness 0,25-0,45 mm is made of epoxy powder. The second layer of thickness 0,5-0,8 mm is a mixture of epoxy powder and dispersive filling agent. The technique ensures high resistance against mechanical stress in combination with high anticorrosion properties. Relatively cheap basic materials.

Production of wear resistant pipes/elbows Technique is based on fusing the inner surface of a steel pipe/elbow with wear-resistant alloys by high temperature carbonisation. Thus the inner layer of a pipe/elbow acquires high resistance against abrasive wear. Hard pipes/elbows makes it possible to increase pipes lifetime from 1-3 years to 5-15 years and that of elbows from 1-2 years to 5-10 years.
Offers

Ref No. Org. No. Cat. Status Offer
5458 25 3 C SL

Low waste contamination free technology of electrochemical cleaning of metal products. The technique is based on electrochemical cleaning by means of contamination free solution. The technology can be used in car industry, machine industry, steel tubular industry etc.

Ref No. Org. No. Cat. Status Offer
105459 25 3 C SL

Elastometallic (polyurethane) tool for production and finish of thin wall pipes and coated pipes. The use of polyurethane tools permits the most progressive schedules of skelping and multiplane schemes of pipe straightening on standard electric weld pipe mills, roll straighteners and finishing floors.

Ref No. Org. No. Cat. Status Offer
5460 27 3 C SL

New method of forging of compound shape forgings having cavities method is used to forge in split dies with the application of overpressure and counterpressure. Method ensures a one-step forging of compound parts due to a combination of few operations in one die impression. The complex permits compound shape forgings like angle pieces and hydraulic T-joints for aircraft, shipbuilding, machine-building and other industries.

Ref No. Org. No. Cat. Status Offer
105461 27 3 C SL

Double action screw press. Intended for hot flashless drop forging of complex shaped parts having side branches, ribs, extensions, flangers, teeth etc made of steel and non-ferrous alloys. The differentiated clamping of die halves in a special die-set unit and part deforming in a cross splitting die are carried out by a special unit in a press consisting of hold down and deforming slides with a screw drive mechanism.

Ref No. Org. No. Cat. Status Offer
105462 27 3 C SL

New method doubles the efficiency of band ripped pipe manufacturing. Method includes initial pipe sizing, pipe outer surface spiral groove and knurl rolling, flat band coiling into spiral grooves or L-section band coiling into the pipe knurles surface, expanding the spiral into grooves or knurles and ribbed pipe size cutting. Aluminium, brass or copper bands can be used for manufacturing ribbed pipes, irrespective of the base pipe material.

Ref No. Org. No. Cat. Status Offer
5463 30 3 C SL

Turbo-abrasive machining (TAO technology) Machining in fluidised bed of abrasive grain. Finish machining for complex shaped parts. Deburring and edge rounding off after cutting and stamping. Surface preparation for coating. Increase of productivity of 3 to 10 times.
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**Portable workshop.** Especially applicable to developing countries this mobile workshop is designed on a modular basis. These modules can be toolkits, spare parts, welders, compressors, work benches, etc. All the units can be picked up and loaded onto a flat-bed truck with a built-in crane, then unloaded if necessary at the work site.

**Security window/door combination lock.** This stylish and attractive fitting is designed in the form of a coordinated range of pivot locking handle, locking stay and locking door handle models, in which a three barrel combination lock mechanism is neatly integrated within the arm of the handle. It will easily replace existing fittings of UK and European design. The locking stay version will allow the window to be locked in the open position and can be reprogrammed at will (no key to lose). The units are designed to be fail safe.

**Process for the recovery of refined zinc from secondary zinc oxide materials (the Stewart process).** The process avoids the need for blast furnace or retort treatment which creates problems due to reoxydation of the zinc vapour and also requires pretreatment of the fine original material by sintering or briquetting.

**Sheet and coil metal forming machinery for section forming and punching.** Several designs of roll-forming and strip processing machinery are available including low cost versions. Drives using gear or chains, modular, rafted and/or with quick release tooling to suit local conditions. Capacities from 0.1 mm to 6 mm in steel, aluminium and stainless steels.

**High strength marine cargo and vehicle clamp in alloy steel drop forging with rapid tightening feature.** This clamp has been designed for securing lorries to the deck of a ship or marine cargo to the deck of a ship. It can also be used for car transporters.

**Automotive piston production including: melting of special aluminum alloy, gravity die casting of pistons, heat treatment of castings, machining and coating of pistons.**

**Electric arc steelmaking and rolling EAF, ladle furnace vacuum degassing.** Black and billet rolling medium section. Rolling conditions. Heat treatment.
Offers

Ref No. Org. No. Cat. Status Offer
105471 44 3 C SJ

Reduced energy diffusion bonding process
Solid state bonding of two completely different metals for aluminium, zinc manufacturing industries aerospace industry. The reduction of voltage drop through the joint reduces electricity cost.

Ref No. Org. No. Cat. Status Offer
205472 82 3 W J

Ultrahigh pressure compact press The press 'KOUZKO' is designed to develop pressures from 2 to 60 thousand tons. It can process metals, polymers, composites and other materials using the technique of cold hydromechanic extrusion.

Ref No. Org. No. Cat. Status Offer
105473 84 3 C L

Cosworth process Low pressure sand casting process for the manufacture of dimensionally accurate high integrity complex aluminium automotive and aerospace components.

Ref No. Org. No. Cat. Status Offer
205474 84 3 C L

Meehanite process Established metallurgical processing and auditing for the manufacture of ferrous casting to the internationally recognised MEEHANITE quality symbol.

Ref No. Org. No. Cat. Status Offer
5475 98 3 F J

Metal industry rehabilitation A complete package of technology, equipment and services to establish, assist, improve, manage or rehabilitate metal industries and metal-related institutes in many countries. Emphasis on casting/foundry technology, industrial heat treatment and industrial development.

Ref No. Org. No. Cat. Status Offer
5476 107 3 C L

TR method for forging crankshafts A special device mounted on a press of any kind (stroke range 500 to 10,000 tons) enables to combine forging and upsetting in one operation. The method offers continuous grain flow of forgings, saving of material, energy and time. Available also a version for shaping small items.

Ref No. Org. No. Cat. Status Offer
105477 109 3 F S

Hot tin plant Can tin up to 7 mill electronic parts, automatic turning of the parts, 50% savings in energy, no pollution, high quality of the tin contacts, the electronic parts are held by magnetic system.

Ref No. Org. No. Cat. Status Offer
5478 119 3 PFC L

Centrifugal casting technology International patented system gives outstanding quality results. The system is specialised on copper alloys eg bronze, red brass, brass etc but can also be modified for iron and steel alloys. Technology transfer includes licences, know-how, training and production equipment.

Ref No. Org. No. Cat. Status Offer
105479 125.09 3 CY L

Hot iron this technology permits to produce hot iron using 100% anthracite without preheat treatment in cool air blasting cupola.
Magnetically impelled arc butt welding The principle is based on the motion of a wire in a magnetic field, the developed machines are designed for butt joining of pipes and other bodies with closed contour. Such as axes, shafts, cups, chain wheels, reservoirs etc.

Optimally alloyed high nitrogen rapid steel The rapid steels are of the heat-resisting types of steels with high hardness due to the nitrogen alloying characterised by increased technological ductility, comparatively low carbide non-uniformity and low tendency towards austenitic grain coarsening during heating.

Optimally alloyed high nitrogen steel with increased heat resistance produced by counter-pressure casting - the proposed tool steels are developed for high temperature material processing. They are characterised by an increased heat resistance. They have good machinability and ductility.

Copper contact for welding with a continuous electrode wire - the contact nozzles are used with automatic or semi-automatic welding machines with a melting electrode which are operated in a protective gas medium under flux protection and with flux-cored electrode wire. They are made of copper or copper alloys.

Electroextraction of zinc (improved method) - by the application of inorganic mixture, which prevents the redissolving of zinc and reduces the negative impact of metal impurities. Reduction of energy expenses, an increased output of cathode zinc.

Plating technology sulphate electrolyte for deposition of bright, smooth tin coatings. Conditions: room temperature, wide interval of cathodic current densities. This process has been used in Bulgaria, USSR, Poland.

Chromate conversion coatings technology used for zinc and for cadmium. Some systems are developed for zinc alloy coatings such as zinc cobalt and others. Applications: in all industries where an improved corrosion resistance of zinc coatings is necessary.

Bright nickel electrodeposition by electrolyte, self-cleaning from iron impurities - suitable for the deposition of bright protective and decorative nickel plate. The iron is bonded in soluble complexes without any negative effects.
Abrasive resistant cast iron, the new cast irons are featured by a very high resistance to abrasive wear at a sufficiently high strength. The castings do not contain expensive alloying elements, such as nickel, tungsten, molybdenum.

Machine for semi-continuous horizontal casting under gas counter pressure for the casting of light and heavy non-ferrous metals and their alloys with possibility of effecting the process in conditions of increased gas pressure.

Two layer thermal products (stomatological crucibles) - application in high frequency stomatological equipment for melting and casting steel, ferrochrome, chrome-cobalt-molybdenum, chrome-cobalt-nickel, gold and other stomatological alloys.

Electrolytes for bright weakly acidic zinc coatings AZ - the electrolytes AZ represent a composition of inorganic and organic additives. They can be prepared on the basis of sulphates, chlorides or mixed salts with varying amounts of ammonium ions, electrodeposits - bright, ductile, with good adhesion to the substrate, high corrosion resistance.

Steels for medicine and stomatology - steels for medical implants, austenitic N-MO corrosion resistant steel, CR-CO-NI alloy for stomatological cermet materials. Very good biological toleration, good contact with various cellular structures.

Cavity filling of axis-symmetrical moulds with molten metal and metal solidification are simulated by means of various mathematical approaches. Program product ‘SICAST-2, FLHIT-2’ on the basis of the results it is possible to determine special zones in the mould where filling problems can arise as well as zones in the casting where defects are most likely to appear. The programme product is useful in developing foundry technologies.

Program product ‘CONSICAST’ the material and the geometric dimensions of the mould as well as the effect of its outer surface can be chosen with the help of this program product so that a preset cooling rate of the axis-symmetrical casting can be achieved. Use: in developing more effective casting technologies leading to cost reduction in foundry equipment manufacturing and to reduced consumption of utilities.
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**Diffusion welding apparatus and technology** - designed for welding together high melting and active materials, heterogeneous metals, special ceramics, cermet materials, metals and non-metals, heat resistant alloys, superhard and hard alloys, hard alloys and metals.

**Composite material reinforced diesel engine pistons characteristics**:
- High wear resistance of the compression piston ring groove,
- Good heat abstraction through the piston ring,
- High resistance to high temperatures,
- Possibility for thermal expansion control by means of insert incorporation in the castings.

**High strength cast aluminium alloy**
- Increased impact and fatigue strengths make it suitable for the production of components operating under severe conditions.
- Application: in the hydraulic industry and in replacing the plastically deformable components by cast ones.

**MEDEX - extraction of copper from copper containing ammoniac solutions** solves the problem of regeneration of etching copper containing NH(3) solutions.
- Application: 
  - CU is reused as high quality electrolytic CU,
  - Chemicals are saved as the reactivated and conditioned solution is recycled back in the process.

**New patented foundry process with many advantages in comparison with the V-process (vacuum moulding)**. The moulding is done in gasified polystyrene block shells. Possibilities are created for automation of the production of complex shape steel and cast iron castings.

**Pipe and tube manufacture under joint venture offered for high temperature service pipes, alloy steel pipes, geological pipes, tubes for structural purposes and compressor pipes**.

**Stainless steel coatings applied to concrete allows the production of metal coated concrete elements** e.g. pre-fabricated cementious products, on site coating of tanks, containers etc.
- Metal coating of concrete protects the construction elements against chemical and mechanical attacks.
- The adhesion between coating and cementitious surfaces, as well as the long term stability are excellent.

**Picking inhibitor**
- A novel, corrosion inhibitor for multi-purpose applications like pickling of steel and non-ferrous metals.
- Reduces acid consumption and metal dissolution to the extent of 50% as compared to conventional pickling inhibitors.
Manufacture of welding electrodes by process of extrusion. The core wire is coated by flux. This flux coating must conform to the stringent norms and classification requirements and therefore calls for good formulations and precision machinery to achieve good quality of the products.

Tin radical ceramic cutting tool more advanced than hard metal cutting tool in strength, heat shock resistance and wear-resistance and is easy to process. As the specific gravity of tin material is about half of WC material, the cost of it is much lower than hard metal tool.

Design of special purpose metal cutting and metal forming machines design of testings, jigs and fixtures, tooling and production systems.

Investment casting

Brake shoes made of phosphorus cast iron. The modified cast iron with elevated content of P is characterised by a pearlitic structure with the lattice of phosphorus eutectic. Hardness of castings 200-260 HB. Wide range of applicability of the technology from automatic moulding line to hand-made products.

Manufacturing of ductile iron castings. Manufacture of ductile cast iron based on simple and cheap technological processes which do not require expensive equipment. Main advantages: improvement in service life of machine elements and spare parts.

Milling balls made of high-chromium cast iron. Milling balls of 30-100mm diameter made of chromium cast iron are characterized after heat treatment consisting of air quenching and tempering by a hardness of 50-60 HRC over the entire cross section. A few technological variations were developed: gravity die casting, casting into sand moulds and into shell moulds.

Management of industrial wastes in mining. Preparation of proper suspension and its transport and application to mining use.

DM planetary rolling mill. The planetary rolls circling around the tube are supported on a back-up ring. Usages: Production of the precision tubes for cylinders, linings. Advantages: Tubes with very high surface finish (RA 0.4-0.6 m) and high dimensional and straightness.
Offers

Ref No.  Org. No.  Cat.  Status  Offer
705512  140.04  3  W  L/S

Machines and installation for cutting rocks using non-conventional methods: 1. Breaking blocks of stone and concrete into fragments by electrohydraulic method. 2. Cutting with high pressure flows, up to 2500 bars. Usages: Disintegration of oversize blocks and mining of hard rocks and in coal mines with high gas hazard or steep galleries.

Ref No.  Org. No.  Cat.  Status  Offer
605513  140.09  3  C  L/S


Ref No.  Org. No.  Cat.  Status  Offer
505514  140.11  3  C  L

Thermal reclamation of used moulding sands. By the burning of resin binder out of used moulding sand to reclaim the sand. Usages: Reclamation of foundry sand from used resin moulding sand.

Ref No.  Org. No.  Cat.  Status  Offer
405515  140.11  3  C  L

Mechanical reclamation of used moulding sand. Mechanical separation of binder in used moulding sand to reclaim the sand. Usages: Reclamation of sand from used moulding sands of all kinds except oil sand and resin sand.

