

# Steel Industry

## Introduction

Effluent Recycle using Hydramem Membrane for a Leading Steel Manufacturer. The Customer is one of the leading integrated steel and power manufacturer in India.

## The Challenge

The major challenges faced by the customer were:

- Adherence to stringent effluent discharge norms set by the Pollution Control Board
- Scarcity of water
- High cost of fresh water

## The Solutions

The Ion Exchange Effluent Recycle plant was set up at the customer's largest integrated Steel and Power Plant manufacturing facility in Central India which has a production capacity of 2.5 million tons per annum.

Ion Exchange mitigated the challenge with the following solution:

The Effluent Recycle Stream with capacity 360 m<sup>3</sup>/h was recycled through our state-of-the-art HYDRAMEM membrane systems:

- HYDRAMEM UF Membrane System and
- HYDRAMEM RO Membrane System

The RO permeate was used as cooling tower makeup and for various other process applications.

## Results

- TEffluent Recycle has been successfully executed with the system running to the customer's satisfaction & achieving desired results
- Treated water TDS is significantly lower than inlet effluent
- The treated water is currently being used as Cooling Tower make up and for various process applications.