



THE **EINCO-K.C.P.** LTD.

an ISO 9001 Company



Installations around the World



THE EINCO-K.C.P. LTD.

The EIMCO-K.C.P. Ltd is a process technology company and a leading Indian supplier of Liquid Solids Separation Equipment for mineral and chemical processing, pulp production, wastewater and water treatment. Technology at The EIMCO-K.C.P. LTD is continuously being updated providing clients with optimum processing efficiency while maintaining the rugged equipment reliably developed from our operating experience.

EIMCO-K.C.P.'s commitment to empowered customer service is geared towards the development of revolutionary equipment to meet the processing requirements of tomorrow. Continuous research has led to advances in technology that improve current processes for our customers.

At EIMCO-K.C.P, highly skilled engineers with leading technical expertise conduct in-depth analysis that leads to efficient and innovative solutions for each process industry. Appropriate tests are carried out to determine and select actual equipment required for clients to ensure efficient and economical operation. Experts from EIMCO-K.C.P. will also work on-site to run "on stream" tests, the findings of which will be kept strictly confidential.

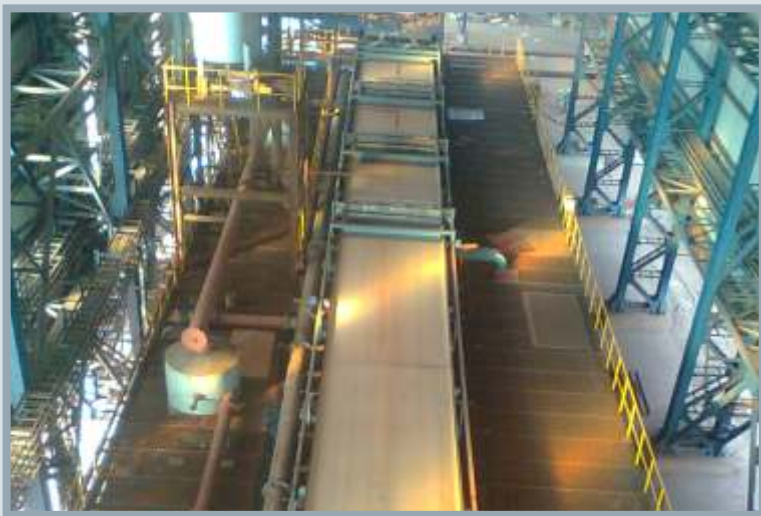
We welcome the opportunity to work with you and foster a long term and positive relationship that will lead to better and more efficient solutions for your company.

A brief description of the equipment manufactured by EIMCO-K.C.P. for Chemical and Process industries is given on the following pages. For more detailed and technical information, please contact:

The EIMCO-K.C.P. Ltd  
Ramakrishna Buildings,  
239 Anna Salai,  
Chennai- 600 006  
India  
Phone: 044- 2855 5171  
Fax: 044- 2855 5863  
E-mail: [ekcp@vsnl.com](mailto:ekcp@vsnl.com)  
Website: [www.ekcp.com](http://www.ekcp.com)



## HORIZONTAL BELT FILTERS



Eimco-K.C.P. Extractor horizontal belt filter is a continuous vacuum filter operating on a horizontal plane. Slurries are fed onto the surface from above and the unit utilizes both gravity and vacuum to effect rapid separation of liquids and solids. The full range of coarse granular to fine slime or fibrous solids can be processed because of the top feeding principle and excellent hydraulic design. The EIMCO-K.C.P. HBF is especially suited for applications where low cake moisture and multi-stage cake washing are desirable. The cloth medium can be washed during each cycle or intermittently to prevent blinding and ensure full filtration efficiency. Liquid used to wash the medium cannot contaminate the feed or the products. Suitable for dewatering iron ore, lead-zinc concentrate, illuminate, coal application etc.

## THICKENERS (HIGH RATE & CONVENTIONAL)

EIMCO-K.C.P. Thickeners are available in both column mounted and bridge mounted types and sizes for every kind of service in chemical, mining, pulp and paper industries and for industrial waste treatment. The drives are of beam, truss or centre column supported or traction types using both hydraulic drive with planetary gear arrangement with hydraulic lift and conventional drive.

Automatic rake lifting devices and centre column pumping are available. Special arms are provided for dense slurries. Main gears in drive-heads are of special steel, designed for wear resistance, surface durability and strength for high-torque applications. Waste treatment thickeners are also available with centre column pumping which eliminates the need for expensive tunnels.