Ref No.  Org. No.  Cat.  Status  Offer
305516  140.11  3  C  L

SKB - sfero and SKK - sfero units for spheroidization of cast iron. Spheroidization of cast iron by bar method in mechanized units. Mechanized units of SKB-sfero type/output up to 12t/h are intended for making spheroidizing iron in the plants of variable product line. Highly automated units SKK-sfero type/output 40t/h are intended for making spheroidizing iron in the plants of steady product line.

Ref No.  Org. No.  Cat.  Status  Offer
205517  140.11  3  C  L

Cast iron melting shops equipment with cupolas or rotary air furnaces. Various degree of mechanization and automation equipped with cupolas of output from 2 to 20 t/h. Heaters, environment protection equipment, moving floors with charging devices, dryers. For production of liquid grey cast iron which can be enriched.

Ref No.  Org. No.  Cat.  Status  Offer
105518  140.11  3  C  L

Automatic moulding line for production of boiler section. Production of boiler sections of grey cast iron in moulding boxes - dimension 1475 x 160/160mm. Output 120 moulds/h. Moulding process - classical densifying of moulding sand by sand slinger with squeezing.

Ref No.  Org. No.  Cat.  Status  Offer
905519  140.11  3  C  L

Cooling equipment in closed cycle-conditioning of supplementary water. Cooling on membraneless exchangers, softening of supplementary water in ion exchange unit, deionizing and demanganization, filtration. Possibility of processing water in the cycle through sedimentation or flotation with coagulation and neutralization. Usages: In melting shops.
<table>
<thead>
<tr>
<th>Ref No.</th>
<th>Org. No.</th>
<th>Cat. Status Offer</th>
<th>Status</th>
<th>Offer</th>
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<tbody>
<tr>
<td>705520</td>
<td>140.11</td>
<td>3 C L</td>
<td></td>
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<tr>
<td>705521</td>
<td>140.11</td>
<td>3 C L</td>
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<td>Manufacture of phosphoric cast iron brake blocks for railway rolling stock. Green sand moulding synthetic sands on Disamatic, melting of cast iron in hot blast cupola dial 400, pouring - junker with bottom pour ladle, fully mechanized line of knocking out, fettling and transporting of castings.</td>
</tr>
<tr>
<td>505522</td>
<td>140.11</td>
<td>3 C L/S</td>
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<td></td>
<td>Casting of iron and sewage pipes and pipe fittings. Casting of pipes on double-permanent mould centrifugal casting machines without heat treatment. Casting of pipe fittings in permanent moulds on carousel. For production of sewage pipes and pipe fittings.</td>
</tr>
<tr>
<td>505523</td>
<td>140.11</td>
<td>3 C L/S</td>
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<td>Basalt pipes and plates permanent mould casting on automatic chain conveyor up to 240 permanent moulds per hour. Casting the basalt pipes on centrifugal casting machines (horizontal) up to 15 pipes per hour.</td>
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<tr>
<td>305524</td>
<td>140.11</td>
<td>3 C L</td>
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<td>Manufacture of chilled cast iron grinding rolls. Casting a face of rolls in permanent mould mechanical working and assembly of rolls. Manufacture of rolls for corn mills.</td>
</tr>
<tr>
<td>305525</td>
<td>140.11</td>
<td>3 C L</td>
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<td></td>
<td>Manufacture of high-chromium cast iron grinding media for cement industry. Green sand casting of grinding media in sand moulds, heat treatment of castings. Advantages: High quality of castings, hardness of casting about 55 HRc, low wear of grinding media during production of cement.</td>
</tr>
<tr>
<td>105526</td>
<td>140.12</td>
<td>3 C L</td>
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<td>Twist drills production (hot rolling method) Cutting, chamfering, hot rolling, cutting cylindrical grinding, sharpening, marking, packing. HSS Economy approx 75 against traditional methods of production.</td>
</tr>
<tr>
<td>105527</td>
<td>140.12</td>
<td>3 C L</td>
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<td></td>
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<td></td>
<td>Cast iron melting and centrifugal casting of cylinder sleeve, machining Technology involves three basic mfg technics: mfg of cast iron alloy induction furnace, f- ming of sleeve casting feeding furnace and semi-automatic with rotary stations by means of rotary mould system machining.</td>
</tr>
</tbody>
</table>
Ref No. Org. No. Cat. Status Offer
905528 140.12 3 C L

Plant for manufacture of head pans from black iron plate, (Holta type). Plastic forming of sheets, cutting of discs and strips, cold stamping of body and handles riveting. Advantages: High efficiency and reliability of equipment, straight-forward and convenient operation.

Ref No. Org. No. Cat. Status Offer
905529 140.12 3 C L


Ref No. Org. No. Cat. Status Offer
705530 140.12 3 C L

Welding coated electrodes production plant. Manufacturing of dry mixed powders of coating paste components, rod coating, mechanical treatment of the coat, heat treatment of the electrode. The plant may manufacture electrodes for cast iron welding, hard metal flame painting, Al welding.

Ref No. Org. No. Cat. Status Offer
605531 140.12 3 C L

Manufacturing line for galvanised sheet metal products. Manufacturing of bucket foot (cutting, coining, welding), bucket bottom (pressing, etc.), bucket body (die shearing, rolling, seaming, flanging, grooving etc) assembly of bucket parts decreasing, etching, galvanising. Advantages: Quick and precise (leakproof) joining of separate bucket parts.

Ref No. Org. No. Cat. Status Offer
505532 140.18 3 C L

Cu-Zn alloy plating. Type of galvanising bath cyanide. Coating thickness obtained: 40-50 um, Coating rate: 0.5 um/min. Cathode efficiency: 80 coating hardness: HV 140-150 kG/sq mm. Usages: Anticorrosive protection of machine elements and assemblies.

Ref No. Org. No. Cat. Status Offer
405533 140.18 3 C L

Cu, Sn alloy plating. Type of galvanizing bath cyanidestannate. Coating thickness obtained 30-80 um. Coating rate 0.5 um/min. Cathode efficiency 80. Coating hardness HB 22kG/sq mm.

Ref No. Org. No. Cat. Status Offer
305534 140.19 3 C L

Technology for economic strata support in small scale mine. Yielding steel arches made from new section steel with various reinforcements meeting requirements of soft and squeezing rocks. Advantages: Low costs as compared with concrete or reinforced concrete supports, 30% higher load bearing capacity as compared with traditional supports, high yielding capacity.

Ref No. Org. No. Cat. Status Offer
205535 140.24 3 C L

Regeneration of metal parts. Chester Molecular is two component, thixotropic paste material for regeneration of metal parts and surfaces. Usages: Regeneration of bearings, shaft necks, pumps, rotor bodies etc. Repairs of leakages and welds etc. Advantages: Reduction of repair costs, time saving, possibility of emergency repair without welding, etc.
<table>
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<tr>
<th>Ref No.</th>
<th>Org. No.</th>
<th>Cat. Status Offer</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>105536</td>
<td>1.25</td>
<td>4 CL</td>
<td>Cable fault location detector. Uses earth potentiometry and electro magnetic induction to locate the ground fault point of cable.</td>
</tr>
<tr>
<td>905537</td>
<td>1.25</td>
<td>4 CL</td>
<td>Control of lifting electromagnets to retain magnetic force when power is lost. In order to meet requirements of electromagnetic cranes this system operates as an electromagnet under power during lifting, but the electromagnets retain their magnetic force for a short time when power is lost either due to open phase, undervoltage or complete loss of supply. The magnetic force is retained for 15 minutes or 30 minutes etc depending on requirements.</td>
</tr>
<tr>
<td>805538</td>
<td>1.32</td>
<td>4 CL</td>
<td>Plastic magnetic materials and the application of CCQ method. This material is composed of magnetic conducting material and high strength resin, including type A and B. At ambient temperature a magnetic wedge pin is formed at the interface of the electric motor, increasing efficiency by 1-1.75%. Temperature decreases by 5-15 deg C and vibration and noise are reduced.</td>
</tr>
<tr>
<td>705539</td>
<td>1.38</td>
<td>4 CL</td>
<td>Electrical earth protection used to protect personal safety. When a machines electrical insulation is broken, the electrical circuit trips cut. 6Kv delta and star used in connected power circuits in overhead line power supplies and cable power supplies.</td>
</tr>
<tr>
<td>505540</td>
<td>1.38</td>
<td>4 C L</td>
<td>Electric variable speed drives for AC motors. Both rotor connected capacitor and resistor types are used. The resistor system is used in motor hoists, the capacitor system is used for continuous operation eg electric train, rolling mill, ventilator and pump.</td>
</tr>
<tr>
<td>505541</td>
<td>1.5</td>
<td>4 C J</td>
<td>Radio recorder. The technology of welding, debugging and assembling.</td>
</tr>
<tr>
<td>305542</td>
<td>2</td>
<td>4 M L/S</td>
<td>Fault detection for electric motors. This apparatus detects rotor bar faults by breaking a phase locked loop. The technology is offered for licence.</td>
</tr>
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<td>Ref No.</td>
<td>Org. No.</td>
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<tr>
<td>305543</td>
<td>2</td>
<td>4 W L</td>
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<tr>
<td>105544</td>
<td>8</td>
<td>4 W S</td>
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</tr>
<tr>
<td>105545</td>
<td>8</td>
<td>4 W S</td>
<td></td>
</tr>
<tr>
<td>705548</td>
<td>31</td>
<td>4 W L</td>
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</table>

**Vehicle windscreen wiper controlled from screen wetness** Available for manufacture as a DIY retrofit model or for incorporation into vehicle manufacturers central processor control software.

**Commutator lead welding machine** The welding job is performed automatically by a pair of electrodes at each job station, and the work is not stopped for replacing burnt-out electrodes. Job quality control and rejection of spoilage are provided. All jobs, including loading and unloading, are carried out automatically. One machine modification is available with walking conveyor loader, automatic spoilage reject.

**Machine for press-fitting bearings on rotor shafts of household induction motors** The machine consists of a bedframe, bearing and rotor shaft gravity feeders, bearing and rotor handling mechanism, press-fitting mechanism, product accumulator, electric and pneumatic equipment. The bearings should be cleaned of slushing compound. Lubrication of fitted-on bearings is not provided.

**Machine for assembling commutator laminae and insulating spacers into a ring jig** The machine consists of a bed, vibratory feeder for feeding commutator laminae, magazines for insulating spacers and ring jigs, electrical and pneumatic equipment, mechanisms for feeding laminae and insulating spacers to the assembly zone and for supplying ring jigs to the stack press-fitting zone.

**Machine for commutator magneto-abrasive treatment** Machine consists of a base on which a washer is mounted, a mechanism for its returning, a loading and armature rotating mechanism, coils for magnetic field generation, microprocessor, electric supply unit, control-panel and screening block. It is a double-position machine which includes loading and working positions. All the operations except loading and unloading are automatic.

**Range of high efficiency fluorescent lighting units** A range of attractive fluorescent lighting units designed for ease of installation and tube replacement. High frequency electronic ballasts ensure instant start up without flicker using high efficiency tubes and special reflective films. The units are BRE CON approved. Each unit is individually switched and can be changed from down lighting to architectural uplighting, either manually or by an infra-red signal.
Ultra compact pancake style (doughnut) motor. Peak continuous torque of 0.35 Nm is achieved with 100 mm diameter and 11 mm axial length including shaft and bearing. Internal diam is 41 mm. A drive circuit is available for the motor.

Automatic calendar. A battery powered automatic calendar of falling leaf display type. Will run for one year on a small battery without attention. Retail cost comparable to hand changed models.

Permanent magnet DC electric pancake motor for electrically powered small vehicles - high efficiency - low internal resistance - high power and torque at low speed - high magnetic flux density - high power/weight ratio - low weight and compact dimensions result from high efficiency, pancake construction and integrated commutator.

Wind powered generator Designed for battery charging application. Output 70 watts at 18 mph (8 metres/sec) wind speed. The maximum wind speed 132 mph (60 metres/sec). This machine is designed for high reliability and long life and with minimum maintenance.

Refrigerated intercooling Indirect refrigerated intercooling for turbo charged engines by means of chilling the circulated fluid of an air-to-water intercooling system via a low cost ultra-compact refrigeration-to-water plate heat exchanger for passenger or rally car performance improvement.

Load control unit for electric motors of mining machines Control unit for motors of mining machines protects electric motors operating in hard conditions. It provides switching off motors in case of stalling and uncompleted start as well as their temperature and overload protection.

Loudspeaking communication and warning system The system includes loudspeaking communication station and stop and signal and diagnosis unit installed in the heading, as well as line stations spaced within a certain distance from each other. The last line station is equipped with monitoring unit to monitor the passage of warning and stop and signals. The system provides two-way communication between miners positioned along stopping face and heading, machinery pre-start warning signals and monitoring.
<table>
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<th>Ref No.</th>
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<tbody>
<tr>
<td>805556</td>
<td>34</td>
<td>4</td>
<td>C</td>
<td>SL</td>
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</table>

Intrinsically safe power supply sources To supply stabilised or non-stabilised rectified voltage to intrinsically safe communication and control systems which operate in the atmosphere where formation of explosive dust air gas mixtures is probable. The intrinsically safe power supply sources are used in gassy and dusty mines to feed the control equipment. The intrinsically safe power supply sources may also be used in oil, gas, chemical and other industries dealing with dangerously explosive media.

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<tbody>
<tr>
<td>705557</td>
<td>42</td>
<td>4</td>
<td>C</td>
<td>J</td>
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</table>

Power conditioning Regulation, conversion and maintenance of electrical power for critical and special loads including uninterruptable power supplies for computers and critical equipments, adjustable frequency converters for AC motors and fixed frequency converters for special applications.

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<tbody>
<tr>
<td>605558</td>
<td>75</td>
<td>4</td>
<td>W</td>
<td>J</td>
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</table>

Converted domestic refrigerators from CFC's to propane Safely and energy factors have been carefully analysed. We have gained considerable expertise in this field and can now offer this know-how for the design of environmentally friendly refrigerators and are seeking an industrial sponsor.

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<tbody>
<tr>
<td>505559</td>
<td>76</td>
<td>4</td>
<td>W</td>
<td>S</td>
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</table>

A multi-piston expander/engine for use in a small scale power generation system to produce rotary power from low pressure working gas. Ideal for production of electrical power from alternate energy sources. Simple to operate and maintain. High torque at low operating speeds for good longevity.

