



Utopia TRU-DM...

BOILER MAKE UP WATER TREATMENT SYSTEM

**SAVE
FUEL**

**REDUCE
CHEMICAL**

**SAVE
WATER**

**REDUCE
CARBON
FOOT PRINT**

**REDUCE
MAINTENANCE**



The Dream of True DM Water is ...
come into Reality



Challenges in Boiler Feed Water:

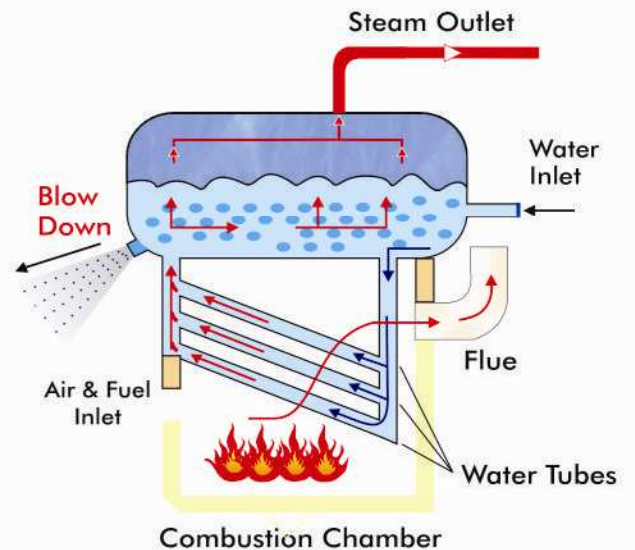


Variations in Raw Water Quality :

Variations in Raw Water Quality because of Seasonal Variations, Discharge of Industrial and Municipal Waste in water source. Water Quality Parameters like Organic Contamination, Silica, hardness Microbial Load are Continuously changes which is very Difficult to handle with Conventional Treatment Method. Because of these impurities Treatment system may also damage or affect the Treated Water Quality.

Blowdown Losses :

Because of Poor Water quality continuous and intermittent Blowdown is required in boiler which cause in to Fuel and Water Loss. Again to maintain certain Blowdown level with poor water quality Very High Chemicals are required to dose in Boiler Water.



Scale and Corrosion in Bolier :

Due to Contaminated Boiler Feed Water Contamination in water forms scale in Boiler Tubes which seriously affect the performance of boiler. Scaling elements like Suspended & Colloidal Silica are very which produce Heat loss up to more than 7% of Total Power

Loss due to Poor Water Quality

4% Blowdown is Equal to 1% Energy Loss which consumes 1% Extra Fuel. For some Power Generation 6.28 Crore INR/Year will be Loss in 210 MW Power Capacity Boiler because of 4% Blowdown.

High Corrosion and Maintenance Loss because of Poor Water Quality is Common Problem in Boiler Industry. Boiler Chemicals are used to Limit this Problem which Ultimately increase the Loss due to Chemical Cost.

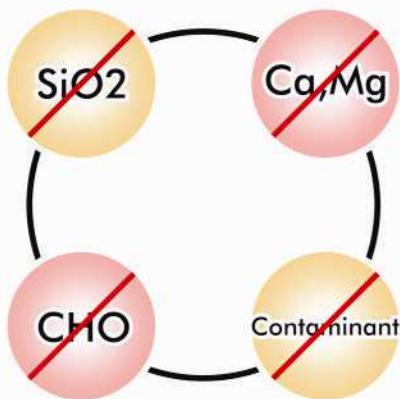
Loss due to Increased Water requirement and Water requirement system Operating cost increase which counts as Operating Loss. Increase in water Consumption increases the Waste Water Generation which further require the cost for Treatment.