Designed for handling iron ore, copper, coal uranium, aluminium, bauxite etc and also various applications which include leaching, concentrates, tailing, clarification, counter current decantation (CCD) etc., in various industries like cement, refineries, smelters, Gas cleaning plant, washeries etc.



## SWING LIFT THICKENERS



The EIMCO-K.C.P. Swing Lift thickener can process thixotropic slurries, acidic and slime laden pulps and tacky muds minimizing torque requirements and the troublesome problems of mud scaling.

EIMCO-K.C.P. designed the Swing Lift mechanism to handle a wide range of solids loadings with minimum of operator attention.

Operating torque necessary to rake settling solids is substantially reduced by the EIMCO-K.C.P. Swing Lift mechanism. This ensures increased flexibility of operation for the handling of overloads due to on-stream plant upsets or for the periodic storage of thickened solids.

## DRUM FILTERS

EIMCO-K.C.P. continuous Vacuum drum filters are custom designed for the broadest range of slurries. They achieve exceptionally high filtration rates and possess excellent washing characteristics. They can also accommodate wide variations in percentage of cycle time devoted to cake formation, dewatering and washing. EIMCO-K.C.P. drum filters are available as high or low submergence units with scraper, string or roller discharge arrangements. Filtering areas range from 1 to 116 sq. m.



## BELT FILTERS



EIMCO-K.C.P. Belt Filter is a rotary drum type, continuous belt vacuum filter that provides maximum efficiency for a wide variety of filtering and washing applications. Full filtering capacity can be maintained at all times. During each cycle, the filter medium leaves the drum and passes over a small diameter roller where even sticky cakes are discharged cleanly. High impact sprays scour the medium before it returns to the drum to prevent blinding. Sizes range from 10 to 80 sq.m. of filtering area.

## AGITATOR DISC FILTERS

EIMCO-K.C.P. Agitator Disc Filter is a vertical leaf rotary vacuum filter particularly adapted to filtration of rapid settling solids. It is widely used in dewatering metallurgical slurries of all types, including coal. A horizontal paddle agitator effectively maintains solids in suspension and prevents uneven cake formation.

The Agitator Disc Filter is the most economical vacuum filter that can be selected where de-watering is the primary consideration. Due to its design where the filtering surface has been utilized in a vertical plane, washing of the filter cake is very limited. Guided scraper provides for discharge of thin cakes which reduces wear on the filter media. A wide variety of media-stainless steel screens, cloth and synthetic fabrics are available. Filtering areas range from 2 to 260 sq.m.



## CANE MUD FILTERS



EIMCO-K.C.P. Cane Mud Filter is designed to increase the capacity of cane mud filtering stations and at the same time, ensure maximum recovery of sucrose by washing. It incorporates a number of design modifications aimed at making cane sugar operations more profitable. The filter valve with streamlined passages and a system to sweep moisture from piping with air, results in the highest operating efficiency. The streamlined piping arrangement eliminates all sharp turns in piping. Cake washing is accomplished by spray nozzles spaced evenly for minimum wash water consumption. The scraper blade and slurry level can be adjusted to get the best operation. Maintenance advantages include easily removable filter screens and automatic lubrication. Every detail of the filter design and construction has been engineered to minimize operating cost for processors of cane sugar.

## HIGH & LOW SUBMERGENCE PRECOAT FILTERS

EIMCO-K.C.P. Pre-coat filter is a continuous rotary vacuum drum type clarification or polishing filter. It is commonly applied for clarification of difficult filtering and low solid slurries on a continuous basis. The slurry solids deposited by vacuum on the surface of this bed are removed on each revolution. Available with vapor tight hoods for special applications. The Scraper blade operates independently of the drum driver to give greater flexibility with 'lathe precision' movement.



## DEWAXING FILTERS



EIMCO-K.C.P. solvent oil dewaxing filters are designed for the safe, high capacity removal of wax from lubricating oils at low operating temperatures. Positive seal of the valve, rigid support construction of the tank, screen support deck construction and spring mounted Teflon scraper which maintains preset position and is not affected by temperature variations are major features. Major features are positive seal of the valve, rigid support construction of the tank, screen support deck construction and spring mounted Teflon scraper which maintains preset position that are not affected by temperature variations. These units can be instrumented and automated for continuous processing.

## CLARIFIERS

EIMCO-K.C.P. Clarifier mechanisms cover all tank sizes and load requirements including beam supported and centre column units. These operate on the common principle of moving settled solids to tank centre for removal. Drive heads have been designed for minimum power consumption. Heavy duty gears are provided to keep maintenance costs low. Skimming mechanism is available for removing oils and floating solids.