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<tr>
<td>305560</td>
<td>79</td>
<td>4</td>
<td>F</td>
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</table>

Predictive switch for control of air compressors It turns a motor off when compressor off loads without waiting for a timer to time out. On large machines payback can be a few weeks.

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<tbody>
<tr>
<td>305561</td>
<td>86</td>
<td>4</td>
<td>C</td>
<td>J</td>
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</table>

High voltage resistors Machinery and know-how for the production of high voltage/high ohm resistors. Elements to be used in many industrial, professional and military applications. Any form of co-operation like buy-back negotiable.

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<tbody>
<tr>
<td>105562</td>
<td>103</td>
<td>4</td>
<td>F</td>
<td>L</td>
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</table>

Innovative range of electronic relays for 3 phase motor protection, pump protection, compressor protection, winding protection. Also available electronic relays for level controller, temperature control and process control. Established design proven application and huge market potential.
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<tbody>
<tr>
<td>105563</td>
<td>117</td>
<td>4</td>
<td>W</td>
<td>LS</td>
</tr>
<tr>
<td><strong>New HED technology (high efficiency dehumification)</strong> for cooling and dehumification of air. Realised in independent units and whole systems. For air conditioning or dehumification of any size of building and storehouses. Using 40% to 65% of electric energy only compared to equipment on the market of same capacity.</td>
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<tr>
<td>905564</td>
<td>125.04</td>
<td>4</td>
<td>C</td>
<td>L</td>
</tr>
<tr>
<td><strong>Axial water pump</strong> The pump is made of normal (conventional) materials. It is a stationary pump with a 33KW electric motor. Suitable for low water level.</td>
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<tbody>
<tr>
<td>905565</td>
<td>126</td>
<td>4</td>
<td>F</td>
<td>S</td>
</tr>
<tr>
<td><strong>Magnetohydrodynamic units for soldering coils to electric motor commutators</strong> - can be used for soldering various types and sizes of rotors and for the repair of commutator type electric machines. It can be operated in combination with an industrial robot or manipulators.</td>
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<tr>
<td>705567</td>
<td>127</td>
<td>4</td>
<td>F</td>
<td>J</td>
</tr>
<tr>
<td><strong>Transformers</strong> Searching for foreign investors for the delivery of equipment and joint venture in the production and marketing of transformers. About 3 000 000 dollars are needed for updating the production technology in order to retain the well developed markets in Greece, Turkey, Pakistan, Algeria, Nigeria, Iran, USSR etc.</td>
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<tbody>
<tr>
<td>505568</td>
<td>138.16</td>
<td>4</td>
<td>C</td>
<td>L</td>
</tr>
<tr>
<td><strong>Soft start motor starters with energy saving facilities for induction motors up to 600 HP and energy savers for welding sets. By using energy savers and soft starters, electrical energy consumption can be reduced substantially resulting in energy conservation.</strong></td>
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<tbody>
<tr>
<td>305570</td>
<td>140.09</td>
<td>4</td>
<td>C</td>
<td>L</td>
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<tr>
<td><strong>Vacuum extinguishing chamber Usages: Switch panels. Advantages: Elimination of explosive hazard, reliability.</strong></td>
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<tbody>
<tr>
<td>205571</td>
<td>140.17</td>
<td>4</td>
<td>C</td>
<td>L</td>
</tr>
<tr>
<td><strong>Lighting accessories. Technology for production of switches, sockets, flexible cords, lengthening cords, fuses, light fittings.</strong></td>
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</tbody>
</table>
Offers

Ref No.  Org. No.  Cat.  Status  Offer
105572  140.17  4  C  L


Ref No.  Org. No.  Cat.  Status  Offer
905573  140.17  4  C  L

Technology of electric heating, electric cookers and hairdryers. Overall design of technology of electric heaters, electric cookers, hairdryers and technological plant, delivery of the equipment.

Ref No.  Org. No.  Cat.  Status  Offer
805574  140.2  4  C  L


Ref No.  Org. No.  Cat.  Status  Offer
705575  142  4  C  L

Audio set: Compact disc music system DTS am/fm stereo double cassette. Tape recorded with built in turn table, remote control.
CATEGORY 5 - ELECTRONICS/OPTICAL:

Ref No. Org No. Cat. Status Offer
605576 1.06 5 L

Negative wave-filtering multi-component analytical technique is adopted, based on the principle of absorption of IR light by gases to be determined. It consists of a semiconductive IR detector, an optical interfering filter and integrated circuits. An industrial on-line auto-analysers for the simultaneous analysis of the concentrations of two components.

Ref No. Org No. Cat. Status Offer
505577 1.15 5 L

Millimetre waves therapeutic apparatus
The therapeutic principle of the millimeter waves is the use of energy resonance. It makes the tissue cells of the human body oscillate with intrinsic frequency, then electromagnetic energy transmits into biological body by strong oscillation for maintaining and strengthening the normal metabolism and enables the tissue to be in “best state” for curing some kind of sickness rapidly. There are special effects for gastric, duodenum ulcer, colitis, wounds, infection etc.

Ref No. Org No. Cat. Status Offer
405578 1.25 5 L

Tx-1 graphic nesting programme A complete set for gas cutting machines by using CAD technology, a new NC programming mode is established, which makes nesting of steel plate and programming are efficient and easy. There is also a multi-user and post-processing program served for various NC gas cutting machines.

Ref No. Org No. Cat. Status Offer
305579 1.25 5 C L

Printable solder cream of high purity For surface mounting of electronic components (leadless) onto various types of printed circuit boards. Gives high performance in application and excellent solderability.

Ref No. Org No. Cat. Status Offer
105580 1.25 5 C L

Management information system for cities and towns The system consists of three parts 1) computer information processing system, 2) sound data integralional communication system, 3) word process printing system. The system possesses two functions: office automation (OA), the auxiliary decision making of MIS. It has good practicality and perfect function. The system is developed on the super-minicomputer and micro-computer. Data communication is done by using PABX.
Offers

Ref No. Org. No. Cat. Status Offer
105581 1.25 5 C L

Semi-conductor contactor for alternating current. To eliminate switching surges the contactor switches at zero current part of the waveform. It protects against overload, open phase, short circuit and control faults. It is suitable for control of loads below AC 500 volt, and replaces mechanical contactors. Especially useful for control of frequent start, braking and reversing of AC induction motors.

Ref No. Org. No. Cat. Status Offer
905582 1.3 5

EMA automatic NDT for ferromagnetic material. Electromagnetism can be used in NDT through the excited acoustic in ferromagnetic material. Using a powerful burst to excite acoustic waves, gives a long measurement range and high sensitivity.

Ref No. Org. No. Cat. Status Offer
905583 1.42 5 C L

Harmonic filter. A low loss harmonic filter with two consecutive adjustment functions of inductance and Q factor. It consists of reactor, capacitor bank and microinductance resistor.

Ref No. Org. No. Cat. Status Offer
705584 1.48 5 C L

Uninterruptible power system. UPS is an electronic indirect AC convertor system with electrical energy storage means in the DC link. The primary function is to ensure continuity of an alternating power source. The UPS may also serve to improve the quality of the power source by keeping it within specified characteristics.

Ref No. Org. No. Cat. Status Offer
705585 1.49 5 C L

Spinal cord function monitoring instrument. The product is used for examining the induced potential in human body. It has made technical breakthroughs in low noise high precision bioelectricity amplifier, high quality stimulator and microcomputerised accurately synchronous controlled fast sampling anthum treatment. The product adopts high speed modular converter A/D design with special purpose display and print.

Ref No. Org. No. Cat. Status Offer
505586 1.53 5 C L

Electronic vacuum device production technology. To produce parts by using glass processing technique, electronic vacuum chemistry metal part grid manufacturing technique and to manufacture electronic vacuum device through assembly and technical treatment.

Ref No. Org. No. Cat. Status Offer
505587 1.53 5 C J

Electron gun used for 14in and 17in black and white picture tube. Electron gun is made through punching, cleaning, hydrogen combustion, assembly, beading span setting and other processes.

Ref No. Org. No. Cat. Status Offer
305588 1.53 5 C L

Technology and equipment for manufacturing B/W picture tube. Black/white picture tubes are produced through 35 working processes under clean conditions. The technology and equipment for manufacturing b/w picture tube are developed from imported advanced technology.
Manufacturing technology and equipment for TN-LCD device. Liquid crystal display devices of up to 16 leads are made from transparent conductive glass (ITO glass) through following operations: clearing, etching, orientation, box assembling, scribing, liquid crystal injection, sealing, polariser, test and packing.

Manufacturing technique of broadcasting magnetic tape and cassette tape. Magnetic powder is mixed with binder and some chemical materials, the mixture is dispersed and then it is pulped (magnetic pulp). The magnetic pulp is coated on support, through calendering, cutting, erasing, packing, broadcasting tape and cassette tape processing is finished.

Design and manufacture of electrical test dynamic balancer. All of the electronic circuits of the dynamic balancer, such as signal treatment, electron-filtration, electron-simulation, amplification etc use integrated circuits. The indicator uses DDW type double faced voltmeter which can be completed with any type dynamic balancer. This balancer has a self-test function. There are single or double supporting points of 0.5-3000Kg for another balancer.

DY-computerised malignancy diagnostic unit. The patented computerised malignancy diagnostic unit (CMDU) has been developed, basing on the theory of extra acupoints relating malignancy (EAM). CMDU is a highly advanced product combining Chinese traditional medicine and modern electronic technique.

High power CW CO2 laser. Its principle is that the gas is blown through the discharge region, heat exchange diversionary devices and blown to make a circular system. The homogeneous and stable glow discharge is formed between the anode and cathode by 'SCR'. The laser beam is extracted by optical resonator and optical output power is 2KW, 5KW, 10KW.

Design and testing of laser-diode collimators. The collimating lens is designed to match a particular model of single model CW laser-diode. The mechanical housing is designed to integrate laser-diode and collimating lens. Precise optical alignment of the laser-diode is achieved by alignment fixtures. Production test systems are developed to ensure a high quality collimated beam.
Offers

Ref No. Org. No. Cat. Status Offer
505595 2 5 M L

Condition monitor for sealed batteries: A microprocessor based instrument has been developed which demonstrates the technique of state of charge monitoring by means of electrical measurements made at the battery terminals. Software has been developed to allow the monitoring to be carried out even in an aircraft environment. Licensing of this development is offered.

Ref No. Org. No. Cat. Status Offer
405596 2 5 M J/L

Piezoelectric co-polymer/ultrasonic probe
These polymers are based on vinylidene fluoride and show 3 to 5 times the electrical activity of commercially available piezoelectric polymers. This will enable the production of higher frequency, higher resolution ultrasonic inspection transducers. A further embodiment of this transducer technology relates to the use of laser fibre optics to induce ultrasound in the material being inspected. Joint R & D and patent licensing is available.

Ref No. Org. No. Cat. Status Offer
305597 2 5 W J/L

Hollow glass waveguide for CO2 laser
Patent licence/joint R & D offered. This development replaces bulky articulated arm, which relies on accurate mirror alignment, currently used in CO2 laser surgery. The fibre is flexible, of relatively low cost and biocompatible.

Ref No. Org. No. Cat. Status Offer
205598 2 5 W L

Artificial nose - a multielement odour detector Suitable for use in hazardous environments in compact portable and fixed installations using, as a sensor system, an array of semi-conducting polymer sensors and specially developed pattern recognition software, the architecture of which is derived from an understanding of the mammalian system. Like the human nose, it is sensitive to polar odorant molecules with molecular weights less than around 350 and has the capacity to learn by experience.

Ref No. Org. No. Cat. Status Offer
105599 2 5 W L

Microscope image comparator for surface defect inspection Compares a discrete defect with a discrete standard defect. Can be used to provide a predetermined standard for a surface under test which avoids the subjective judgement of current types of test. Applications include, lens or mirror surfaces, paper, steel, plated or painted surfaces.

Ref No. Org. No. Cat. Status Offer
905600 3 5 F J

Supervisory control and data acquisition system for plant and process monitoring Allows customising of existing software and user selection from an extensive library of software modules, colour animated mimic displays of operating conditions in real time, graphical representation of inputs/time and coloured histograms with fast updates to examine critical levels easily with alarm scanning for unsafe plant conditions.
Offers

Ref No. Org. No. Cat. Status Offer
805601 3 5 F LJ

Complete wide dynamic range data collection system for ultrasonic imaging. A 5 MHz logarithmic amplifier and analogue detection system with a dynamic range exceeding 90db.

Ref No. Org. No. Cat. Status Offer
505602 3 5 F LJ

Training simulator display output module. To provide analogue output data from a digital store for a training simulator. They system used on-board intelligence and 100 MHz pipe-lining techniques to provide an unbeatable functioning speed.

Ref No. Org. No. Cat. Status Offer
405603 3 5 F LJ

Solid coupled ultrasonic probe for on-line corrosion or wear monitoring in hostile environments. This probe for non-destructive testing is of totally inorganic construction and can be welded permanently to plant vessels and pipework for measurement of wall thickness and rate of corrosion or wear. Detects a change of under 0.1 mm.

Ref No. Org. No. Cat. Status Offer
105604 3 5 F LJ

Fast response mineral insulated high temperature co-axial thermocouple. Developed for consistent and reliable performance at temperatures over 1,000°C. It is double sheathed and resistant to stresses induced by bending, thermal expansion and chemical action.

Ref No. Org. No. Cat. Status Offer
905605 3 5 F J

High temperature ultrasonic transducers for remote imaging, leak detection, gas content monitoring, structural and temperature measurement. These rugged transducers of inorganic construction, cased in stainless steel, operate at temperatures up to 600°C and are resistant to corrosion and radiation.

Ref No. Org. No. Cat. Status Offer
705606 3 5 F LJ

Radio frequency liquid level gauge. Of stainless steel construction has no moving parts and requires no calibration. It has a 0.1% resolution and operates through a non-conducting surface layer. It is used reliably in hostile environments where maintenance is impossible. A computer controlled RF generator and detector system is used to energise and monitor the gauge.

Ref No. Org. No. Cat. Status Offer
505607 3 5 M LJ

Remote monitoring of displacement by analysis of scattered light pulses. A new laser scanning technique monitors displacement of a body in any direction normal to the laser beam. This non-contacting system gives real time displacement information with a 10 micron resolution (measured at room temperature) from a distance of several metres.

Ref No. Org. No. Cat. Status Offer
305608 3 5 M LJ

Remote detection of surface moisture. The detection system utilises the instability of laser light reflected from a surface where moisture is present. The method can be used to control drying processes melting points or to detect and locate leaks or spillage involving a range of different fluids and surfaces.
Electrodeless cell for measuring electrical conductivity and temperature of fluids. This computer controlled, non-intrusive, non-polarising cell contains the fluid in a ceramic tube located in a stainless steel housing which can be used either in a vessel or in a pipeline.

