

## CASE STUDY

### WWTP TECHNOLOGIES FOR DISCHARGE FOR BREWERIES INDUSTRY

**WOG Technologies** has installed various projects on Breweries for waste water treatment by introducing various technologies as per the industrial parameters.

WOG designed the WWTP Plant to treat the Effluent (from Breweries) to treat in such manner with minimum discharge to meet the followings objectives:

- Extensive reduce of outlet parameters for further applications.
- Effective technologies to fulfill the present industrial water requirement.

Water Stress growing worldwide with minimal rate of recovery. RO, Clarifiers, Filters and various ETP Process are presently best and most energy saving methods for Breweries and providing effective treatment where effluent is treated in such manner to meet the present water requirement as water supplies from conventional sources are expensive.

A state of art treatment process is designed to achieve Environment Sustainable development of most energy efficient treatment of complex wastewater.

#### Plant Details:

WOG carried out a *Plant* study to evaluate the performance of reducing parameters for System for treating the critical effluent of particular breweries industries WOG have installed various capacities of treatment plants and successfully validate the technology and the design basis of the treatment plant.

#### Treatment Schemes:

Pre-filtration is followed by Anaerobic digesters which is followed through high Rate aeration Flash Mixer and effluent will be treated in clarifiers and then for filtration.

On the Basis of parameters these treatments may varies and which is followed by Anaerobic reactors to tertiary treatments to meet the outlet parameters requirement and reduce the waste generation.

#### Scope of Work:

**The scope of work** included complete Design, engineering, manufacturing, supply, supervision, installation and commissioning of the plant along with GFS Tanks and various electrical and instruments equipments. WOG handled all WWTP plants on turnkey basis.





