



Robust & Economical, Import Substitution



Dolvi 5 MTPA Integrated Steel Plant

Submersible Slurry Pumpsets for Pit Dewatering



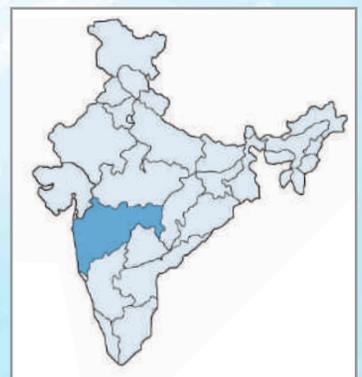
Aqua's Pumpset

JSW group has 18 MTPA installed capacity, which is **15%** of the national steel manufacturing capacity.

Today, JSW Steel has plants in six locations in India - Vijayanagar in Karnataka, Salem in Tamil Nadu, and Tarapur, Vasind, Kalmeshwar & Dolvi in Maharashtra.

Dolvi 5 MTPA Integrated Steel Plant, (*being upgraded to 10 MTPA*) located at, Dharamtar, Taluka Pen, Dolvi, Maharashtra 402 107, is part of JSW Steel group.

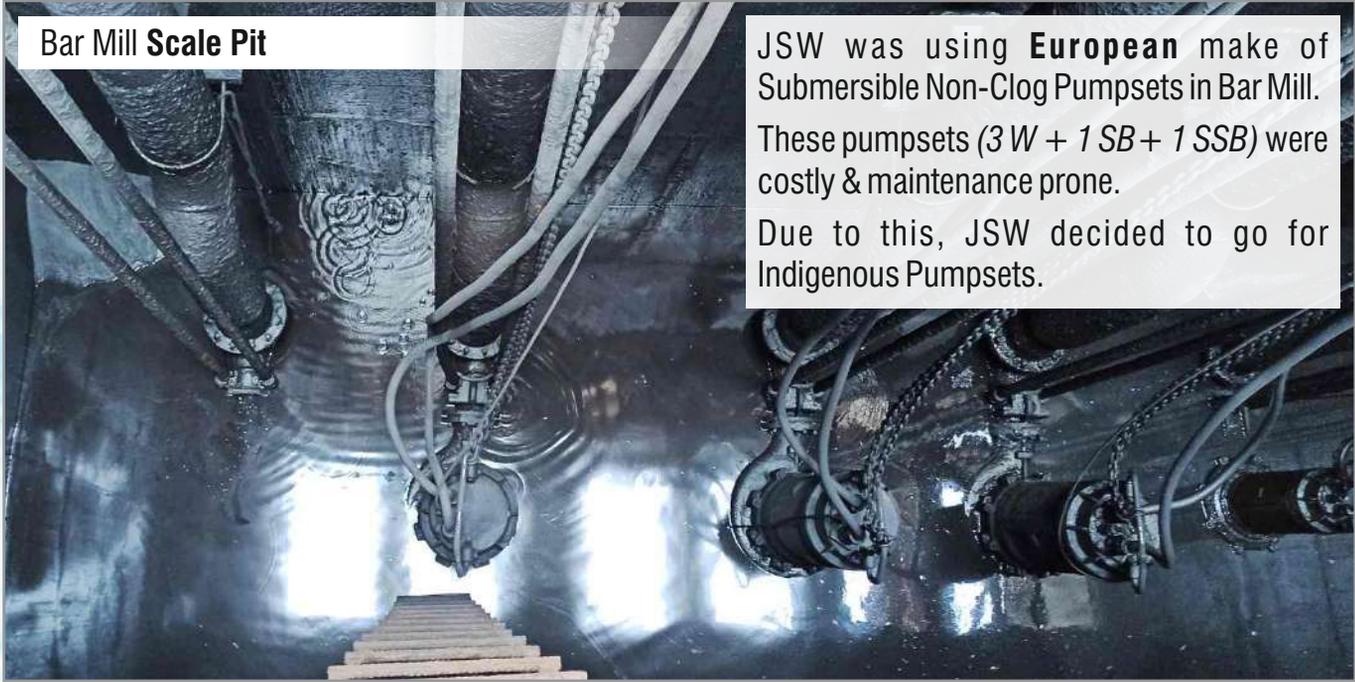
Located on the west coast of India, the plant has a captive jetty strategic presence in western India.