Non contact displacement transducer will operate in liquid metals. Originally developed for sodium pump commissioning in a high temperature, high radiation, liquid metal environment. These non-contacting displacement transducers have exhibited a working life in excess of 20 years.

Wide dynamic range analogue data collection system for imaging in opaque fluids is used with ultrasonic transducers. The system incorporates a 5 MHz logarithmic amplifier and an analogue detection system with a dynamic range exceeding 90db. Subsequent computer analysis prepares a two dimensional image containing three dimensional information.

In-house computer linking system which has virtually no memory, time or priority overheads. The system links mini-computers, PC's and peripherals in a way which allows access to any computer or peripheral. All protocols are handled by the system for ease of interrogation and file transfer.

Video system for position control of an industrial robot. This automated equipment and control system design is used for non-contact high accuracy dimensional analysis from a video image by embedded transputer array for positional control of an industrial robot. The transputer has reduced the time for analysis of 325 pin sub-assembly from 20 minutes to 1½ minute.

Adaptive controller for single or multiple fluidic pumps. Monitors and controls pump parameters, such as the drive and suction pressures, for maximum efficiency. Aspiration and overblow are prevented and on-line plant diagnostics are automatically provided. The controller can simultaneously control several pumps which can have widely different duty cycles.

Quality assurance of software is especially important for software used where safety and reliability are essential. New computer software production follows a structured approach in which all stages follow standard procedures and are fully documented. Strict change control of software and documentation is used to ensure that uncontrolled multiple versions do not exist.
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<th>Ref No.</th>
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<th>Cat. Status Offer</th>
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<tbody>
<tr>
<td>605616</td>
<td>3 5 C J</td>
<td>Complete data banking service for PC and mainframe computers. Includes file creation, data collection systems, programming, and data retrieval, manipulation of data to suit customers' requirements, quality control, statistical and graphical data analysis, materials accounting, and component traceability. Raw data can be checked by scanning programmes to identify potential errors for correction.</td>
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<tr>
<td>805619</td>
<td>6 5 W S</td>
<td>Electrophotographic image carrier member has metal substrate with evaporating photoconductive and intermediate layers. The image carrier member of type TCEK 620 used for copy apparatus ER-620 provides are 80000 copies while ensuring the stability of photoelectrical parameters. The use of the electrophotographic copy or recording apparatus.</td>
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<tr>
<td>305617</td>
<td>3 5 C L</td>
<td>PC computer and peripheral sharing and interconnection system designed for the interconnection of up to 8 peripherals (eg printers, plotters, modems etc) with a maximum of 24 computers. Three types of module allow connection to serial or parallel ports and a further 'chainlink' module allows bi-directional transfer between PC's.</td>
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<tr>
<td>305620</td>
<td>25 5 C SL</td>
<td>Laser measuring system for control of pipe manufacturing equipment. Designed for adjustment control of the electrical welding, tooling, pressing and drawing plants for pipes. The system consists of a base model and a set of special mechanical and optical elements. The system is universal and can be used for setting and adjusting the main and auxiliary equipment of pipe producing units.</td>
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<tr>
<td>5618</td>
<td>4 5 C S</td>
<td>Electron beam program control system. The system 'Termorelief - 01' is designed for electron beam path and rate control for creating temperature field. It is used in machine building, metallurgy, electrochemical, and electronic industry. Operating principle is based on control of continuous electron beam movement of the machined part surface, performed with two orthogonal oriented coils of deflection system of electron beam gun.</td>
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<tr>
<td>405621</td>
<td>31 5 C L</td>
<td>Data cable test equipment. This easy to use test set is British Telecom approved and is specified for use with computer data cabling and telephone cabling installations. It is powered by a PP3 battery and gives an instant indication without manual intervention of the state of cabling terminations. Unterminated, wrongly or badly terminated conductors, inter-conductor shorts and earthed conductors are clearly shown. It will be of universal interest to installers and commissioning engineers.</td>
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</table>

87
Human tissue care and repair. 'CAR' is a white powder, that is extracted from meat homogenates in a highly purified form. It can be incorporated into creams, ointments and lotions as an active ingredient. It has strongly bacteriostatic, anti-inflammatory and immunomodulating properties. A manufacturing agreement is offered.

'Voice box' recording machine. A patented battery-operated, pocket sized, solid state message playing and recording machine activated by an infrared proximity switch to replay any message on the approach of an individual. For advertising messages, security announcements, entry and reception systems, aid for the blind etc.

Computer diskette storage carousel. Patent/manufacturing licence is offered for a plastic storage carousel suitable for fabrication by injection moulding. Intended for storing often-used computer diskettes whilst keeping them readily to hand with visible labels.

Word processor for blind users A portable, lightweight, self-contained, full feature word processing system for blind users. With one function key and simple command structure. It connects to printers, embossers and computers. To take notes, write letters and reports, to store and to access data. A speech synthesizer in character-by-character or word-by-word modes, can be used to teach Braille. The accurate Braille translation and word-processing facilities enable high quality documents to be prepared.

Advanced data logger A modular system has been developed, initially for draught animal work, to measure a range of variables under realistic conditions. By the use of sensors and hi-tec electronics; speed, force, heart rate, breathing rate, etc. can be recorded with greater accuracy than before. This development undoubtedly has many other applications.

Low-power broadcasting equipment A manufacturer of low-power broadcasting equipment would consider joint ventures and licensing as well as general marketing agreements. At present they manufacture UHF transmission equipment for TV broadcasting and UHF solid state amplifiers.
Phase locking controller

A system for the locking or alignment of the response phase angles of dynamic systems using a novel phase locking technique. It uses few components and can be miniaturised to fit in many applications. The technique can be adapted to many types of dynamic systems where the controlled variable and its derivative (or integral) can be detected. Applications for process control, machine tool actuation systems, robotics, shaking and vibration tests, etc.

Compact capacitance distance measuring probe

The probe is positioned some distance away from a conductive surface, so that the probe, air gap and conductive surface together define a capacitor. Thus the capacitance measured is proportional to the distance between the probe and the surface. This probe is compact and cheap to produce. Applications include situations where the measurement of small distances is required and space is limited. Applications can be extended to determine contents.

Electro-mechanical remote control lock

A high security electromechanical locking system which can be opened and closed by remote control, and also opened with a coded key pad from outside. Automatic closure is by means of a half turn bolt, and additional security bolts are engaged once the door is fully closed and the half turn bolt entirely within its socket. Suitable for flats, offices, laboratories, etc where high security is required.

Electronic detection of overloaded lorries

This system processes input from road mounted sensors to give information on axle loading, vehicle speeds, vehicle classification etc. It can be used for screening out overloaded vehicles for enforcement purposes or producing detailed information on traffic flow for survey and interactive protection of bridges etc.

Patient transport aid

A self-powered patient-operated transfer aid suitable for most disabled people who have only slight power in their upper limbs. No leg power required. Facilitates self-transfer between wheelchair/toilet/bed etc. Designed for indoor use and powered by 12 V batteries, it uses two-way touch-sensitive controls driving and box-lift motors.

A single board computer for measurement and control applications

The unit has A/D converter and serial/parallel input and output ports. This compact unit can be used to control any piece of process plant according to a programme based on up to eight external events eg. voltage, temperature, switch operation etc.
<table>
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<th>Ref No.</th>
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<tbody>
<tr>
<td>505634</td>
<td>31</td>
<td>5 U</td>
<td>L</td>
<td>Portable 8 channel datalogger with built-in display and keyboard. The unit can be set to commence recording data at any future time and date. The scan interval is variable from one minute to 99 hours and up to 16000 individual records can be held in the internal memory. The unit will print data in the form of graphs or digitally onto a dot matrix printer in the form of tables.</td>
</tr>
<tr>
<td>305635</td>
<td>31</td>
<td>5 W</td>
<td>L</td>
<td>Commercial refrigeration control. A modular electronic unit for direct control of refrigeration systems. The solid state control unit has approximate dimensions of only 40cm x 40cm x 10cm and embodies all the normal control functions and a widely variable defrost cycle time and frequency. Advantages of high reliability and ease of maintenance, installation, and board replacement.</td>
</tr>
<tr>
<td>5636</td>
<td>31</td>
<td>5 C</td>
<td>L</td>
<td>Remote plant surveillance equipment. Enables remote status and fault monitoring, using public switched telephone network. The licensee will be supplied with a configuration unit consisting of a small computer terminal and programmer to enable him to configure a number of outstations consisting of a modem, the outstation itself which receives digital from information an isolation interface unit and signals fault or no fault conditions to a local and/or remote printer.</td>
</tr>
<tr>
<td>805637</td>
<td>31</td>
<td>5 C</td>
<td>L</td>
<td>An electronic soft start/soft stop controller. A microprocessor based thyristor phase control system which controls and protects any electric induction motor automatically allowing precise control of soft starting, automatic optimisation of energy consumption, power factor improvement and, where required, controlled deceleration to prevent shock loading on the system.</td>
</tr>
<tr>
<td>605638</td>
<td>31</td>
<td>5 C</td>
<td>L</td>
<td>Picture archiving and communication system. 30 second transmission of full tone images over telephone lines worldwide. Still videogram and/or radiography now operating.</td>
</tr>
<tr>
<td>405639</td>
<td>31</td>
<td>5 U</td>
<td>L</td>
<td>X-ray monitoring system. A compact, integrated system for the assessment and quality control of diagnostic x-ray equipment capable of accepting signals from a variety of sources, including a kv voltage divider, ion chamber and closed circuit TV video lines. These signals or profiles can be stored, displayed and analysed at the point of capture and archived on TV magnetic media. The user interface is via a laptop computer, all operations are menu driven.</td>
</tr>
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</table>
Film and slide cameras for the computer graphics industry. The world's first comprehensive range of custom designed computer graphic cameras for 35mm slide, 35mm motion picture, 16mm and 70mm film camera backs. Incorporating the latest developments in solid state electronic control and interface technology. These compact easy to use cameras have registration pins diamond lapped to .0001 inch and with either 100ft or 400ft magazines. They have full electronic and mechanical interfaces to all major computer graphic recorders.

Remote plant surveillance equipment Enables remote status and fault monitoring, using public-switched-telephone network. The licensee will be supplied with a configuration unit consisting of a small computer terminal and programmer to enable him to configure a number of outstations consisting of a modem, the outstation itself which receives digital information from an isolation interface unit and signals fault or no fault conditions to a local and/or remote printer.

Paperless chart recorder. This equipment is designed to enable the data gathering capacity of data loggers to be combined with conventional paper type chart recorders. Recording of signal information on paper has been replaced by storing the incoming signal directly on a large scale Read Only Memory. Four signal channels available and any one channel may be displayed or any two channels side by side for comparison. A hard copy of the screen display plus an average of the graphics is available via a printer port.

Integrated theft proof power supply and control unit for cars Power supply/control unit to drive 4 modules and interface to car electrical system. Includes anti-tamper (theft) protection for the unit and connector modules which activates the horn if any part of the system is disturbed. Modules include: car alarm, 'lights left on' reminder, battery monitor and windscreen wiper delay and speed adjuster.

Patient monitoring system A suite of technology, providing a whole range of lifesign monitoring equipment for use in both established medical centres and for mobile systems, such as field hospitals.
Theft and intruder detection system
A self powered electronic security system designed to protect glazed areas and precious objects. A small, thin, flat transmitter 1 1/4 in x 1 in x 1/4 in which can be mounted between the glass of a double glazed window, and will activate an alarm signal on breakage of the glass.

Application of images to fabrics and plastics
The process bonds an image (holographic, photographic or printed) or a special material (luminous plastic), to a wide range of fabrics or plastics without the use of heat, pressure, adhesives or inks. The imaged area has exceptional environmental stability and is machine washable to 60°C.

Telephone call screening device
A low cost call screening system used on an attended telephone to avoid and deter any unwelcome telephone callers. Operated manually by the call recipient and is suitable for use in the home or small business. Manufacturing cost under £20.

Protection of industrial electronic control instruments
Discrete digital, analog instruments, controllers microprocessor based instruments complete process system (computerised) sensors, thermocouples, resistance thermometers and accessories.
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</thead>
<tbody>
<tr>
<td>405653</td>
<td>45</td>
<td>5 C L</td>
<td>SMD</td>
<td>Design a production technology for hi-tech automotive electronics for the cars manufactured in Turkey, East Europa and Europa.</td>
</tr>
<tr>
<td>5654</td>
<td>57</td>
<td>5 C J</td>
<td>Computerised electrocardiography system</td>
<td>With the addition of our ars-EKG12x card on a standard PC. Electrocardiography and stress electrocardiography system can be computerised by adding a special card to a standard PC. This gives simultaneous real time acquisition of 12 channels in ECG. Hard copy on normal paper and storage and retrieval of previous records.</td>
</tr>
<tr>
<td>805655</td>
<td>58</td>
<td>5 C L</td>
<td>Uninterruptable power supply</td>
<td>Small size, high reliability, quiet in operation, high efficiency.</td>
</tr>
<tr>
<td>605656</td>
<td>59</td>
<td>5 C L</td>
<td>Digital telecommunication equipment</td>
<td>Up to 2000 port capacity systems available.</td>
</tr>
<tr>
<td>405657</td>
<td>74</td>
<td>5 W L</td>
<td>Heat flux sensor</td>
<td>For process control for improving the efficiency of driers and ovens. The sensor is mounted on a stainless steel support which projects into the chamber, and includes Peltier cooling element and external microprocessor. Portable version also available for efficiency surveys.</td>
</tr>
<tr>
<td>205658</td>
<td>78</td>
<td>5 PM JL</td>
<td>High pressure scanning electron microscope</td>
<td>A module to fit any standard microscope. Converts the microscope for viewing materials in the pressure range 1 ton to 25 ton. Can be used for a variety of materials without loss of volatile constituent ie petroleum, water.</td>
</tr>
<tr>
<td>905659</td>
<td>81</td>
<td>5 U L</td>
<td>Memory linked wavefront array processor</td>
<td>Implemented in a parallel information co-processor (PIP) system. Each PIP module/board contains two processing elements (CPUs) which can be operated in series or parallel. Operated in parallel, a single PIP module can perform 99 MFLOPS. A PIP system can contain up to 8 PIP modules. This modular system can be plugged directly into AT (ISA) bus machines or it can be configured in an IBM PC expansion chassis and interfaced to any IBM PC or Macintosh II computer.</td>
</tr>
<tr>
<td>705660</td>
<td>81</td>
<td>5 W L</td>
<td>Accumulating arithmetic memory (AAM) chip</td>
<td>An ASIC intelligent image decimation chip designed for use in adaptive optics. However, by proper configuration and appropriate programming, the chip can compute histograms to measure the distribution of some data over ranges of values; computer power histograms; correlate and compress data; and count events. The chip architecture is also uniquely designed for parallel configurations. The chip has been fabricated and functions properly.</td>
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<td>505661</td>
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<td>Electronics/fuel economy service test and safety aids. Temperature monitors and thermostat from (-40^\circ C - 110^\circ C) LCD display. Single and multi-channel gas detectors, all gases. Design and training in all aspects of electronic/electrical industries.</td>
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<td>305662</td>
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<td>5</td>
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<td>DPS: Dedicated planning and scheduling system for use on the shopfloor.</td>
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<td>Ref No.</td>
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<tr>
<td>Prediction systems on production, cost, market potential</td>
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<td>Ref No.</td>
<td>Org. No.</td>
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<td>905664</td>
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<td>5</td>
<td>W</td>
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<tr>
<td>System that helps to handle efficiently emergencies in a firm.</td>
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<td>605665</td>
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<tr>
<td>SPMT: Software project management technology for developing and controlling with success and in time, knowledge systems and software in general.</td>
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<tr>
<td>Ref No.</td>
<td>Org. No.</td>
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<td>505666</td>
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<td>The hydrophilization of the intraocular lens. The conversion of a hydrophobic lens surface to a wetting surface is made possible by a simple reactive method thereby improving the properties of the implanted lens.</td>
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<td>Ref No.</td>
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<td>He-Ne laser lights for the industry allows for better positioning of the workpiece in front of cutting tools.</td>
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<td>Laser detector to measure saw-blade deviation during cutting lights up a panel according to the deviation and allows operator to slow down or to speed up cutting action to maintain sawing accuracy at its best level.</td>
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<td>Personal identity verifier patented optical/electronic, biometric, hand geometry device based on silhouettes of four fingers either hand. Controls access to entryways, teller machines, computers, EFTPOS. Identity verified from smart, magstripe, or proximity cards and/or keypad. Secures commercial industrial, military facilities, airports, hospitals and prisons. Simpler than fingerprints, retinal scans.</td>
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<td>Production of colour TV (21, 25, 28 inch, stereo/mono teletext SCART, multistandard and technology for assembling, soldering, adjustment and control of electronic modules (including SMD technology).</td>
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## Offers