## REACTOR CLARIFIERS



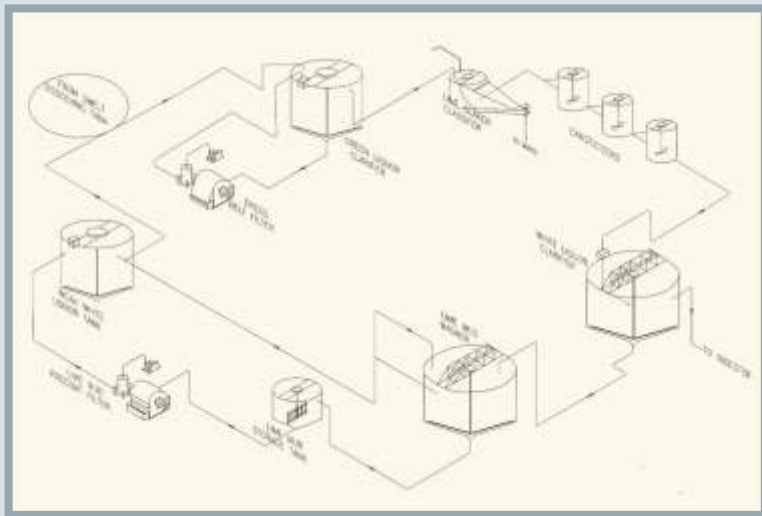
EIMCO-K.C.P. High rate, solids contact reactor clarifiers have general application for water treatment and for industrial process. Improved operating efficiencies ensure operating costs are kept to a minimum. The Reactor clarifier water treatment units effectively clarify and soften raw or processed water for re-use.

## CLASSIFIERS

EIMCO-K.C.P. Classifiers are designed to settle and de-water relatively coarse particles from high volume, low percent solid streams. The Classifiers offer the best means of removing settleable solids and grit quickly and economically.



## RECAUSTICIZING SYSTEMS



EIMCO-K.C.P. offers different systems of recausticizing plant and equipment to suit pulp and paper mill requirements. The recommended system includes green liquor clarifier, dregs washer, lime slaker classifier, causticizers, white liquor clarifier with storage, mud washers - either belt filter or clarifiers, followed by a lime mud storage agitator and lime mud filter.

Several cost saving features are incorporated in the EIMCO-K.C.P. equipment.

EIMCO-K.C.P. recausticizing system can be expressly tailored to meet the exact mill operating conditions by our experienced engineers.

## LIME SLAKERS

EIMCO-K.C.P. Slakers and Slaker-Classifiers for lime are available in different sizes depending on the application and requirements. The Slaker-Classifier combines the slaking action, classifying and grit removal in a single unit. This design provides adequate retention time for optimum slaking efficiency.



## FLOCCULATORS



EIMCO-K.C.P. Flocculator provides agitation for treating processed liquids, water or wastewater in circular or square tanks. Available in 1 to 25 hp for chemical mixing and blending coagulants, neutralization and general purpose mixing. When used for flocculation, the unit has an extremely high circulation capacity - upto 25 times the feed rate. EIMCO-K.C.P. also provides other types of horizontal and vertical paddle flocculators for flocculating and mixing applications.

## SURFACE AERATORS

EIMCO-K.C.P. Fixed and Floating mechanical Surface Aerators are available for any industrial waste treatment application. They are recommended for processes involving activated sludge, aerobic digestion, contact stabilization or pre-aeration and for aerated lagoons. The design of the EIMCO-K.C.P. aerator provides an oxygen transfer capacity from 1.4 to 1.8kgs per impeller horsepower hour, depending on size and conditions. These aerators provide rigorous agitation and mixing in the water to disperse the oxygen and keep the solids in suspension. For large basins or ponds, aerators can be supported on bridges. The Drive is sized and selected from available reducer or gear motor equipment to provide a generous service factor.



