

In this issue, we feature two of Ion Exchange India's projects - for textile dyeing effluent treatment & recycle and for zero discharge plant for petroleum industry. Also, advanced technologies for solid waste treatment and energy recovery from waste offered by our joint venture Ion Exchange Waterleau Ltd.

Prestigious Recycle Project

INDION® Effluent Treatment & Recycle Plant at Angeripalayam Common Effluent Treatment Plant, Tirupur

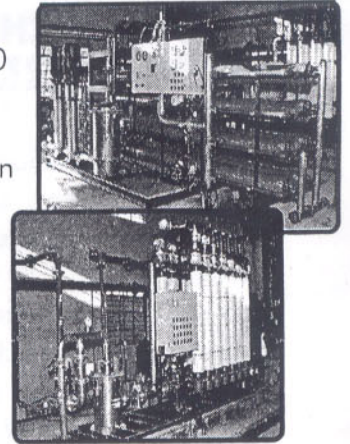
Ion Exchange India (IEI) has been awarded the contract for installation of the INDION common effluent treatment and recycle plant at Angeripalayam Common Effluent Treatment Plant (ACETP), Tirupur. The plant will treat 10 MLD of effluent generated by around 75 dyeing units. The existing CETP is available for primary treatment for colour removal and COD/BOD reduction. IEI is now upgrading the facility to achieve zero discharge (approx. 82% permeate for reuse as fresh water, 10% as brine solution for reuse in dyeing and 8% to evaporator). The treatment scheme comprises:

- INDION membrane bio-reactor-chlorination-ion exchange columns (for colour and hardness removal)
- The filtrate passes through 2 stages INDION reverse osmosis (RO)
- The RO reject is then treated by an INDION high rate solids contact clarifier (HRSCC) for silica removal and then,
- Nano filtration (NF) for removal of COD, hardness and colour reduction.

The NF permeate contains high amount of salt which can be used in the dyeing process by individual units. NF also helps in reduction of volume of water passing through the evaporator thereby reducing the capacity of the evaporator. IEI had earlier taken up a 500 m³/day pilot plant for Angeripalayam CETP, Tirupur which included a 50 m³/day INDION membrane bio-reactor unit that has

given excellent results in COD reduction, from 500 to 100 ppm. The reason why MBR also forms part of the treatment scheme in the current 10,000 m³/day contract.

The plant not only saves the input cost of fresh water but also solves the issue of waste water disposal.



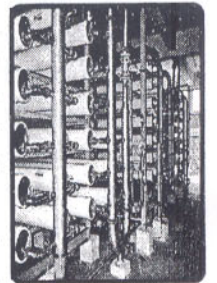
Successfully Commissioned

INDION® Zero Discharge Effluent Recycle Plant for CPCL

Ion Exchange India has successfully commissioned a zero discharge effluent recycle plant for Chennai Petroleum Corporate Ltd. (CPCL), Manali, Tamil Nadu.

The plant, feed capacity 200 m³/h, incorporates pretreatment, coagulation and filtration, ultra filtration and reverse osmosis, and degasification. It treats water from the existing effluent treatment plants of CPCL, for process use in the refinery. This is saving more than 4000 m³/day of scarce fresh water and over Rs. 20/m³ compared to the costs of fresh water.

The zero discharge plant demonstrates that recycle of waste water not only protects the environment but also makes good business sense. IEI has also been awarded the O&M contract for this zero discharge plant.



INDION is a registered trademark of Ion Exchange (India) Ltd.

