



Chematur Engineering Group
Technology Centre

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The Chematur Engineering Technology Centre is located in Karlskoga. It is the hub of the Chematur Group's development activities.

The Tech Centre is complemented by local laboratory and pilot facilities at the Chematur Group companies.

IBI Chematur, Mumbai, India is the competence centre for ethanol chemistry such as acetaldehyde, acetic acid, ethyl acetate etc. Plinke GmbH, Bad Homburg, Germany has a fully equipped laboratory to make tailored custom tests in the field of acid treatment.

The Tech Centre is fully modern and features among other things the following:

- A modern office with catering and changing room facilities. The office part includes conference rooms with Audio-Visual capabilities and Internet connection for our guests.
- A top modern laboratory equipped with fume hoods, all normal laboratory equipment and state of the art analytical equipment such as GC, HPLC and viscosimetry. In the laboratory we also have a bench scale Fermentation system to support the Biostil® 2000 development.
- A large pilot plant hall with an associated work shop. The main feature of the pilot plant is a Biostil® continuous fermentation unit. The unit is mainly to be used for starch based raw materials but it can also be used for sugar based feedstocks. All variables of interest can be tested in the plant which is equipped to operate continuously around the clock with minimum attendance.
- The pilot hall also features a Supercritical Carbon Dioxide plant. The unit is a Rotowasher™ but it can also be used to test other scCO₂ applications.
- We also have a forced circulation evaporation/ crystallisation unit to support the Evaporation/ Crystallisation business area. This unit can either be installed and used at the Tech Centre or at the site of our clients.





PLINKE R&D ACTIVITIES

The R&D activities of PLINKE are focused on the continuous improvement of the proprietary PLINKE Processes in regard to environmental protection, energy saving, process safety, reliability, sustainability, OPEX and CAPEX.

Laboratory Tests

During more than 60 years in the acid treatment business, we have made the experience that each waste acid is unique. Even waste spent acids derived from the same production processes may be different. Therefore, Plinke GmbH offers laboratory testing for the clients. This step saves a lot of time and money for the client and avoids possible process problems. Alternative materials are also tested in regard to corrosion resistance and applicability for special purposes.

Risk Evaluation and Process Design

When clients decide for recycling of spent acids, they are very keen to know the quality of the recycled acids. A change of the quality can obviously completely change the production process because of the enrichment of by-products.

Lab tests give a clear picture about the quality. Knowing the requirements of the client and having results of the lab tests, Plinke designs the process and the equipment adequately. The lab tests give a clear indication about process requirements, necessary dimensions of the equipment, required washing intervals if necessary, and other particularities to consider. For Plinke a direct scale up is possible and in most cases pilot tests can be avoided.

Database

Plinke has a detailed database about the physical and chemical properties of a large range of acids. The database covers 60 years experience.

Analytical Equipment

GC-FID, Head Space GC-FID, UV-VIS, AAS, COD-Analytic, etc. are available. If necessary, special analysis will be executed by external laboratories of reputed institutes.

Pilot Units

Plinke can also supply and operate pilot units for process development as a further step between lab tests and large scale process plants to reduce scale up risks. For NO_x absorption technology Plinke has a mobile pilot test unit available for process evaluation.

IBI Chematur R&D

World over people are turning their attention towards green chemistry. Issues such as Carbon Neutral (Low Carbon), Ozone Depletion, Sustainability, Self-reliance and Bio Diversity are being actively investigated by policy makers, engineers and researchers alike. As a part of our continuing efforts to enhance and improve our technologies, making them more energy efficient and adopting newer green technologies, IBI Chematur is in the process of setting up a state of the art R&D facility at Mumbai which will be functional by mid-2009. The Research Centre will specifically look into ideas on renewable energy and green chemicals. With back up arrangements from Universities abroad and in India, the centre will also be well equipped to undertake contract research in these emerging fields of tomorrow.



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