

W A T E R

Technologies for Better Quality of Life

WATER PINCH TECHNOLOGY FOR ACHIEVING ZERO DISCHARGE

Usage pattern of water is extremely critical in any complex which consumes large quantities of water. The benchmark for water consumption and waste water generation in industrial and non industrial complexes is an important issue. This calls for a technological approach to water management, conservation and reuse. With the advent of zero discharge approach it has become necessary and important to use pinch technology in water management for carrying out systematic study on various aspects related to water consumption, water balance and recycling of the water.

The pinch technology identifies process for inter-linking various water sources qualities and their utilization pattern with respect to the quantity of water consumed, quality of water and then estimates the minimum water required in any complex. The technology identifies use of process effluent to demineralised (DM) water make up, cooling tower blow down to slurry make up etc., in a systematic manner which will ensure minimum consumption of water. Heavy Water Board (HWB) has used water pinch technology and this has helped in bringing down the water consumption from 3600 m³/hr to less than 2200 m³/hr at Heavy Water Plant, Manuguru and from 2200 m³/hr to 1300 m³/hr at Heavy Water Plant, Kota.

*Contact: Head, Technology Transfer & Collaboration Division
Bhabha Atomic Research Centre, Trombay*

Phone : 022-25505337 Fax : 022-25505151