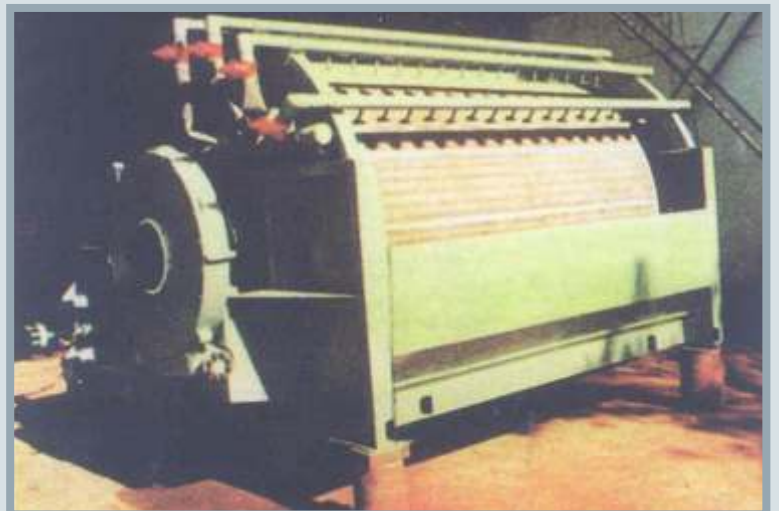
## ROTARY DISTRIBUTORS



EIMCO-K.C.P. Rotary Distributor provides for uniform distribution of screened and/ or clarified waste water over the surface of biological filter media. The hydraulic power created by the force of the jet like streams escaping from the outlets is sufficient to rotate the distributors.

## BROWN STOCK AND BLEACH PULP WASHERS

EIMCO-K.C.P. Brown Stock and Bleach Pulp Washers have exceptional hydraulic capacity upto 76 cu. m per minute and a high washing efficiency with minimum foaming. The Exterior valve is trouble-free and simplifies operation. Anti-run back deck design for Brown Stock Washers and deep deck polypropylene grids for Bleach Washers eliminate all maintenance and downtime associated with wire wound decks. The Brown Stock Washers are designed to assure maximum recovery of dissolved solids by efficient displacement washing, while the Bleach Washers provide maximum removal of dissolved solids for low chemical consumption at minimum dilution factors for uniform pulp production. The valve design permits use of a barometric leg or a combination vacuum pump for flexibility of operations.



## DRIVE HEADS



The drive head is the heart of the Clarifier mechanism. The present design of Eimco-KCP Drive heads is the result of careful study and experience gained over 25 years of operation in Sedimentation equipment used in various Chemical Industries, Water Treatment Plants, Sewage and Effluent Treatment Plants under severe operating conditions.

A Sedimentation drive generally operates at a relatively low value of output torque in a well-operated installation. As long as the solids input equals the solids output from the mechanism, torque will begin to climb and the alarm on the drive control will actuate to warn the operator to take corrective action.

Three types of drives are generally used for Clarifier and Thickener Mechanism:

"W" SERIES DRIVE

"B" SERIES DRIVE

"C" SERIES DRIVE

## HYDRAULIC DRIVES

EKCP's Hydraulic Drive includes drive unit with bull gear, planetary gear system driven by a hydraulic motor, which in turn is operated through a hydraulic power pack. Also the unit includes a torque transducer to activate the overload alarm and to produce an output signal. Automatic rake lifting arrangement and drive tripping arrangement is provided in order to protect the mechanism from overloading.

The drive is mounted on a lift plate and provided with hydraulic lift arrangement with cylinders.

- Drive Heads with duty rated torque upto 2,711,000 Nm and peak torque rating upto 9,760,000, using High Precision Ring Gears are standard on large EKCP Thickeners
- Increased torque capacity
- Reliable and adjustable torque sensing
- Torque sensing by electronic main drive slip sensor with fixed high torque alarm and motor cut off valves but with adjustable rake raise torque value and also the same feature is available with load cell type transmitter



# WORKSHOP & INSTALLATION IN PROCESS



EIMCO-K.C.P. is also engaged in executing turnkey contracts in various Govt & non-Govt industries and organizations. Our latest project involves a complete de-sulfurization unit for refinery of HPCL in Mumbai and Vizag where Engineers India Ltd. is the consultant.

### List of Major Turn-Key projects handled

Hindustan Petroleum Corporation Ltd. Mumbai and Vishakapatnam • SAIL – Rourkela for their IISCO-Burnpur project.

\* Sunflag Iron & Steels Ltd, Nagpur • Maheswary Ispat Limited, Cuttack • Usha Martin Industries, Kolkata • Essar Steels Ltd, Hazira • SAIL – IISCO, Burnpur Phase 1 • Larsen & Toubro Ltd for Tata Steel Blast Furnace • SAIL – IISCO, Burnpur Phase 2 • Larsen & Toubro Ltd for Bhushan Steels - Angul • Total STP to Chennai Metro Water Supply and Sewerage Board, Bangalore • Metro Water Supply and Sewerage Board, Mumbai Municipal Corporation, Delhi Jal Board etc.