Situation

Bar Mill Scale Pit

JSW was using **European** make of Submersible Non-Clog Pumpsets in Bar Mill. These pumpsets (3 W + 1 SB + 1 SSB) were costly & maintenance prone. Due to this, JSW decided to go for Indigenous Pumpsets.



In absence of detailed drawings of existing European Pumpsets, correct parameters were required to be deciphered & hence Aqua's Engineers made several visits to JSW Dolvi Works.



Also, JSW wanted to install Aqua's Pumpset on Existing European Pumpset's Auto Coupling/with flange mounted bracket, since shutdown of Bar Mill was not possible (*for emptying sump to remove existing Auto Coupling & Re-Install Aqua's Auto Coupling with Aqua's Auto Coupling base, unless there is Long & Planned shutdown.*)



Scale Pit

Solution

Aqua successfully **retro engineered** the Pumpset; developed required delivery flange mounted bracket, based on drawing made by JSW from this physical part (*reverse engineering*) to enable Aqua Pumpset to be installed on existing guide rails.

Application	Installed Yr.	Qty.	Discharge	Head
Scale Pit Dewatering	2020	1W	90 LPS to 330 LPS (324 m ³ /hr to 1188 m ³ /hr)	50.2m to 23m
Model				Impeller
ASS.._V_AC._1st_VoG_ES__2543__T._4P_.180W__415_NJ.				MoC: CA6NM (300 BHN hardness)
DN (mm)	HP	RPM	Operation	Pumpset was installed & commissioned on existing Auto Coupling in 1st week of December 2020.
250	180 HP (132 KW)	1500	VFD	

Later on JSW also placed PO at very short notice for Aqua make Auto Coupling & Guide rail, to make it a fully Aqua installation. The metal to metal joint of Aqua's Auto coupling flange with Pump set flange is exceedingly superior/leakproof as compared to imported Pump sets having gasket design.



Bar Mill - Scale Pit

Benefits



Robust & Reliable
Over-safe Design & Smart Protection Systems result in high Reliability.



Low Life Cycle Costs (LCC)
Zero Consumables, Minimal Maintenance Spares & Good Efficiency.

Intelligent InBuilt Monitoring



Easy Monitoring (& Remote Control #) of your pumpset's health

- **PSLD** detects Pressurized Water leakage from Mechanical Seals.
- **CCWLD** detects Accidental Water leakage from Cable Sheath's Cuts &/or Nicks into the Motor.
- **SBWLD** detect Accidental Water leakage in to Motor's Stator Chamber.
- **BTDs** in the form of Bi-metallic Switches &/or PT100 monitor Bearing Temperature
- **WTDs** in the form of Bi-metallic Switches &/or PT100 monitor Stator Winding temperature

#requires additional communication hardware
CS_JS_W_r0_2021 : 03

World Class Engineering used for creating Robust Pumpsets for Indian Conditions...!



Requires No Periodic Consumables; like :

- Oil
- Grease



Thanks to generous **Reserve Margins & Optimized Design;** Aqua's Motors **keep coolly working** even in **scorching summers.**



Tribologically Optimized **Bearing** Components for **Bullet Proof Reliability**

PERFORMANCE CERTIFICATE

Date – 16.09.2021

This is to certify that the pump along with accessories supplied from M/s AQUA Machineries Pvt. Ltd against PO No: 4700087044 for BAR MILL was installed successfully.

Pump supplied by M/s AQUA Machineries are working satisfactorily from past 6 months.

16645
15/9/21

Mr. Rajesh Raut
Section Head

16251

Mr. Soumen Roy
HOD



Aqua Machineries Private Limited

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