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### Computer based training (CBT) Didactive software simulators (general or specifically developed) on personal computers for training or teaching people with high efficiency thanks to graphic and interactive communication without risk of damage to actual equipment.

### Digitising photographs for poster production
Digitisation of the photographs in black/white or colour and printing onto paper for poster production using IBM computer, video camera, software and accessories.

### Pulse laser security system
An intruder detection warning device primarily designed to provide maximum security in highly sensitive places such as airports, nuclear power plants, military camps/bases and industrial facilities.

### MF-SSB Transceiver
Synthesized military spec multi-purpose transceiver. It could be used as manpack (portable) communication station. Extremely rugged and fully waterproof.

### Scrambler or communication security device
Provides high degree of security with excellent recovered audio. Crystal controlled for high stability and is fully adaptable to any 2-way radio communication in either built-in or external mount configuration. Housed in compact, rugged and waterproof chassis that it makes suitable for most military radios.

### Programmable control systems for production machines
Individual adapted software. From cycle control system to complicated complexes, line displays, screens, development on microprocessor chips specific for customers. Individual configuration of switchgear cabinet which are ready for occupancy from our own production. Technical consulting for mechanical adaptation from fix construction. On-line data transmission in every style.

### Computer integrated manufacturing concept
For the production of concrete reinforcements with rods and lattice girders and their distribution by means of racks for use. In concrete floor slabs and double walls.

### Software for development of rotating machinery
Electrical and mechanical calculations, such as windings, loads, shaft and bearing stresses, efficiency optimising.
Offers

Ref No. Org. No. Cat. Status Offer
505679 113 5 C S

Software for woodprocessing enterprises
Furniture, doors, with serial production between 40 and 300 employees. Product name: WOODPROCESSING. Software modules: offer, calculation, order, production planning and control.

Ref No. Org. No. Cat. Status Offer
305680 113 5 C S

Joinery Software for woodprocessing enterprises with individual production between 5 and 40 employees. Software modules: offer, calculation, order, material management.

Ref No. Org. No. Cat. Status Offer
105681 115 5 F J

Humidity sensor A new thin film sensor, based on special polymers, operates over 0 to 100% RH and up to +120 deg C. Ideal for air conditioning and portable humidity instruments. The robust element even withstands immersion in boiling water.

Ref No. Org. No. Cat. Status Offer
905682 115 5 F J

Molybdenum temperature sensor
Molybdenum on ceramic - new, very precise laser trimmed resistive sensors 2*10 mm, which operate from -200 deg C to +200 deg C. Linearity is typical better than +/- 0.2%, trimming tolerance down to 0.1%. Applications are in heating systems, air conditioning and automotive, customised designs and special housings available on request.

Ref No. Org. No. Cat. Status Offer
705683 116 5 F L

Digital engine management For small combustion engine control - prepared for using directly on the engine in mass production - main application: motorcycles. The system includes: development tool-kit up to fuel injection applications.

Ref No. Org. No. Cat. Status Offer
405684 118 5 C L

Plastic card printing and encoding units for printing characters of all languages, barcodes and pictures on plastic cards as well as encoding of magnetic stripes at the same time.

Ref No. Org. No. Cat. Status Offer
205685 122 5 W J

Fire protection systems
Automatic/semi-automatic involving smoke/heat detection/alarm systems integrated with combatting systems by wet risers, sprinklers, medium/high velocity water spray, foam, dry chemical powder or Halon.

Ref No. Org. No. Cat. Status Offer
5686 125.02 5 C L

Maps associated with databases on microcomputer Two main software systems, the first is to record maps to be managed, the second is intended to complete, colour, compile and insert data in the subjects of the map. This can be the map of the world, a region, a country, a city etc.
Temperature measuring gauge a frequency vs temperature measuring gauge consisting of a thermosensitive quartz crystal type TQC-26 and a measuring -60 to +250 deg C temperature range.

Thermosensitive quartz oscillators The thermosensitive quartz oscillators type TQO-26 are realised on the basis of integral highly sensitive temperature frequency response. Each quartz oscillator operates at 26.5 MHZ and has a frequency sensitivity at about 1000 HZ per grad C in the -60 to +250 deg C range.

Surface acoustic wave oscillator The surface acoustic wave oscillator can be used as a stable reference source in microwave frequency synthesizers. Centre frequency 360 MHZ, short term stability better than 5.10^-10/S. Spectral noise 115 DBC/HZ at 1 KHZ.

Surface acoustic wave filters Surface acoustical bandpass filters for application in telecommunication equipment and electronic devices. Centre frequencies are 165-195 MHZ, pass band 20-40 MHZ, insertion loss 12-25 DB.

Crystal monitors Crystal monitors for measuring coating thickness in vacuum coaters.
Bright copper for printed circuit boards A technology for the deposition of 'first' and 'second' layer of electrochemical copper on the chemical deposited tracks of plated boards. Application: in the production of bi- and multi-layer printed boards with no imported components. A high quality of performance guaranteed.

Remote lidar observation of the planetary boundary layer (modelling and forecasting of smog conditions) - investigations of this type help in finding the actual sources and causes of the pollution (atomic electric power station, thermo-electric power station, metallurgical and chemical plants).

Electronic optical set for laser technique pockels cell PC-14, optical receiver P-108 - for direct registration of light pulse form in visible and near IR. Application: in laser technics, ranging, optical communication, technological system.

Program product 'DIFFAL PLUS' developed on the basis of original ideas and current mathematical methods of differential thermal analysis of temperature measuring data, phase transition temperature, latent heat of crystallisation, coefficients of heat transfer etc. The information obtained is useful in developing new alloys and casting technologies.

A programme package for processing temperature measuring data Program product 'EASYTEMP' - introduction of a correction in the thermocouple indications for the thermocouple inertia: smoothing of discrete temperature measuring data: surface temperature and heat flow reproduction by means of temperature measurements at several points inside the specimen.

Contactless magneto-elastic torque transducers used for electrical measuring of the torque both under static conditions and at speeds up to 15000 rpm, for operation under severe conditions and big overloads. They can carry out measurements within practically unlimited range.

Fibre-optic contactless sensors for registration of objects, passing through destined position. They can be used as contactless switches for positioning or counting in industrial automation. The principle of operation is based upon interruption or reflection of light beam.

Novel custom magnetosensor ISI CMOS devices the novel magneto-sensitive ICs serve as high performance latching switches and use lateral parallel strip bipolar magneto transistor to sense a magnetic field.
Offers

Ref No. Org. No. Cat. Status Offer
405705 126 5 F S

Laser diode for audio disk players and other systems on compact disk, laser printers, optical distance meters, medical instruments.

Ref No. Org. No. Cat. Status Offer
5706 127 5 C J

Commutators, telephone sets for local links, jamming stations Offered by Bulgarian state company producing communication, office and protective equipment is searching for expansion of the sales by industrial cooperation and marketing

Ref No. Org. No. Cat. Status Offer
805707 127 5 F S

Software package ‘Termostress’ This is a programme for thermal stress analyses of mass concrete structures, by numerical modelling of three-dimensional temperature field and two-dimensional stress field, caused by the temperature changes in mass concrete structures (dam, foundation block etc).

Ref No. Org. No. Cat. Status Offer
405708 127 5 UF J

Electronic temperature measurement of molten metals and salts Joint R & D activity for the perfectioning of the products and joint marketing. The main products concerned: electronic portable devices for measurement of the temperature of metal melts and molten salt baths, system for continuous temperature measurement of metal melts.

Ref No. Org. No. Cat. Status Offer
5709 127 5 U LJ

Single use cardioelectrodes New technology for production. The company is searching for foreign investments and joint venture for starting the production. The foreseen capacity of the Bulgarian market is about 600 000 pcs annually and possibilities for export in USSR and Yugoslavia also exist.

Ref No. Org. No. Cat. Status Offer
705710 128 5 C LSJ

Potato sensor to determine the quality of potatoes X-ray scanner and DCS-device available for manufacture.

Ref No. Org. No. Cat. Status Offer
405711 130 5 F J

Low noise ultra high frequency transistors Power infra-red LED photodiodes and integrated sensors technology available.

Ref No. Org. No. Cat. Status Offer
105712 134 5 W J

Fire protection systems Automatic-semi-automatic involving smoke/heat detection alarm systems integrated with combatting systems by wet rises, sprinklers, medium/high velocity water spray, foam, dry chemical powder or halon.

Ref No. Org. No. Cat. Status Offer
705713 137 5 F L

On-line automatic pH control for sugar industry continuously monitors the pH of sulphited juices with digital display; controls automatically the rate of flow of milk of lime and sulphur dioxide so as to keep the pH close to an optimum pre-set value for good clarification of juice thus leading to enhanced yield and improved quality.
Offers

Ref No.  Org. No. Cat. Status Offer
505714  137  5  F  L

On-line pan monitoring system for sugar industry monitors the degree of supersaturation in the mother liquor and helps in assessing the critical stages viz seeding, hardening, thinning and final pan dropping. Reduces energy and water consumption; improves conglomeration of free crystals and ensures uniformity of size of crystals.

Ref No.  Org. No. Cat. Status Offer
105715  137  5  F  L

On-line centralised temperature measurement, monitoring and control system for sugar industry Unique system with capability for acquiring, indicating and monitoring of over 60 temperature sensitive points with an accuracy of +/- deg C and resolution of 0.1 deg C throughout the range, leading to substantial energy saving and process improvement.

Ref No.  Org. No. Cat. Status Offer
705716  137  5  F  L

On-line instrumentation for pulp and paper industry comprising 'C' frame and 'O' from instrumentation - these nucleonic source based instruments enable paper machine operator to continuously measure and control the basis weight, moisture and caliper of paper automatically, resulting in better on-line production control and increased productivity.

Ref No.  Org. No. Cat. Status Offer
505717  137  5  F  L

Smoke meter simple, low cost, easy to operate device for estimating exhaust smoke level of diesel engines. Annular spots obtained on the test panel are compared with respect to standard evaluator chart over a scale of 3.0 to 9.5 units.

Ref No.  Org. No. Cat. Status Offer
705718  137  5  F  L

Digital corrosion meter continuous and rapid determination of corrosion rate, 0-300 mills per year, low weight, portable battery operated.

Ref No.  Org. No. Cat. Status Offer
705719  138.01  5  C  L

Load cell for electronic weighing scale a transducer which converts applied pressure into an electrical signal, is a major component in electronic scales. Since this product is technology based, the time needed for testing and calibration is more than the time needed for manufacture. It is a labour intensive product and it has high precision in the order of 1/3,000 - 1/5,000.

Ref No.  Org. No. Cat. Status Offer
305720  138.02  5  C  L

Miniature circuit breakers (MCBs) (0.5 amps to 40 amps in rated voltage of 240/415) safeguard equipment against damage from short circuit and overload. Current limiting feature, less than 1 millisecond. Arcing time is special contour of the contacts and the arc runners, reduce arcing time.
Pulsed laser system for treatment and diagnosis of cancers includes窄带激光和染料激光基于光从光学纤维。技术规格如下：RPF 15-25 kHz: Power (511 nm) 50-80 MW, Power (630 nm) 750 MV.

Digital switching products A family of digital PCM/TDM switching system designed to meet needs like data, teletext, facsimile and videotext of developing countries. The products include private automatic branch exchange, rural automatic exchange, main automatic exchange, and trunk automatic exchange.

Integrated local and trunk exchange digital switching system ILT 512 - is a member of the family digital switching system and can be configured as a local, trunk, tandem or a combined local/trunk/tandem exchange. The system is modular for maintenance and expansion, is in steps of 8 subscriber lines or 4 trunk lines and has a non-blocking speech network employing TDM/PCM technique in a modified time-space-time mode operation.

Low cost C-band earth stations These are small stations operating in C and S bands. Modular design and equipment interchangeability allows configuration for specific applications. Some terminals are fully transportable by road or air, others are trailer mounted. They could be configured depending on requirements and available infrastructure at particular locations.

Micro processor based systems for telecom applications comprise: a) automatic call recording systems, b) station message details system, c) telephone call simulator, d) line observation equipment and e) uninterruptible power supply. These lower cost and simpler systems are appropriate for developing countries like India where imported complex, multi-spectral communication equipments are still being used.