### Export Front

Since 1973, The EIMCO-K.C.P. Ltd. has been exporting equipment to Australia, Thailand, Singapore, Mauritius, Malaysia, Nigeria, Kenya, Indonesia and other countries.

### Major International Installations

• Konkola Copper Mines plc, Zambia. • Bangkok Water Treatment Plant, Thailand. • Cherating Water Treatment Plant, Malaysia. • Nigerian paper Mills Ltd, Nigeria. • Pan African paper Mills Ltd, Kenya. • Metax Engineering Corpn, Singapore. • Aquatech International, Canonsburg. • Habitat, USA. • Thai Organic Chemicals, Bangkok. • Summit Grade, Bangkok Pattaya STP. • Bangladesh Project through Nuberg Engineers, India. • Sinothai, Thailand. • Societe Co-operative Ouvriere de Production, French West Indies. • The KCP Ltd (Vietnam project). • FCB-KCP Ltd (Thai Binh Project). • SNAM PROGETTI. • SEARSOLE. • FISHRCHER, MANILA. • Sitara Chemicals Ltd, Pakistan. • Kabuye Sugar Works, Uganda. • Birla Nifty Ltd, Australia. • Biwater International Ltd, London, England. • Oman Chemicals Ltd, Oman. • National Refinery, Iraq. • Aquathai Co. Ltd, Thailand (For Maha Sawat WTP). • Sabah Forest, Malaysia. • Sinothai Engg & Construction, Udorn.

The EIMCO-K.C.P. Ltd. has won several Regional and National Awards including Best Exporters' Shield awarded by the Engineering Export Promotion Council, Government of India for the export of capital equipment.

### List of Plant & Machinery

DESCRIPTION	MAKE	MODEL
HORIZONTAL BORING MACHINE	HMT PEGARD	AZ-11
VERTICAL TURRET LATHE-01	COOPER	CVT-150
VERTICAL TURRET LATHE-02	KIRLOSKAR	150 DYNACUT
FACING LATHE-FL 4000	BECO	FL 4000
HEAVY DUTY LATHE (24 FEET)	BECO	HD 50C
DELHI LATHE	BECO	DL 310
EOT CRANE – 5 TONNE	CONSOLIDATED HOIST	2E 504
EOT CRANE – 10 TONNE	CONSOLIDATED HOIST	E 1004
BOMBAY LATHE (SLIDING BED GAP LATHE)	MYSORE KIRLOSKAR	BOMBAY
SHAPPING MACHINE	SAKAR	SM-24
SLOTING MACHINE-CH25	COOPER	
RADIAL DRILLING MACHINE	BATLIBOY	Vr4
RADIAL DRILLING MACHINE	OKK	Vr4
UNIVERSAL MILLING MACHINE	RAMAN	
HYDRAULIC POWER HACKSAW MACHINE	MYSORE KIRLOSKAR	COBRA
CIRCULAR SAW (GRIND CUTTING MACHINE)		
PEDESTAL GRINDING MACHINE		
GEAR HOBGING MACHINE	HEWKS	V-1800
PLATE BENDING MACHINE		
HOLDING OVEN – 6 KW	HEATERS INDIA	
PUG CUTTING MACHINE	ESAB	
WELDING RECTIFIER – GL401	AOL	
WELDING RECTIFIER	AOL	
WELDING RECTIFIER-01	FLOWTECH	
WELDING RECTIFIER-02	KANUBHAI	
WELDING GENERATOR	TRIODYN K 320	
WELDING GENERATOR	GELBERG	
PLASMA CUTTING MACHINE	CELBERG	
DIESEL POWER GENERATORS	CUMMINS & RUSTON	

Regd. Office:

The EIMCO-K.C.P. Ltd.  
Ramakrishna Buildings,  
239 Anna Salai,  
Chennai- 600 006 India  
Phone: 044-2855 5171  
Fax: 044-2855 5863  
E-mail: ekcp@md2.vsnl.net.in  
Website: www.ekcp.com  
Mobile: 94440 86921/ 94440 86920

Marketing Office:

231, Arun Chambers,  
J. Dadaji Road,  
Mumbai-400 034 India  
Phone: 022-2352 4608  
E-mail: eimcokcp@vsnl.net  
ekcp@md2.vsnl.net.in

Factory:

No. 11-A, 3rd Main Road,  
Industrial Estate, Ambattur  
Chennai- 600 058 India  
Phone: 044- 2625 3375  
Fax: 044- 2625 5085