Utopia TRU-DM Water Demineralization Plat for Boiler Make Up

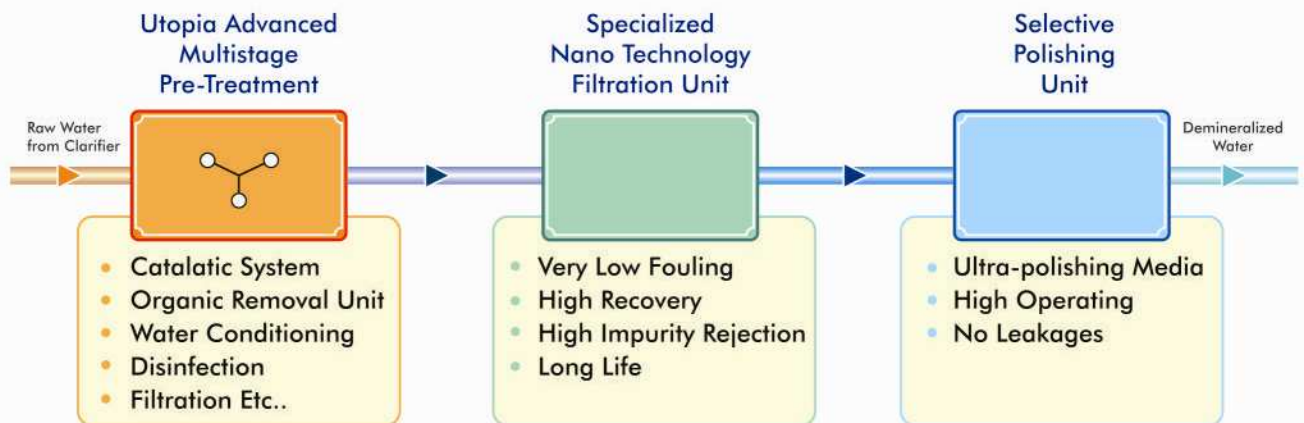
Utopia Offers Worlds Leading Technology for Boiler Make Up Water Production. Utopia Water DM Plant is based on Patented Advanced Nano Technology Base Process train. Utopia Offers Customized solution for your Boiler to Improve the Performance of boiler and reduce losses due to water and it's impurities

No More Scaling , Corrosion and Reduction in Blowdown with Utopia TRU-DM



- High Silica Removal Below 0.01 PPM
- High Water Recovery up to 90%
- Reduced Fouling of System Elements
- Very Low Operating Cost
- High Impurity Rejection produce Demineralized Water
- Reduced Maintenance of the System
- Increase Water Saving

Treatment Stages of Utopia TRU-DM



Results of Utopia TRU-DM

- Reduce Boiler Blowdown up to 1.5.1 With TRU-DM
- Consistent Product Water Quality with Conductivity up to 0.08 $\mu\text{S} / \text{CM}$
- Removal of Silica up to 0.010 PPM Irrespective of Raw Feed Water
- Complete Organic Removal with TOC Removal up to 0.05 PPM
- Guaranteed Hardness (Ca, Mg) removal up to 0.005PPM
- Uninterrupted System Operation with Feed Back Control for Human Interface.
- No Scaling and Fouling Problems were Occurred during Operation.

Special Features and Advantages of Utopia TRUE-DM Plant

- Highly Effective and Efficient Purification which can Handle Variety of Raw Water Qualities.
- Produce DM water as per ASME Guide Line to meet Specific Boiler Requirement.
- Fully Automatic Plant Operation avoids Manual Intervention.
- Easy System Operation. Online catalytic and Nano Technology based Pre Treatment avoids System Scaling and Fouling
- Improve Boiler Performance, No more Scaling Problems No pH Variation
- Save Money, Water, Environment with Reduced Blowdown and Fuel Consumption etc.
- Low System Maintenance and Service Interval leads to High Customer Satisfaction with Utopia TRU-DM

Comparison table with Conventional Treatment Process

| Technology | Utopia TRU-DM System | Existing DM Plant | Conventional RO |
|--|----------------------|-------------------|-----------------|
| Colloidal Silica Removal | ***** | * | ***** |
| Reactive Silica Removal | ***** | *** | * |
| Organic Impurity removal | ***** | * | *** |
| Dissolved Gas Removal | ***** | *** | * |
| Hardness reduction | ***** | *** | ***** |
| Water Recovery | ***** | ***** | * |
| Organic Fouling Resistance | ***** | * | *** |
| Hazardous Waste Reduction | ***** | * | ***** |
| Silica & Inorganic Fouling Resistance | ***** | * | * |
| Operation & Maintenance Cost Reduction | ***** | *** | * |
| Automation (Low Manual Intr.) | ***** | * | *** |

| | |
|---------|-------|
| Good | ***** |
| Average | *** |
| Poor | * |



Utopia Membranes Pvt. Ltd.

P -4/5, Information Technology Park
 Old MIDC, Satara, 415 004, INDIA
 Ph:- +91 2162 246821 / 29
 Email- sales@utopiamembrane.com
 www.utopiamembrane.com

Reg.Off. :
 207, Option Commercial
 Center, Near Milan subway,
 Santacruz (West) ,Mumbai -54,
 Ph:- 022-26186915