

LARGEST SIZED “SCREENMAT” FINE STEP SCREENS FOR AMBERPET STP AT HYDERABAD



Location:

The 339 MLD Amberpet STP is located at Hyderabad city of Telangana state in India.

Purpose of the Amberpet Project:

The Government of India has taken several initiatives to deal with the waste generated across the country. Mitigation of sewage pollution in the Musi River of Hyderabad is one such effort made by the government. Hyderabad Metropolitan Water Supply & Sewerage Board had taken up a project for “Abatement of pollution to Musi River” which was successfully completed and commissioned by 2009 at 4 Sewage Treatment Plants were constructed at Amberpet (339 MLD), Nagole (172 MLD), Nallacheruvu (30 MLD) and Attapur (51 MLD) within the city of Hyderabad.



Panoramic view of Amberpet STP.

The first three STPs uses the Up-flow Anaerobic Sludge Blanket (UASB) process and the last one in Attapur STP uses Sequential Batch Reactor (SBR) process of technology.

All the STPs are positioned alongside the river Musi so that the polluted water that is being drained into the river undergoes treatment and converted into water of river standards.

The 339 MLD STP Amberpet is one of the biggest plants with UASB technology in Asia in terms of capacity (i.e. 339 MLD).

Waste water is being treated in primary and secondary units of the plant. The treatment of waste water leads to the generation of electricity, sludge cake and treated water.

Project Details	
Project	339 MLD SEWAGE TREATMENT PLANT AMBERPET, HYDERABAD
Customer	Hyderabad Metropolitan Water Supply & Sewerage Board.
EPC Contractor	M/s NCC Ltd. (Formerly Known as Nagarjuna Construction Company)
Consultant	Hyderabad Metropolitan Water Supply & Sewerage Board.

Mechanical Step Type Screen – ‘SCREENMAT’ details	
No. of Screens	4 Nos.
Flow capacity per screen	84.75 MLD
Channel Size	2500 mm Width x 3830 mm Depth
Screen Model No.	ZA-1160-2000-6
Screen Size	1948 mm Width x 6885 mm Length
Spacing Between Bars	6 mm
Manufacturer	JASH Engineering Limited
Operation	Hydraulically Operated
MOC	Stainless Steel AISI 304



Role of JASH “Screenmat” Mechanical Step Type Screen:

For proper functioning of an UASB based treatment plant the performance of fine screen is of utmost importance. The project uses 4 nos. “Screenmat” Step screens each of 84.75 MLD capacity and having 6 mm spacing between bars. Due to the high handling capacity each step screen was required to be given in 1948 mm width and 6885 mm length.



Screens installed at site.



Screens installed at site.



Belt Conveyor installed at site.

Engineering Specialty of the “Screenmat” Mechanical Step Type Screen:

Requirement of 6 mm spacing between bars meant that a total of 209 bars were to be given. The creation of a mat of waste on bars alongwith upward movement of bars while carrying this mat meant design of rigid structure of the “Screenmat” screen. Upward movement was made possible by using two hydraulic cylinder of 80 mm diameter working at tandem at 110 bars pressure.

These mechanical fine step screens were installed in 2006 and were at that point of time amongst the largest step screens made in the world.

Successfully & timely execution of such projects has helped us establish our credibility with large EPC contractor like M/s NCC Limited, Hyderabad making JASH their preferred supplier for critical projects.

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