

CASE STUDY REF: 003

INDIA'S FIRST 2 MM PERFORATED JASH-MAHR TRAVELLING BAND SCREEN FOR SEA WATER INTAKE



Location:

RSPL set up a 1500 TPD Soda Ash Plant near Kaunga Village at Dwarka on the Sea Coast of Gujarat, India.

Purpose of 1500 TPD Soda Ash plant:

RSPL produces detergent under the brand name of "Ghadi". As a backward integration for manufacturing detergents RSPL set up the soda ash plant. Soda ash, also known as sodium carbonate, is a highly soluble substance and is used in numerous chemicals. It is also a main ingredient for manufacture of dyes, coloring agents, synthetic detergents and fertilizers.

For producing soda ash, RSPL uses sea water as the input material in their Plant. To draw in sea water RSPL constructed a sea water pumping station of 25000 cubic meter / hour capacity.

Role of Jash at 1500 TPD Soda Ash plant:

To prevent floating waste from being drawn into the pumps of sea water pumping station fine travelling band screens with 2 mm perforation were envisaged by the consultants Jacobs.

This was a most challenging projects as 2 mm fine perforated screen of this high capacity of 25000 Cub.m/hr. at depth of 28 meters was being installed first time in India and that too for a sea water intake project. As the production of the entire plant was dependent on reliable and continuous functioning of the screens we had to give a solution which was sturdy and involved nominal maintenance.

Jash supplied the entire isolation and screening package comprising of 14 nos 2x2 m size Stainless steel sluice gates and 2 nos Jash-Mahr Center Flow type Travelling Band Screen for this project.

Jacobs visited Jash manufacturing facility for evaluation of capability and technical soundness to execute such a project in 1 year time and the order was placed after Jacobs was convinced about the same.



Project Details	
Project	1500 TPD Soda Ash plant
Customer	RSPL (Rohit Sulphactants Pvt Ltd)
EPC Contractor	RSPL/CCG/KS/PO/008/2017-18
Consultants	Jacobs, Mumbai

Travelling Band Screens Details	
Screen Size	2000 mm (Width) x 28000 (Height) mm
Quantity	2 nos
Flow Capacity	25000 Cubic meter / hour
Perforation	2 mm
Type	Center Flow
Manufacturer	JASH Engineering Ltd.
Operation	Self-Cleaning Type
MOC	Stainless Steel AISI 316 L with Sacrificial Anode
Client name	RSPL

Special Design Consideration for Jash-Mahr Band Screens:

Special profiled panels were designed to ensure that required quantity of water pass through from the 2 mm perforation provided in them. The panels were designed in form of a basket to carry small floating debris and sea shells trapped by the screen till top of the platform and discharge these out of the water channel so that there is no accumulation of such material in front of screen.



Complete Screen of over 31 m length assembled & in operational testing at Jash plant.

Due to large 31 meters length of screen, transportation of screens in assembled condition was not possible. Hence the entire 31 meter long structure was to be shipped disassembled and then reassembled vertically at site from bottom to the top. To assemble and hold the screens vertically at the same time was an installation challenge.

To overcome this, a complete dummy frame structure was prepared and sent in advance to site so as to allow accurate predrilling of anchor holes to allow immediate and trouble-free anchoring of screens in steps as it was progressively assembled. This ensured accurate and fast installation for such deep screens in restricted space condition.

The 2 screens were manufactured, supplied, installed and commissioned within 11 months and are in successful operation since installation in April, 2018.



Screen after installation at site.

JASH ENGINEERING LTD,

31, Sector-C, Industrial Area, Sanwer Road, Indore-452015 (MP), India
 Phone : +91 (731) 2720143, 2721143,
 Email : info@jashindia.com,
 Website : www.jashindia.com

SUBSIDIARIES:

Rodney Hunt Inc., **USA.**
 Mahr Maschinenbau Ges.m.b.H, **AUSTRIA**
 Engineering & Manufacturing Jash Ltd, **HONG KONG**
 Shivpad Engineers Pvt Ltd, **INDIA**