WOG GROUP OF COMPANIES

(Process technologies & solutions)

Commitment towards cleaner environment

CASE STUDY

WASTE WATER UNIT FOR METHANAL REFINING UNIT

CLIENT: NATIONAL METHANAL COMPANY (IBN SINA)

WOG Technologies has facilitated design construct and commissioning of 840 KLD waste water treatment plant (Advance Sequence Batch Reactor, Dual Media Filter, High Recovery Ultra-Filter and lucrative Ultra-Violate System) for reuse of Wastewater as DM water at National methanol company (IBN SINA, Sabic).

WOG designed the water treatment plant to treat the most provocative methanol refining column residue as DM water, waste water to treat in efficient manner to meet the followings objectives:

- Energy efficient process
- Extensive biological treatment for removing organic pollution from wastewater.
- Overall system aims to remove >98% organic pollution with >92% recovery of water for reuse as utility water in production.

Water stress growing worldwide for achieving maximum rate of recovery. Ultra-filter is presently most efficient technology which gives >92% recovery for industrial utility. In that context conventional treatment methods are expensive and not so effective in sense of water recovery.

Year of installation: **2020-2022**

A state of art treatment process is designed to achieve environment sustainable development of most energy efficient treatment of complex wastewater with max Recovery.

Plant details:

WOG carried out a plant study to evaluate the performance of water treatment system for treating the critical effluent of the "Methanal Production Units" and successfully validate the technology and the design basis of the treatment plant.

Treatment scheme:

ASBR - (Advance Sequence Batch Reactor) –One single vessel works as primary clarifier, biological treatment and secondary clarifier that gives high rate of organic removal (>98% TOC Removal) from waste water, with less space acquire and low capex for construction.

Dual media filter – Dual media filter is intent for removal of turbidity and physical particles.

Ultra-filter – UF is Most reliable and affordable technology for recycling wastewater to utility water. UF removes micron size suspended particles and > 99% Bacterial cells from the process/wastewater.

Ultra Violet – Most efficient disinfection equipment in current scenario. UV is provided to disinfection of treated water from the plant.

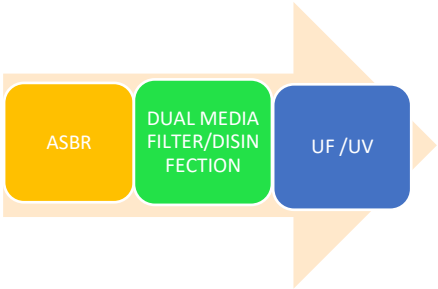
Scope of work:

The scope of work included complete design, engineering, manufacturing, supply, installation and commissioning of the complete waste water package.

LOOK OF THE INSTALLATION OF PLANT (BRT + DMF + UF + UV).

WATER CHARACTERISTICS

PARAMETER	UNIT	INLET VALUE	OUTLET VALUE
FLOW RATE	M3 /D	840	<840
pH		10.5-11.5	6.5 -8.5
TSS	Mg/l	<20	NIL
TOC	Mg/l	<800	< 10



BENEFITS:

- ***To minimize the waste water disposal in the environment.***
- ***Scarcity of Water around the World are self-driven force for Reusable waste utility.***
- ***To mitigate the individual problems of the industries with better approach and with reduced environmental impact on the ecology.***

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