Radio communication equipment and systems in MF, HF, VHF and UHF frequency bands The VHF range includes hand held radios, mobile and base radio repeater and duplex radio telephone systems. The HF range includes general purpose receivers, low and medium power transreceivers and low and high power transmitters. The UHF range comprises of time division multiple access (TDMA) systems for rural radio telephone applications. The MF range comprises of low and high power non-directional beacons used for providing homing information to aircraft.
3-dimensional co-ordinate measuring machine for accurate measurement and inspection of engineering components. A measuring probe scans any point within its working volume. High accuracy results from rigidity of the base, bridge structure of the carriage, linearity of the guide ways and precision of the scales.

Chromium dioxide powder for making magnetic recording tapes for audio, video, instrumentation and computer applications. Very fine powder particles can be used in ferrofluidic applications such as magnetic seals in high speed rotating systems. Coarse grade particles find application as polishing media for fine finishes, lapping etc. Powders possessing coercivity better than 600 oersteads are generated using special additives.

Radiation dosemeters measure X- and gamma radiation exposure or dose in an irradiated medium (air, tissue equivalent material, etc). The following types are available: a) beam therapy dosemeter (digital), b) secondary standard dosemeter (analog), c) universal dosemeter (digital and analog version) and b) clinical dosemeter. All the dosemeters consist of air equipment ionisation chamber detectors (with defined air volumes).

Black and white picture tube Turnkey project for manufacturing, electron guns for black and white picture tubes, special material handling systems for computers, audio products.

SW - CAE Software for mounting engineering, a professional SW for all electrical engineers for reducing the costs and time. It is a CAE software for full automatic design and engineering all the electrical components in an industrial plant and all others. Includes the electric diagram and ground plan and ground layout.

Semiconductors Production of a diodes and thyristors from 10A to 1000A. Advantages: Energy saving


Card access security system Will allow entry into restricted premises through the use of authorised cards. Suitable for Government bodies, banks, and finance institutions, telecommunications, computer venders and computer site preparation companies.
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**Personal computer TIM-286 (286/AT), TIM-386/SX, TIM-386(DX), TIM-486/SX, TIM-486(DX).** IBM compatable, 2 serial and 1 parallel ports, 101 keyboard, run DOS, UNIX XENIX and Novell netware 286/386.

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**An impact matrix printer** High compatibility and various interface mode. Printing speed, 240CPS (max) semi-lifelong print head. Numerous models with beautiful design. Durable case in-built LCD display showing printing process. No microwave obstacles.

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**14 inch super VGA monitor 20 inch multi-sync colour monitor:** be designed for CAD/CAM/CAE user. Maximum resolution is 1024 x 768 for 14 inch monitor and 1280 x 1024 for 20 inch monitor. 14 inch monitors made is VGA, super VGA, IBM 8514A. 20 inch monitors made is all automatic scanning frequency (FH:30 KHZ-64KHZ).
REQUESTS

CATEGORY 1 - CHEMICAL ENGINEERING:

The production of AC foaming agent using hydrogen peroxide by reacting hydrazine hydrate with UNEA to produce the intermediate M2HCONHHCONH2 which is the dehydrogenerated using hydrogen peroxide in the presence of a catalyst to obtain AC foaming agent for plastics and rubber.

Aniline production from nitro benzene reduced by hydrogen gas with catalyst. Quantity required 20-50,000 tons/year. Aniline is the main organic raw material which could be widely used for producing MDI, medicine, agricultural chemicals and so on.

The technology of producing potassium sulphate from potassium chloride and sulphuric acid. A technology that can directly dessicate hydrogen chloride into the gas that contains moisture 0.06% and concentration is required with low energy consumption. The equipment should be leakproof, corrosionproof, give continuous production with good environmental protection.

Production of 1,4 butanediol Hydrogeneration of maleic anhydride produces 1,4-BD and tetrahydrofuran. Then by separation and purification, the finished product can be isolated. Plant production rate 2000 t/annum. 1,4-BD can be used to manufacture NVP, PU, PTHF and PBT.
Requests

Ref No.  Org No.  Cat.  Status Request
105745  1.11  1  LJ

Technology and equipment for manufacturing steel cord conveyor belts

Request for licensee or joint operation for the above process. Specification includes
new high tenacity carcase material to reach internationally accepted standards.

Ref No.  Org No.  Cat.  Status Request
705746  1.13  1  L

Process for extraction bromine from sea water and dilute brine. Request process for
extraction of bromine from sea water and weak brine. Need parameters of
equipment, raw material requirements, power and labour requirements.

Ref No.  Org No.  Cat.  Status Request
505747  1.13  1  L

Production of salt from sea water by solar evaporation. Wish to licence technology
relating to production of salt (sodium chloride) from sea water by solar
evaporation.

Ref No.  Org No.  Cat.  Status Request
105748  1.24  1

Manufacture of carbamide from ammonia using the ammonia from coke oven gas as
raw material. The process involves absorbing the ammonia by absorbent, then
desorbing it then making high concentrate ammonia by rectification, using CO of
blast furnace gas to synthesize carbamide.

Ref No.  Org No.  Cat.  Status Request
805749  1.29  1  C  J

High performance unshaped refractories
Simple and convenient manufacturing process, lower energy consumption
suitable for mechanising installation, light weight and monolithic construction,
directly used in projects.

Ref No.  Org No.  Cat.  Status Request
405750  1.34  1  C  L

Manufacture of sodium xanthate from which the synthetic xanthate can then be
manufactured after forming and drying. It is an excellent collector for sulfide
minerals.

Ref No.  Org No.  Cat.  Status Request
105751  1.35  1  C  L

Louise pump to carry strong sulphuric acid at high temperature in absorbing tower of
the aring tower. The flow of the pump 250-280m3/h delivery lift: 25m.

Ref No.  Org No.  Cat.  Status Request
805752  1.35  1  C  L

SO2 flue gas blast. Used to transport the
impetus of flue gas during SO2 making.
Flow of the blast: 180000 m3/h, boost
pressure: 45000Pa.

Ref No.  Org No.  Cat.  Status Request
305753  1.56  1  C  LJ

Production line for steel plastic compound pipe. The steel pipe forms the basic body
with plastic pipe, which has good chemical stability, lining its inner part. It not only
has the mechanical character of steel, but also has the erosion-proof character of
plastic. Steel and plastic are compounded as one body and cannot be divided.

Ref No.  Org No.  Cat.  Status Request
105754  1.67  1  C  J

Quick fluorescence regulator, powerful regulator on flower stage. Quick mature
and output regulator. Producing plant growth regulator with indoleacetic acid,
high energy compounds, micronutrients, nutrients, emulsifier and antiseptics.
### Requests

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**Rubber shoe manufacture**

The moulding technology to produce 10,000 pairs of rubber shoes per year.

**Plastic injection moulding**

Machines for plastic injection and mould making process required to produce plastic parts from 10 to 30 moulds per year.

**Textile finishing resins**

Joint venture partner required for the production of thermosetting resins eg melamine, UREA, phenolic and furan.

**High strength industrial flooring tile**

A company specialised in design and erection of building for industrial use, is looking for a new materials technology to make high strength flooring tile.

**Diagnostic test for sexually transmitted diseases**

A medical diagnostics company is seeking to expand its range of sexually transmitted disease tests and require any specific reagent (probe or MAB) which could be a strategy point to an industrial development or a prototype or even a test ready to commercialise (distributor or co-manufacturer).

**Asbestos treatment (bridging, penetrating)**

A company expert in the coating of walls and flooring tiles for industry and building is looking for a technology in the field of asbestos treatment. Owing to its speciality and know-how the company gives asbestos bridging or penetrating technology preference rather than removing.

**Composite materials ('sandwiches' panels)**

A company expert in moulding techniques for composite materials, is looking for a diversification product preferably 'sandwich' panels (foam bulk).

**Dental grafts**

A company expert in the manufacturing of fine mechanical parts, is looking for a diversification technology in the field of dental grafts (preferably titanium made).

**Pesticides and herbicides (technical grade)**

Planned capacity: 1,000 MT/annum (combined capacity). To manufacture methyl parathion, fenitrothion, oxydemeton methyl, carbofuran, propoxur etc. This is a new project to be set at Maharashtra, India. Local investment capacity indicated is US$ 4.5 million besides land and building.
Latex rubber thread Planned capacity: 1 tonne/day (approx). All raw materials to manufacture latex rubber threads in tape form are locally available. Right now the entire market demand is met through imports from Malaysia and UK. Estimated project cost is around US$ 5,000,000. Local investment capacity indicated is US$ 2,600,000 besides 10,000m2 of land and 30,000m2 of building.

Calcium cyanamide and cyanamide Planned capacity: minimum economic size. The company has excess of captively produced nitrogen and carbon dioxide which are the raw materials required. This is a new project to be set up at Mangalore, India. Estimated annual demand is around 2000 TE which is mostly met through imports.

Para-amino-phenol (PAP) Planned capacity: 5000 mt/year. The company now produces large quantities of Nitrobenzine, the raw material required for making PAP, and want to develop downstream products derived from it. This is a new project set up in Nanjing in China. Indicated annual demand 7,000 tons/year.
Ref No.  Org. No.  Cat. Status Request
805770  138.45  1  C  LJ

Synthetic rubber ring cots Planned capacity: 1.5 million pieces/year. The company is seeking know-how for the manufacture of synthetic rubber ring cots which are used on spindles for making yarn. Rubber, the raw material, is locally available. Local investment capacity indicated is US$ 150,000 besides land and building.

Ref No.  Org. No.  Cat. Status Request
405771  138.46  1  C  L

Exfoliated vermiculite This company wants to manufacture exfoliated vermiculite from raw vermiculite mineral available in Southern parts of Asia. It is not manufactured in the country at present. Vermiculite, a geological name given to a group of hydrated lamellar minerals which are aluminium-iron-magnesium silicates, consists of thin flakes containing innumerable microscopic voids. When subject to high temperature (700 - 1000 deg C) the flakes exfoliate.

Ref No.  Org. No.  Cat. Status Request
5772  138.47  1  C  LJ

PVC flooring Planned capacity: 16,00,000 sq m/annum. Locally available raw material is recycled PVC. A new project based on imported PVC granules with mix of waste PVC to be set up at Kathmandu, Nepal. At present, their entire requirement is met through imports.

Ref No.  Org. No.  Cat. Status Request
105775  138.51  1  C  J

Borosilicate glass Planned capacity: 200 T/year. Locally available raw materials are white sand and felspar for the production of borosilicate glass which is used in scientific and technical wares, health services, and high grade domestic wares. This is an expansion/modernisation programme. This product is sold in the domestic and Japanese markets.

Ref No.  Org. No.  Cat. Status Request
105776  138.5  1  C  J

Silicate zircon Planned capacity: 1000 T/annum. A feasibility study has already been prepared for the expansion/modernisation of the existing project. Silicate zircon is used in the glaze industry, zircon firebrick industry etc. Besides catering to the domestic market this product is exported to Italy and France.

Ref No.  Org. No.  Cat. Status Request
705773  138.49  1  C  L

Pharmaceutical formulations Planned capacity: flexible. The company wishes to manufacture new delivery systems for drugs like transdermal/controlled released nasal spray etc. Estimated annual growth demand is around 15%.
Requests

CATEGORY 2 - LIGHT INDUSTRIAL MACHINERY:

Ref No. Org. No. Cat. Status Request
705776 1.11 2 LJ

Technologies and equipment for producing automobile rubber parts. We wish to import advanced technology and equipment for automobile parts. Require high quality to meet export requirements for production capacity of 300,000 automobiles. Quality control instruments are required. Parts include oilseed, O-ring, brake diaphragms, bent rubber hose, sealing strip. Materials involved include kevlar, silicone rubber, fluorine rubber, EPDM etc.

Ref No. Org. No. Cat. Status Request
505777 1.14 2 L

Heat treatment of needle bed face plate, memory drum processing techniques. There are two important processes in knitting machine production. One is the heat treatment of needle bed face plate, another the memory drum. These two points play an important role in knitting machine production, they are also the poor link in our factory. We require technology for high grade needle bed and advanced technology of heat treatment and high quality memory drum production techniques.

Ref No. Org. No. Cat. Status Request
105778 1.14 2 J

Require joint collaboration for manufacture of card mode automatic knitting machine consisting of carriage, needle bed arm and auto-tension devices. Most of them are pressed pieces. Technical processes involved are as follows: feeding, pressing, assembling, setting up.

Ref No. Org. No. Cat. Status Request
705779 1.17 2 J

Dishwasher, microwave oven, solar air conditioner Request joint venture for the design and manufacture of domestic dishwasher, microwave ovens and solar air conditioning.

Ref No. Org. No. Cat. Status Request
405780 1.18 2 L

Turbo unit driven by blast furnace gas to drive an 8000 KW steam turbine generator and 2000m3/min auxiliary air blower to solve the problem of energy shortage by generating about 6.7 million KW/h electricity.

Ref No. Org. No. Cat. Status Request
105781 1.44 2 C J

Pin for colour kinescope glass case Import equipment for producing electron gun for x-ray medical systems and complete sets of equipment and instrument for welding, clean, annealing, exhausting, test and ageing.

Ref No. Org. No. Cat. Status Request
805782 1.44 2 C J

X-ray image intensifier tube Import large scale complete set of equipment for welding furnace, cold heading, annealing and clean.
Requests

Ref No.  Org. No.  Cat.  Status  Request
405783   1.52  2  C  L

Controller for automobile and train automatic steering lights General technologies for manufacture and assembly of above mentioned products.

Ref No.  Org. No.  Cat.  Status  Request
205784   1.55  2  C  J

Electrodynamic vibration machine Licence for manufacturing body, power amplifier, vibration controller and vibration meter.

Ref No.  Org. No.  Cat.  Status  Request
805785   1.63  2  C  L

Research and development of ceramic "Feima"

Ref No.  Org. No.  Cat.  Status  Request
405786   38  2  C  L

Plastic and metal part production for automotive industry eg mirrors etc.

Ref No.  Org. No.  Cat.  Status  Request
205787   43  2  F  J

Crane/hydromechanical equipment and steel construction including complete manufacturing, technical erection, consultancy and detailed engineering/design.

Ref No.  Org. No.  Cat.  Status  Request
705788   48  2  L

Vehicle air brake equipment manufacture Investment in CNC machines etc required for just in time production of 100,000 parts/annum.

Ref No.  Org. No.  Cat.  Status  Request
405789   50  2  LJ

Lift machinery manufacture Firms requires new production machinery for 1200 to 1800 lifts per year including numerical control work center casing production machine, creiever thread form grinding machine and NC turning unit.