## WATER CHARACTERISTICS FOR VARIOUS CLIENTS:

S.No.	Customer Name	Type of system	Capacity (m3/Day)	Parameters	Project Description															
1	United Breweries Ltd.(a Diageo group company)	ETP & UF (RECYCLES)	1000	<table><tr><td></td><td>Inlet</td><td>Outlet</td></tr><tr><td>BOD</td><td>30</td><td>ND</td></tr><tr><td>COD</td><td>150</td><td>&lt;10</td></tr><tr><td>TSS</td><td>2000</td><td>&lt;1</td></tr><tr><td>TDS</td><td>2500</td><td>&lt;100</td></tr></table>		Inlet	Outlet	BOD	30	ND	COD	150	<10	TSS	2000	<1	TDS	2500	<100	Upgradation of ETP - Pre Treatment and Ultra Filtration System
	Inlet	Outlet																		
BOD	30	ND																		
COD	150	<10																		
TSS	2000	<1																		
TDS	2500	<100																		
2	United Breweries Ltd.(a Diageo group company)	RO	45	<table><tr><td></td><td>Inlet</td><td>Outlet</td></tr><tr><td>BOD</td><td>5</td><td>ND</td></tr><tr><td>COD</td><td>30</td><td>&lt;5</td></tr><tr><td>TSS</td><td>50</td><td>ND</td></tr><tr><td>TDS</td><td>500</td><td>6-7</td></tr></table>		Inlet	Outlet	BOD	5	ND	COD	30	<5	TSS	50	ND	TDS	500	6-7	RO Plant
	Inlet	Outlet																		
BOD	5	ND																		
COD	30	<5																		
TSS	50	ND																		
TDS	500	6-7																		
3	United Breweries Ltd.(a Diageo group company)	ETP & AHR	2400	<table><tr><td></td><td>Inlet</td><td>Outlet</td></tr><tr><td>BOD</td><td>3500</td><td>30</td></tr><tr><td>COD</td><td>6500-7000</td><td>150</td></tr><tr><td>TSS</td><td>1500</td><td>50</td></tr><tr><td>TDS</td><td>-</td><td>-</td></tr></table>		Inlet	Outlet	BOD	3500	30	COD	6500-7000	150	TSS	1500	50	TDS	-	-	Design, Engineering, Construction, Supply, Erection & Commissioning of ETP. ETP 1000 m3/day with AHR 1800 m3/day
	Inlet	Outlet																		
BOD	3500	30																		
COD	6500-7000	150																		
TSS	1500	50																		
TDS	-	-																		
4	United Breweries Ltd.(a Diageo group company)	WWTP with UFRO	1050	<table><tr><td></td><td>Inlet</td><td>Outlet</td></tr><tr><td>BOD</td><td>1575</td><td>5</td></tr><tr><td>COD</td><td>6825</td><td>15</td></tr><tr><td>TSS</td><td>3675</td><td>ND</td></tr></table>		Inlet	Outlet	BOD	1575	5	COD	6825	15	TSS	3675	ND	Upgradation of ETP			
	Inlet	Outlet																		
BOD	1575	5																		
COD	6825	15																		
TSS	3675	ND																		
5	United Breweries Ltd.(a Diageo group company)	UF-RO- RECYCLE	720	<table><tr><td></td><td>Inlet</td><td>Outlet</td></tr><tr><td>COD</td><td>&lt;250</td><td>&lt;15</td></tr><tr><td>BOD</td><td>&lt;30</td><td>ND</td></tr><tr><td>TSS</td><td>&lt;150</td><td>1</td></tr><tr><td>TDS</td><td>1500</td><td>&lt;50</td></tr></table>		Inlet	Outlet	COD	<250	<15	BOD	<30	ND	TSS	<150	1	TDS	1500	<50	E&C of UF & RO System 600 KLD (720 m3/day)
	Inlet	Outlet																		
COD	<250	<15																		
BOD	<30	ND																		
TSS	<150	1																		
TDS	1500	<50																		
6	United Breweries Ltd.(a Diageo group company)	ETP	850	<table><tr><td></td><td>Inlet</td><td>Outlet</td></tr><tr><td>BOD</td><td>4000</td><td>&lt;30</td></tr><tr><td>COD</td><td>9000</td><td>&lt;125</td></tr><tr><td>TSS</td><td>2500</td><td>&lt;45</td></tr></table>		Inlet	Outlet	BOD	4000	<30	COD	9000	<125	TSS	2500	<45	Design, Engineering, Construction, Supply, Erection & Commissioning of ETP -850m3/day (Revamping) & Upgradation of WTP - RO system with automation 672 m3/day			
	Inlet	Outlet																		
BOD	4000	<30																		
COD	9000	<125																		
TSS	2500	<45																		
7	Blossoms breweries Ltd, Daman	ETP	1250	<table><tr><td></td><td>Inlet</td><td>Outlet</td></tr><tr><td>BOD</td><td>4000</td><td>20</td></tr><tr><td>COD</td><td>8000</td><td>140</td></tr><tr><td>TSS</td><td>1500</td><td>30</td></tr><tr><td>TDS</td><td>2000</td><td>2000</td></tr></table>		Inlet	Outlet	BOD	4000	20	COD	8000	140	TSS	1500	30	TDS	2000	2000	Proposed Capacity enhancement and Modernization of ETP at Brewery at Daman- Supply, Erection & Commissioning of ETP for treatment of 1250 m3 of brewery effluent per day and revamping of existing UASB of 450 m3
	Inlet	Outlet																		
BOD	4000	20																		
COD	8000	140																		
TSS	1500	30																		
TDS	2000	2000																		

## BENEFITS:

- To minimize the waste water disposal in the environment
- Scarcity of Water around the World is self driven force for WWTP systems.
- To mitigate the individual problems of the industries with better approach and with reduced environmental impact on the ecology.
- To reuse the treated water in various forms like make up, etc in the respective industries.

### W.O.G. Technologies Pte. Ltd.

60 Paya Lebar Road, # 12-27, Paya Lebar Square, Singapore -409051

Tel: +65-68216880, +65-82682912, Fax- +65-68216890.

Email: info@woggroup.com

