

## REPLACEMENT OF VERTICAL TURBINE PUMPS WITH NON-CLOG SUBMERSIBLE PUMPS IN EXISTING PUMPING STATION AT VISHAKAPATNAM

### About the Project:

There are 3 raw sewage pumping stations of **9 MLD Panduranga Puram, 16 MLD Shanti Ashram and 38 MLD** with Vertical Turbine (VT) pumps under Greater Vishakapatnam Municipal Corporation (GVMC). Pumps were Installed during 1998-99. Each Pumping station is having 5 VT Pumps and are under operations from last 20 years. During discussion with GVMC we came to know efficiency of Pumps were very low and O&M cost was very high. They were considering to replace the pumps with increased efficiency and with lower O&M cost.



*Image for representative purposes only*

### The Challenge

1. New non clog submersible pumps were to be installed in the existing pumping station without much alteration in the existing piping layout and structure
2. Without changing the pumping station capacities, KISHOR needed to select suitable pumps which can take care of existing as well as future requirements without disturbing the existing pipeline connecting to the common header.

### The Solution

After initial discussions with officials of Greater Visakhapatnam Municipal Corporation and the turnkey contractor, KISHOR team suggested to replace VT pumps with non-clog submersible pumps with minimal changes to the existing pipeline and structure. KISHOR team conducted site analysis and flow logic simulation studies and presented to the stakeholders. A series of meetings were carried out with GVMC and the engineering consultant. KISHOR team explained and convinced them regarding the advantages of submersible pumps over VT Pumps.

#### Some of our advantages

1. Compact monoblock pump.
2. Very easy to install / remove due to automatic coupling system.
3. Site fittable cable design + side entry cable + site repairing of pump with no special tools.
4. No external flushing + motor re-alignment not require.
5. Noiseless and vibration less operation.
6. Minimum skills required for operation.

KISHOR successfully convinced the stakeholders with our experience and technical competence. KISHOR supplied submersible sewage pumps for **all the 3 pumping stations & the STP.**

### The Benefit

The customer is confident of multiple benefits once the pumps are commissioned including:

1. High efficiency pumps
2. Low O&M cost
3. No clogging as pumps are designed for lifting upto 100 mm soft solids particle size.
4. Pumps were fitted without disturbing the existing pipeline and structure.