

**Replacement of Pump set with control panel & other accessories at  
K. D. Gaikwad nagar (sector C) behind Rawli Camp fire station in  
F/North Ward.**



MCGM wanted to replace the existing pump sets and demolish the overhead water tank as the overhead water tank was not fit to serve longer. Previously water use to come in underground tank and pumps would pump the water from underground water tank to overhead water tank. Then the water would be supplied from overhead water tank to households by gravity.

As the overhead water tank was going to be demolished and old pumps were to be replaced, MCGM wanted us to supply the water from new pumps directly to households from underground water tank.

Considering the variation in distance & heights of the buildings & households to be provided with water supply from the Pump Room, it was necessary to check & confirm the Head & Pressure of the existing system.

Vijay Engineering and Machinery Company took measures and confirm the parameters to ensure water supply to all households through new system. The new system was designed and the work was executed without disturbing the existing system.

## Details

Project Title	SITC of Pump set with Panel & other accessories at K. D. Gaikwad nagar (sector C) behind Raoli Fire Station in F/North ward
Customer	Municipal Corporation of Greater Mumbai A/c Vijay Engineering & Machinery Company
Pump Model & type	Kirloskar make GK 100/40A pump with Kirloskar make 50HP Motor
Project duration	July 2018- Feb 2019

<b>Duty Parameters</b>			
Pump details		Motor details	
Make	KBL	Make	CGL
Model	GK 100/40A	Frame	ND 225S
Flow in m <sup>3</sup> /hr	210.70	Motor HP	50
Head in M	45	Voltage in Volts	415
Rated speed in rpm	1475	Speed in rpm	1475
Pump efficiency in %	78.55	Motor efficiency in %	92.5

<b>Control Panel</b>
Fix Speed (2W +1S) with level sensors

## Project scope

- Removal of old pump sets with all accessories and demolishing old cement concrete foundation.
- Removal of old starter 1ph/3ph. DOL/ Star-Delta.
- Erection of new cement concrete foundation and installation of new pump sets with base frame.
- Installations of new control panel (2W+1S) for 50 HP pump set with cable and other accessories like cable gland, lugs, sensor for underground tank.
- Installation of new NRV, suction valve and spring loaded check valve.
- Installation of vacuum pump for priming with starter and piping.
- Fabrication of suction piping from underground water tank and delivery piping up to supply line valves with Tee, bends, flanges, packing's and fastener's.

### Old Pump sets before removal

VEMC dismantled old pump sets without disturbing the operation of other pump set.



### **Pump installation:-**

The challenge here was to change the existing pumps without disturbing the regular supply of water to households.

VEMC installed one new pump set (50 HP) and supplied water to the households through the same till the installation of other pump sets. VEMC also fabricated temporary delivery piping and installed valves and other accessories for the same.

Core cutting was done to install the suction piping into the underground water tank.



**Old starter panel:-**



**New control Panel (2W+1S) installed**

Old starter panel was removed with precaution and safety. New control panel with 2 working and 1 standby was installed and new cables were laid from panel to all the Pump sets.



**New pump set installed:-**

New pump set were installed, tested and commissioned successfully.