Ref No.  Org. No.  Cat.  Status  Request
5790   61  2  LJ

Wire type marble cutting machines The equipment and machines are required to build 30 - 40 marble cutting machines per year, eg hydraulic equipment, diesel engines, steel parts etc.

Ref No.  Org. No.  Cat.  Status  Request
805791   63  2  LJ

Hydraulic work platforms Welding, steel construction and assembly technology required for the manufacture of 40/50 hydraulic work platforms per year.

Ref No.  Org. No.  Cat.  Status  Request
405792   70  2  LJ

Glass tube manufacture Hot glass forming of glass tubes of different diameters to DIN standards for laboratory use.

Ref No.  Org. No.  Cat.  Status  Request
5793   72  2  L

Sunflower oil extraction and refining equipment Equipment for crushing and extracting edible sunflower oil from seeds followed by refining and packaging. Quantity 24000 tons/year.
CATEGORY 3 - METAL FORMING AND TREATMENT:

Ref No. Org. No. Cat. Status Request
805754 1.18 3 C J

Metallurgical coke and by-product production. The iron and steel complex need a joint venture to construct a new coke oven.

Ref No. Org. No. Cat. Status Request
405795 1.19 3 C L

Refining steel from oxygen top blown converters. They need technical help to upgrade the billet casters and to refine the steel from the converters to produce high quality medium and high carbon steel billets.

Ref No. Org. No. Cat. Status Request
105796 1.2 3 C L

Centrifugal ductile cast iron pipe by hot mould techniques. Major Chinese iron and steel producer needs assistance or technology licence to enable its ductile cast iron pipe to meet ISO2831, particularly in elongation.

Ref No. Org. No. Cat. Status Request
805797 1.21 3 C L

150 x 150 mm billet compact mill from 120 x 120 mm billet wire rod mill production line. In order to raise coil weight we intend to turn to 150 x 150 mm billet. So two additional breaking down mills are required. It is likely that compact mill is to be chosen.

Ref No. Org. No. Cat. Status Request
505798 1.21 3 C L

Milling machine for reinforced bar roll. There is a high speed wire rod mill production line. In order to enlarge market we intend to produce reinforcing bars. So a milling machine to machine reinforcing bar roll is demanded able to mill φ 8-12 mm roll grooves of finishing mill (WC).

Ref No. Org. No. Cat. Status Request
105799 1.21 3 C L

Micro-processor static control of oxygen top-blow converter. Three IST oxygen top-blow converters which are now manually controlled. In order to achieve steady performance improves technological and economic indexes, a micro-processor is required to give static control over oxygen supply, slag-forming and temperature system of the steelmaking process.

Ref No. Org. No. Cat. Status Request
905800 1.21 3 C L

Liquid iron pre-treatment to reduce sulphur content. Two 50 T cupola furnaces produce high sulphur content melted iron (sulphur content 0.050% - 0.090%) which cannot meet the requirements of the steelmaking process. An installation is required to blow sulphur removing powders into a 30 T melted iron pot, followed by slag residual to decrease the sulphur content to below 0.050%.
Refining of liquid steel for continuous casting A technique of powder blowing, air blowing and vacuum treatment is intended to be introduced to meet the requirements of succeeding continuous casting as well as variety of steels.

Controlled cooling of steel plate An advanced, controlled cooling installation and control system is required for A4 high plate mill to improve properties of steel plate and guarantee its quality. Systems could include layer flow cooling, monolayer jet cooling, spray cooling etc but cooling velocity and uniformity should be guaranteed at low water consumption.

Equipment and technology for cutting slab to length from slab continuous casting plant 3 sets of slab continuous casting plants in operation using gases to cut casting slab, have the problems such as wide seam and untidy section, so the problems of slab rate and big loss are caused.

Production of end mills and twist drills Technology of spiral flute grinding in high speed steel required.

Red iron ore dressing The main metal minerals of Tie shan miao ore body of Wuyang Mine are pseudomorph red iron ore, a little magnetite and brown iron ore. Iron concentrate grade 63%, rate of metal recovery over 70%. The gangue mineral are jasper, quartz and a little pyroxene. The normal magnetic dressing technology does not perform well.

The boring, trenching and groove sampling in opencast mining At present the trenching and groove sampling all depend on manual operation. The labour productivity is low, the cost is expensive. There is a requirement for an advanced opencast mining prospecting drilling machine, trenching and groove sampling equipments.

The quantitative detection of TFe, MFe, SiO2, S, P, U, Th in iron ore the detection of various elements in iron ore has remained a problem for a long period resulting in inefficiency and loss of production. More advanced, accurate and faster equipment and means of detection are required.

Reduce massive ratio of punch detonating of hard iron ore and crush up massive iron ore in advance In the west of Gongxiling ore body in Yang Ja Zhuang mine the iron ore is fine grained. But the ageing punch equipments make the massive ratio achieve 40-60% which seriously holds up the production.
The hydrogeology appraisal of duli ore body The proven deposits of duli ore body are 43200000T. It can be regarded as the replacement for lizhen mine. But now the hydrogeological condition needs verifying to forecast the future water leakage before the mine can be exploited.

H beam (200 - 600 mm) and common rolled sections Widely used in high structure, ship building, mechanical manufacture, the petroleum industry, the chemical industry, power plant and bridge construction etc.

Composition and dosing technology of lubricants for copper drawing on bull block Speed of drawing can reach 300-600m/min with the heat from metal deformation and friction, the temperature of drawing die can reach hundreds of degrees centigrade. At this temperature the lubricants must still remain effective.

Technology for welding tubes Tube welding production technology to replace seamless condenser tube made of tin-brass, aluminium, brass and copper nickel alloy is required which will give similar structure, finish and resistance to corrosion.

New type of tool steel, composition and heat treatment technology of hot working for copper and copper alloy extrusion New type hot work tool steel required with good workability at room temperature for making extrusion dies, extrusion piercer, extrusion pad, extrusion shaft and extrusion house of copper and copper alloys extrusion. Should withstand water cooling with no brittleness and low reduction in hardness at 600 - 800 deg C.

The production technology of dia 0.15 - dia 0.30 mm tantalum wire for capacitor The technology is required to produce fine diameter tantalum wire for capacitors include the major production equipment for a good quality product. The required capacity is 3-5T tantalum wire per year.

Rolling rolls Manufacture of hot and cold rolling rolls to be used in steel, aluminium industries for rolling long and flat products of steel and aluminium.

Cast iron foundry, backed by CNC machining for machined and raw cast machine parts requires an automated, flaskless molding line for 6,000 tons/yr molding process with cleaning drums.
Requests

Ref No.  Org. No.  Cat.  Status  Request
605817  51  3   J

Machine and vehicle parts casting and machining Investment in the technology and equipment to produce gray cast iron, nodular cast iron and chill casting and machining capacity 1200 tons/yr.

Ref No.  Org. No.  Cat.  Status  Request
5818  52  3   J

Powder metallurgy Production of powder metal parts for the automotive industry.

Ref No.  Org. No.  Cat.  Status  Request
505819  54  3   J

Chip removal from automotive spare parts made from cast iron and sphereodical graphic castings. Quantities up to 1200 tons/year.

Ref No.  Org. No.  Cat.  Status  Request
105820  62  3   LJ

Metal coating and plating The construction, welding (PVC) and installation of metal coating and plating facilities.

Ref No.  Org. No.  Cat.  Status  Request
705821  64  3   LJ

High tension electrical line parts Forging, casting, heat treatment and machining from steel and aluminium. Forging 650 - 700 tons/ year, casting 550 - 650 tons/year.

Ref No.  Org. No.  Cat.  Status  Request
305822  65  3   LJ

Hydraulic couplings Casting and machining facilities required for manufacture of 300 to 400 hydraulic couplings per year for earth moving machines.

Ref No.  Org. No.  Cat.  Status  Request
805823  66  3   LJ

Hydraulic cylinder manufacture Turning and honing of pipes for the manufacture of hydraulic cylinders and pistons 1500 - 2000 per year for industrial and earth moving machines from seamless steel tube.

Ref No.  Org. No.  Cat.  Status  Request
405824  67  3   LJ

Sand blasting machines and foundry equipment Steel construction, welding and machinery facilities required for building 20 - 30 foundry and sand blasting machines per year.

Ref No.  Org. No.  Cat.  Status  Request
905825  69  3   J

Automotive castings Ferrous casting for auto industries and machine spare parts 1200 - 1500 tons per year.

Ref No.  Org. No.  Cat.  Status  Request
505826  73  3   J

Aluminium casting Spare parts in non-ferrous and aluminium casting with heat treatment. Capacity required 200 ton/year.

Ref No.  Org. No.  Cat.  Status  Request
105827  138.4  3   C   J

Parabolic springs Planned capacity: 2,500 MTs (first year), 4,000 MTs (second year) All raw materials are available locally. This is a new project to be set up in Mangalore, India. Presently they manufacture laminated leaf springs.
CATEGORY 4 - ELECTRICAL:

Ref No. Org. No. Cat. Status Request
605828 1.54 4 C L

The manufacturing technology of vehicle central electrical appliance To replace 8 rigid circuit boards by 5 single sided flexible PCBs (by Iveco).

Ref No. Org. No. Cat. Status Request
205829 36 4 C SJ

Domestic white goods Licences and joint venture opportunities to manufacture, design and test all domestic appliances (white goods) and major components.

Ref No. Org. No. Cat. Status Request
705830 41 4 C L

Auto airconditioning systems for cooling and heating buses, light vehicles, passenger cars.

Ref No. Org. No. Cat. Status Request
405831 138.31 4 C LJ

Electrical induction hand washer This is a new project to be set at Jiangsu, China. Local investment capacity indicated is US$ 0.5 - 1 million, besides land and building. Production required 300,000 sets/year.

Ref No. Org. No. Cat. Status Request
905832 138.42 4 C LJ

Energy saving compact single ended fluorescent lamp Planned capacity: 8,000 pieces/hr on single/double shift Locally available raw materials are glass tube, lead glass tube, lead in wires, etc. Estimated total project cost is around US$ 600,000. Indicated annual demand of single ended compact fluorescent lamp (as per Philips PL or Osram Dulux) is around 7.5million pieces/year.

Ref No. Org. No. Cat. Status Request
405833 138.48 4 C L

Fractional horse power (FHP) motors Planned capacity: 100,000/annum. Enamelled copper wire and mild steel available locally. Items such as silicon steel sheet, bearings, etc have to be imported. Estimated annual demand is around 500,000 which is entirely met through imports. The company is willing to invest around US$ 100,000.
CATEGORY 5 - ELECTRONICS/OPTICAL:

Ref No.  Org. No.  Cat. Status Request 534  1.03  5  L

Application software for computer aided management in construction engineering Used for office automation of construction corporations and project control using microcomputers 0500 IBM PC/TX 286.

Ref No.  Org. No.  Cat. Status Request 405835  1.25  5  C  L

Transplant techniques for process control computer Set up software environments for process control computer, including system integrative techniques and supporting software such as data communication, process interface and man-machine interface as a technical preparation for future process computer software transplantation.

Ref No.  Org. No.  Cat. Status Request 105836  1.25  5  C  L

Design and application of computer network engineering for MIS in a steelworks including the selection of computer network for steelworks and their development. Also the application of optical fiber networks.

Ref No.  Org. No.  Cat. Status Request 605837  1.43  5  C  L

UHF high power transistors with metallised chip on front and back panel used in telecommunication sets, beat chain broadcasters.

Ref No.  Org. No.  Cat. Status Request 105838  1.43  5  C  J

Surface acoustic wave (SAW) devices used in telecommunication sets, TVs, VCRs.

Ref No.  Org. No.  Cat. Status Request 705839  1.44  5  C  L

Manufacturing technologies of transmitting tubes for UHF-TV services Manufacturing technologies and surface coating technologies of grid 2. Manufacturing technologies of mesh thoriated tungsten cathode.

Ref No.  Org. No.  Cat. Status Request 205840  1.45  5  C  L

Manufacturing technique for microcrystal alumina ceramic substrate Mainly used for thick film lc and thin film lc. It needs a flat smooth surface small uniform grain size distribution in matrix.

Ref No.  Org. No.  Cat. Status Request 905841  1.45  5  C  L

Manufacturing technique for high thermal conductivity aluminum nitride ceramic substrate made by sintering aluminium nitride powder that has 2 um average grain size, and beryllia powder additive. Its requirement are: small uniform grain, high thermal conductivity. Formula of material and manufacturing technique are sought.
Requests

Ref No. Org. No. Cat. Status Request
405842 1.45 5 C L

Manufacturing technique for large area ceramic substrate The large area ceramic substrate is liable to become deformed. Equipment and techniques for manufacturing large area ceramic substrate are sought.

Ref No. Org. No. Cat. Status Request
5843 1.46 5 C J

Digital display induction circuit tester Plastic injection, ultrasonic bonding and printed circuit board.

Ref No. Org. No. Cat. Status Request
505844 1.47 5 C J

Facsimile production

Ref No. Org. No. Cat. Status Request
5845 1.5 5 C J

Laser compact disc machines Require the processing technology of the laser photographs hinge element, debugging technology, measuring means and assembly technology.

Ref No. Org. No. Cat. Status Request
705846 1.51 5 C J

Chip monolithic ceramic capacitors Including raw materials, ball milling, moulding, chipping, screen printing (electrode ink), chipping, coating terminals with silver electrodes, sorting, testing and packing.

Ref No. Org. No. Cat. Status Request
205847 1.51 5 C J

Piezoelectric telephone transmitter and receiver The processes required include feed proportioning, ball milling, pre-drying, crushing, forming, sintering, sorting, metallising, polarising, poster, testing, assembly, testing and packing.

Ref No. Org. No. Cat. Status Request
805848 1.51 5 C J

Conductive rubber keypads Processes required include mixing rubbers, powder rolling, thermo compression forming, ageing, testing operating force and packing.

Ref No. Org. No. Cat. Status Request
305849 1.55 5 C L

Control and measuring technology for shock test To produce 3 kinds of waveforms for shock test, to control the shock test, analyse and process of shock test data and analyse shock response spectrum.

Ref No. Org. No. Cat. Status Request
805850 1.59 5 C J

Large flat panel dot-matrix STN LCDs Joint venture required for the following processes: photoresist coating of conductive glass substrates, exposure of photoresist coated substrates, surface alignment layer coating and treating, scribing glass plates, vacuum back filling liquid crystal, electrical-optical inspection.

