



Confederation of Indian Industry



CII-TRIVENI
WATER INSTITUTE

IRON AND STEEL SECTOR

ENHANCING COMPETITIVENESS THROUGH WATER AUDITS

MORE STEEL PER LITRE OF WATER



Steel is the most important engineering and construction material in the modern world. It has an essential role in meeting the challenges of development in the country.

Indian steel industry is the 4th largest producer of crude steel and the largest producer of sponge iron.

Steel industry uses high volumes of water in

- Cooling
- Coke quenching
- Reactor cooling in the Blast Furnace
- Electric Arc Furnace
- Continuous casters
- hot rolling



Water usage rates in a steel plant varies widely from 0.63 to 27.5 m³/tonne¹ depending upon the type of steel plant, water quality, environmental restrictions, cooling systems design and other factors. To improve efficiencies, it is imperative to quantify water usage at each step through a water audit.

Strategies

- Recycling options for wastewater coming from Steel Melting Shops, Lime Dolomite & Brick Plants and Oxygen Plant after treatment.
- Sewage management of township
- Reducing water use by increasing the Cycle(s) of Concentration (COC) of cooling towers
- Reusing the filter back wash water after minor treatment
- Recycling the leakage water in various applications

Why go for water audits?

What gets measured: Gets Managed.

- Water Audits help improve efficiencies at every step and reveal several water saving opportunities leading to huge paybacks.

- CII-TWI's water audit findings of an integrated iron and steel plant in Eastern India, showed monthly water saving potential of 3.5 million m³
- In monetary terms this translated in to Rs. 6 lakh/ day

CII – TWI through Water Audits, handholds industry to build a roadmap to implement effective strategies to improve water resource efficiency and ensure sustainability.

- 15-20% water savings possible by low-medium cost strategies; payback 6-8 months
- 30-40 % water savings possible by high cost strategies; payback mostly 1.5-3 years



Last mile discipline

- Use of state-of-the-art tools, instruments and techniques for measuring pipes of varying diameters
- Well-equipped team to handle ultrasonic potable flow meters, water quality analysis
- Use of softwares for deriving plant water balance at various levels, process flow charts, and integrating (wherever required) with sophisticated GIS based systems.

Customized approach specific to units

- Covers both utilities and process side evaluations.



Integrating triple bottom line

- Attractive pay back; less than a few months
- Delivering on financial front
- Enhanced opportunities that lead to saving fresh water and recycling wastewater thereby delivering both on resource and environmental front

Get your Water Audit done Today

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