

DEEPEST MULTIRAKE BAR SCREEN IN SEWAGE PUMPING STATION OF DELHI



Floating Waste at Yamuna River, Delhi

Project Details	
Project	Design & Construction of Interceptor Sewers Along Najafgarh, Supplementary & Shahdara Drain for Abatement of Pollution in River Yamuna, Package-5
Customer	Delhi Jal Board
EPC Contractor	DSCL-FENG-SHUN-WABAG Consortium
Project Management Consultant	Engineers India Limited (EIL)

Jash-Mahr MM2MM Multirake Screen	
No. of Screens	2 Nos.
Flow capacity per screen	90 MLD (20 MGD)
Channel Size	1500 mm Width x 16290 mm Depth
Screen Model No.	MR-18773-1140-20-M1-S1
Screen Size	1360 mm Width x 18773 mm Length
Bar spacing	20 mm
Bar Size	12x6x50
Manufacturer	JASH Engineering Limited
MOC	Stainless Steel AISI 304
Breaking load of Chain	112 KN (25178 lb-f)

Location:

The Rithala Pumping Station of 40 MGD is located opposite to Rithala Metro Station Rohini, New Delhi.

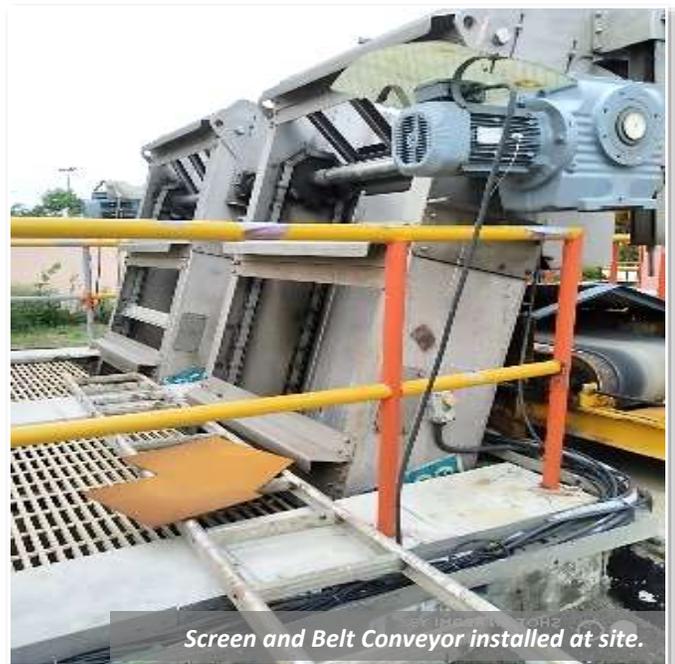
Purpose of the Rithala project:

The interceptor project is projected by the Delhi Jal Board (DJB) as a panacea to the pollution problems of the river Yamuna. The interceptor sewer project is an integrated approach towards zero sewage flows from the drains to the river. The laying of interceptor sewers is to tap the minor drains carrying sewage into three of the major drains— Najafgarh, Supplementary and Shahdara.

According to the DJB, these drains constitute 70 per cent of the sewage discharged into the river Yamuna. There are 22 drains out falls into the Yamuna from Delhi.

The Rithala Interceptor pumping station is located at supplementary drain having length of 5.4 Km aprox, which falls into Najafgarh drain. The Rithala pumping station comes under contract package - 4. The sewage is trapped and pumped to 40 MGD STP Plant located near to the pumping station.

After treatment of sewage in 40 MGD STP plant, 20 MGD of treated sewage is used by PPCIL Power Plant and the remaining 20 MGD treated sewage is disposed to supplementary drain and from there to river.



Screen and Belt Conveyor installed at site.

Role of Jash Mahr Maschinenbau “MM2MM” Mechanical Multiraking screen:

Jash Mahr “MM2MM” Multirake screen is a front clean front return, mechanically cleaned bar screen installed at Rithala Sewage Pumping Station. The purpose of the Mechanical screen is to removes larger solids & floating material from sewage water in order to protect the pumps located in the pump chamber of the sewage pumping station.



Assembled Screens at Jash Plant

Screens installed at site.



Engineering Specialty of the Jash Mahr Maschinenbau “MM2MM” Multiraking screen:

The Rithala interceptor pumping station project uses 2 numbers “MM2MM” Multirake screen each of 90 MLD capacity. These screens were supplied with many unique features. The screens bars have superior tapered profile and each individual bar can be replaced in installed condition in case these gets damaged. The screens are supplied with jam removing feature which in event of blockage of screen by wooden particle, stone or any big object stuck in between the bars tries to remove the blockage by automatically conducting short reverse- forward operation of rake for a pre-determined number of cycles and in event of failure to remove the blockages give an alarm.

The screen measures 1400 mm (55”) in width by 18773 mm (739”) in length and is installed at 75° from horizontal and provided with bars placed at 20 mm (0.78”) spacing. The individual bar length is 2500 mm (98”) and the operating chain used is of 112 KN (25178 lb-f) load capacity.

These screens were supplied in year 2013 and commissioned in year 2015 and are in operation since then. At the time of commissioning these were the deepest Multi-raking screens installed in the city of Delhi.

These screens are amongst the 40 numbers Jash Mahr MM2MM Multi-raking screens supplied by Jash for the Delhi Interceptor project.



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