

Underground Drainage Scheme for Sagar Municipal Council, Madhya Pradesh

About the Project

Sagar, one of the growing cities in Madhya Pradesh, is planning to build a Sewage Treatment Plant (STP) for the whole city to treat the wastewater. The clean water to the city was getting contaminated due non treatment of the wastewater. The famous LAKHA BANJARA lake was also getting polluted. The municipal council was planning to have a complete Underground Drainage Scheme which contains a sewage pipeline of 254 km, 4 pumping stations and a 43 MLD Sewage Treatment Plant which will be sufficient for population growth upto 2043.



The Challenge

1. The city is divided into 3 zones for collecting the sewage at 3 pumping stations. These pumping stations are required to transfer the sewage into 1 big pumping station which will feed the sewage to STP for processing. New pumps were to be installed in the planned pumping stations which are required to operate in parallel which was designed considering population by 2043. The challenge was to propose the pumps/system which is economical, workable and efficient.
2. Although the plant is to be designed with proposed capacity of population by 2043, current requirements were relatively smaller. Therefore, suitable pumps were to be selected which can take care of existing as well as future requirements without changing the pumps.

The Solution

Earlier offer and pump selection was based on the requirement mentioned in the tender for the proposed population. But in order to operate the plant at present condition, the pumps were required to handle less flow although they need to be designed to handle proposed flow requirement of year 2043. A series of meetings with the municipal council, contractor, consultant and KISHOR team were held to ascertain possible options and select the optimum one. KISHOR team suggested to go in for submersible sewage pumps with VFD operations to operate the pumps in parallel to get the desired results. Since the pumping stations are designed for peak flow, average flow and lean flow requirements, pumps selected were of dissimilar sizes. Such an approach hinders efficient use of the pumps as well higher inventory of spare parts. A complete new operational philosophy was developed to suit the present and future operating conditions with minimising variety in the models and sizes of the pumps. This scheme was then shared with all the stakeholders and it was immediately appreciated & accepted. KISHOR supplied 24 pumps for 4 pumping stations and 12 pumps for the STP of optimal capacity & sizes. Currently, STP is commissioned under KISHOR supervision. Pumping stations are under final construction stage.

The Benefit

Since the pumps were selected as per the future requirements, KISHOR team offered the efficient, economic and workable solution to operate the pumps in various combinations to achieve desired results.

The Customer Opinion

KISHOR offered complete support for giving technical support without taking any deviation from the tender requirement to operate the plant in present and future conditions. The pumps were selected to operate in parallel and the pumps were successfully tested as per calculated working philosophy and supplied at site. Such a solutions based approach of KISHOR was much appreciated and valued by all the stakeholders.