Ref No. Org. No. Cat. Status Request
505851 1.61 5 C J

Video tape production The manufacture of 3/4 inch and 1/2 inch video tape for professional and domestic use.
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<td>Electronic weighing equipment Licences sought to manufacture balances and scales for industry.</td>
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<td>705857</td>
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<td>Capacitor manufacture Require new, modern machines and equipment for the production of metallised polypropylene capacitors in quantities from 0.6 to 2 million per year to increase production capacity and to decrease the cost.</td>
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<td>Electrical measuring instruments Low voltage measurement devices for electrical measurements in industry.</td>
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<td>ECG, EEG, ultrasonic medical apparatus Bulgarian private company producing medical equipment is researching for a partner for starting a joint production and marketing. Markets in Soviet Union, Romania, Turkey, Greece and Yugoslavia could be provided.</td>
</tr>
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</table>
Optomechanical instruments, optics, lenses, optoelectronic sensors Bulgarian state-owned company is searching for partners for cooperative production of fire-protection equipment, peripherals scanners, plastic details, manufactured under pressure, elements of electrical equipment for cars.

Computer aided manufacturing management A company specialised in design and erection of industrial buildings, is looking for a software able to combine an existing CAD-CAM with the softwares of the CNC tools.

Development of an automatic measuring device for ophthalmic lenses A company expert in design and manufacturing of automatic device is looking for a co-operation (common R/D, joint venture) for the design and development of an automatic measuring device for lenses which will be able to measure diopter, curve, shape and to detect defects by ‘computer aided vision’.

Development of security systems for automatic devices A company specialised in design and manufacturing of electronic security systems, is looking for mechanical machine manufacturers able to co-operate in the development of new performing security systems for their own products.

Development of person detection systems near multi-axis robots A company specialised in the design and the manufacturing of electronic security systems (protection of goods, persons, machines) is looking for a multi-axis robots manufacturer able to co-operate in the development of a space protection sensor for the work security near such robots.

Electronic equipment for teledistribution A company specialised in design and manufacturing of electronic equipment for telecommunication, is looking for a German partner (through licensing, joint venture or industrial co-operation) for manufacturing and distributing its exclusive test pattern generators and text generators.

Optical (bio) sensor to be used in fermentation process A medium sized is seeking to improve the control of some parameters of its fermentation processes. To reach this objective, they are looking for a company having a field experience and a know-how in optical sensors. Technology collaboration sought could be set up on licensing agreement or through an industrial co-operation.

Uninterrupted power supply Locally available raw materials are transformers, PCBs and sheets metal casing. Annual demand growth is 10,000 pieces. Local investment capacity indicated is US$ 50,000 besides land and building.
Requests

Satellite transceivers

Planned capacity: 60 sets/year. Intermediate components are locally available. This is a new project for which the estimated local investment capacity indicated is US$ 12,000 besides 300m2 of land and building.

Flat panel liquid crystal displays

Planned capacity: 40,000 Nos/annum. Raw materials such as plastic and metal parts, and electronic assemblies are locally available for the manufacture of flat panel liquid crystal displays for lap top computers and other information system products. Local investment capacity indicated is around US$ 2500,000 beside 8600m2 of land and 1500m2 of building.

Computer modems

Planned capacity: 20,000 units/annum. Passive electronic components like plastic and metal parts are locally available. This is a new project to be set up with a local investment capacity of US$ 1.7 million besides land and building. Estimated annual demand is 10,000 units. Growth rate is 30%.

Digital telephones

Planned capacity: 30,000 sets/year. This is part of an expansion/modernisation programme. The products are sold in the domestic market as well as in countries of East and South of Asia.
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1.05 Harbin Petro-Chemical Industry Corp Group
1.06 Shanghai Research Institute of Chemical Industry
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3 INSYT (AEA Technology) Ltd
4 Scientific-Research Institute of Engine Production, Engineering & Technology
5 The All-Union Scientific and Research Institute of Transport Construction
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<td>All-Union R&amp;D Institute of Fractional Electric Motors Design and Technology</td>
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Ede-Elektronik Devre Elemanlari AS
Orsan Brakes Ltd
Yazar AS
Ersal Makina Ltd
Cer Dokum ve Makina Sanayi AS
Tozmetal Ticaret ve Sanayi AS
Mikrotek AS
Momsas
Ozdekan Kaucuk
Bodur Engineering Co
Caesas Bilgisayar Ltd Sti
Eges As
Telesia AS
Uker Makina
Makesan
Mekates
Oz Makine Elektrik
Korucu Makina
Ermaksan
Hidrolift Makina Sanayi
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Ozguven
Ildam Cam
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Bikit
Barnes Advanced Technology Inc
Zenon Environmental Inc
Playdon, J
The University of Manitoba
Rotech Technological Centre
Institute of Industrial Technology
Agri Contact
Axon AB Plastics Machinery
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Org. No. 140.13

Central Mining Institute
Refer to UNIDO IPS Warsaw
Org. No. 140.19

Centre for Development of Telematics
Refer to Asian & Pacific Centre for
Transfer of Technology
Org. No. 138.04

Centre for Science & Technology
Application
Refer to National Information &
Documentation...(Org. No. 125)
Org. No. 125.07

Centre for Technology Transfer
State Committee for Sciences
Refer to Asian & Pacific Centre for
Transfer of Technology
Org. No. 138.50/.51/.52

Centre of Electro-Mechanical Engineering
for Agriculture
Refer to National Information &
Documentation...(Org. No. 125)
Org. No. 125.04
Centrifugal Piston Expander Inc
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Chem Tech Industries
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Org. No.138.43

China North Industries Corporation (NORINCO)
Refer to Asian & Pacific Centre for Transfer of Technology
Org. No.138.29

China Technology Market Management & Promotion
Refer to Asian & Pacific Centre for Transfer of Technology
Org. No.138.03

China Typical Sewing Machine Co (YASEW)
Refer to ISTIC
Org. No.1.14

China Zhen Hua Electronics Industry Corp
Hong Yun Electric Components Factory
Refer to ISTIC
Org. No.1.51

Ciris International
Jean-Pierre Ogliati
President
Zone Industrielle
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France
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Telex:550 213 f
Org. No.96

Cogent Ltd
Org. No.2
Refer to Technology Exchange

Computer Monitoring & Control Ltd (C-Mac)
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Org. No.83

Construction Technical Institute of China National Chemical Engineering Corp
Refer to ISTIC
Org. No.1.03

Corp for Manufacture of Essential Oils Aromas Cosmetics
Refer to National Information & Documentation...(Org. No. 125)
Org. No.

Cosmic Engineering Works
Refer to Asian & Pacific Centre for Transfer of Technology
Org. No.138.44
Earthshields Europe SA
127 Rue des Moulins
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Eastern Engineering Industries
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Org. No. 138.13

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Org. No. 58

Electric Safety Devices
53 Chevewham Close
Colwall
Nr Malvern
Worcs WR13 6RE
UK
Org. No. 85

Elektromontaz-Export
Refer to UNIDO IPS Warsaw
Org. No. 140.2

Elektronik Kontrol Aleleri AS (EKA)
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Endumak
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Org. No. 67

Energopol Contractors & Designers
Refer to UNIDO IPS Warsaw
Org. No. 140.24
Entech Consultancy Pvt Ltd
Refer to Asian & Pacific Centre for Transfer of Technology
Org. No. 138.63

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Suheyl Erboz
Chairman
Imes San Sites 206 sok
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Fax: 364 98 77
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Fischer Advanced Composite Components Ges mbH
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Foundry Research Institute
Refer to UNIDO IPS Warsaw
Org. No. 140.02 / 140.05

Frycool Pvt Ltd
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Tel:
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Org. No. 138.53
Fujian Research Institute of Light Industry
Refer to ISTIC
Org. No. 1.15

Fisegear Electric Ltd
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Org. No.100

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Telex:33616 W
Org. No.99

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Org. No.119

Guangzhou Center Power Electronics
Enterprise Limited
Refer to ISTIC
Org. No.1.48

Guanqian Agricultural Technical Service Co
of Longxi County Fujian Province
Refer to ISTIC
Org. No.1.67

Guiyang Aeronautical Electrical Appliance
Factory
Refer to ISTIC
Org. No.1.54

Gunmalt Gunduz Machinery & Metal Ind
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Handan Iron & Steel Works
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Hangzhou Household Electric Appliance
Industrial Corp
Refer to ISTIC
Org. No.1.17

Harbin Petro-Chemical Industry Corp Group
Refer to ISTIC
Org. No.1.05

Hevea Engineers Pvt Ltd
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Transfer of Technology
Org. No.138.6

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INSYT (AEA Technology) Ltd
Org. No. 3
Refer to Technology Exchange

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Org. No. 1

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Ilker Makina
Mehmet Asian
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Org. No. 60

Indian Explosives Limited
Refer to Asian & Pacific Centre for Transfer of Technology
Org. No. 138.28

Indian Space Research Organization (ISRO)
Refer to Asian & Pacific Centre for Transfer of Technology
Org. No. 138.06

Indian Telephone Industries Limited (ITI)
Refer to Asian & Pacific Centre for Transfer of Technology
Org. No. 138.05
Indo Asian Fusegear Private Limited
Refer to Asian & Pacific Centre for Transfer of Technology
Org. No.138.02

Industrial Chemistry Research Institute
Refer to UNIDO IPS Warsaw
Org. No.140.15

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Telex:23 178
Org. No.127

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Telex:148125 PROJEKT
Org. No.13

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Tel:219165
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Institute for Research & Development of Cellulose Industries
Refer to Asian & Pacific Centre for Transfer of Technology
Org. No.138.08

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Institute of Chemistry (Sub-NCSR of Vietnam)
Refer to National Information & Documentation...(Org. No. 125)
Org. No.125.06

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Org. No.93

Institute of Metal Research Academia Sinica
Refer to ISTIC
Org. No.1.27

Institute of Tropicalization Technology (NCSR of Vietnam)
Refer to National Information & Documentation...(Org. No. 125)
Org. No.125.05

Istanbul Motor Piston ve Pim Sanayi AS (IMP)
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Org. No.37
Leather Research Institute
Refer to UNIDO IPS Warsaw
Org. No.140.16

Li Taka Pharmaceuticals Ltd
Refer to Asian & Pacific Centre for
Transfer of Technology
Org. No.138.49

Lianyungang Economic & Technical
Development Zone
Refer to Asian & Pacific Centre for
Transfer of Technology
Org. No.138.31

Liaoyuan Radio Factory The Ministry of
Aerospace Industry
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Org. No.111

Louyang Institute of Refractories Research
Refer to ISTIC
Org. No.1.29

Luoyang Copper Works
Refer to ISTIC
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M/S Sangula Enterprises
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Org. No.1.103

Maanshan Iron & Steel Co
Refer to ISTIC
Org. No.1.28

Maanshan Iron & Steel Research Institute
of the Metallurgical Ministry of China
Refer to ISTIC
Org. No.1.42

Macon Engineers
Refer to Asian & Pacific Centre for
Transfer of Technology
Org. No.138.61

Maestro Enviro Systems Pvt Ltd
Refer to Asian & Pacific Centre for
Transfer of Technology
Org. No.138.57

Magnus Aerolubes Pvt Ltd
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Magnus Aerolubes Pvt Ltd
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Makina Disli Tekstil Sanayi
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Mangalore Chemicals & Fertilizers Ltd
Refer to Asian & Pacific Centre for Transfer of Technology
Org. No. 138.38

Mattech Int Co Ltd
Refer to UNIDO IPS Warsaw
Org. No. 140.21

Mekats
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Metallurgy Research Institute of Hebei Pro
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Middle Asian Research and Project Institute of Non-Ferrous Metals
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Mining Mechanization Centre KOMAG
Refer to UNIDO IPS Warsaw
Org. No. 140.18

Mirpur Agricultural Workshop & Training School (MAWTS)
Refer to Asian & Pacific Centre for Transfer of Technology
Org. No. 138.41
Nanjang Research Institute of Cigarette Filtering Material
Refer to ISTIC
Org. No.1.02

Nantong Erosion-proof Pipe Factory (Jiang Su China)
Refer to ISTIC
Org. No.1.56

National Aeronautical Laboratory
Refer to Asian & Pacific Centre for Transfer of Technology
Org. No.138.19

National Aeronautical Laboratory
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Org. No.138.24

National Information & Documentation Centre For Science & Technology
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National Small Industries Corporation Limited
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Natural Science Journal of Xiengtan University
Refer to ISTIC
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Nauchno-proizvodstvennoe obiedinenie po kusnechno-pres-sovomu oborudovaniju i gibkim proizvodstvennym
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Punjab Wireless Systems Limited
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Org. No.138.1

Qingdao Institute of Chemical Technology
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Org. No.1.09 / 1.1

Quest Investment Limited
Refer to Asian & Pacific Centre for Transfer of Technology
Org. No.138.23

R C Projects & Systems Pvt Ltd
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Org. No.138.62

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Org. No.121

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Rubber Research Institute of Malaysia (RRIM)
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Org. No.138.12

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Org. No.138.14

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Org. No.138.26

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Org. No.1.62

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Shaanxi Institute of Microbiology
Shaanxi Academy of Science
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Org. No.1.64

Shanghai Research Institute of Chemical Industry
Refer to ISTIC
Org. No.1.06

Shenyang Scientific Instrument Factory
Refer to ISTIC
Org. No.1.26

Shenyang Smelter Co-operation
Refer to ISTIC
Org. No.1.39

Sheuyang Jinyi Automatic Control Institute
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Org. No.1.52

Shivalik Agro Poly Products Limited
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Org. No.138.27

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Org. No.77
Shuyuang Electron Tube Factory
Refer to ISTIC
Org. No. 1.53

Sichuan Chemical Works
Refer to ISTIC
Org. No. 1.01

Sintroco Limited Partnership
Refer to Asian & Pacific Centre for Transfer of Technology
Org. No. 138.09

Sirur & Co
Refer to Asian & Pacific Centre for Transfer of Technology
Org. No. 138.46

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Org. No. 138.58

Standard & Industrial Research Institute of Malaysia (SIRIM)
Refer to Asian & Pacific Centre for Transfer of Technology
Org. No. 138.11

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Starch & Potato Products Research
Refer to UNIDO IPS Warsaw
Org. No. 140.14

State Owned Xingguang electron Device Factory
Refer to ISTIC
Org. No. 1.43

State Run Factory No 799 of the Ministry of Machinery & Electronic Industries
Refer to ISTIC
Org. No. 1.45

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Org. No. 80

Swastik Products
Refer to Asian & Pacific Centre for Transfer of Technology
Org. No. 138.36

Swathy Chemicals Limited
Refer to Asian & Pacific Centre for Transfer of Technology
Org. No. 138.17

T T K Pharma Ltd
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Org. No. 138.56
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