

Waste Water Management

The level measurement and control instruments manufactured and supplied by Pune Techtrol are widely used in the processes of waste water treatment.

Human beings can use and consume only fresh water. While three-fourth of the Earth's surface is covered in water, only three per cent of it is fresh and seventy per cent of this three percent is locked up in the ice caps of Antarctic and Arctic regions.

What remains, is to be used by the entire human population of seven billion for their ever increasing needs, and habitual wastage. Also, around ninety percent of fresh water that is consumed, goes down the drains as waste water. Industries, which are increasing continuously in numbers, create lots of harmful pollutants that get mixed with water. The rate at which human beings are bidding farewell to water in the form of waste is indeed alarming.

Thus, arises the dire need of waste water management. Waste water treatment is the process of removing contaminants from waste water and making it reusable for all purposes. Processing of waste water is important with regards to the need of environment preservation in the current times. Waste water, if allowed to flow untreated, can play havoc not only with humans, but also with crops, forests



and wild life as well. Hence, the treatment of waste water or effluent is increasingly becoming vital for survival of human race and the environment.

All waste water treatment processes require level monitoring and control. Level instruments are installed in almost all parts of water treatment and effluent treatment plants. The level measurement and control instruments manufactured and supplied by

Pune Techtrol Pvt. Ltd. are widely used in the processes of waste water treatment.

A very useful feature of 'Techtrol' instruments is that there is wide choice of Material Of Construction (MOC) for all the instruments to suit specific requirements of the medium or liquid whose level is to be measured, detected or monitored.

These level instruments are mainly classified into level gauges, level switches and level transmitters. These 'Techtrol' level instruments are specifically designed for this particular application, and hence increase the efficiency and reliability of the process.

The application of each of these level instruments for waste water management is explored further.

Using level gauges for waste water management

Pune Techtrol's wide range of level gauges useful in the application of waste water management are as follows:

- Tubular Level Gauge (TTG) and Reflex Flat Glass Gauge (RFG) are glass gauges used to indicate liquid levels of chemical tanks and other storage/process tanks.
- Magnetic Level Gauge (MLG) is used to indicate levels of storage



tanks of acid and alkali. It can also be improvised with alarm switches and transmitter for remote indication and control.

- Float and Dial Gauge (FDG) is useful for indication of liquid level in underground tanks. It is particularly suitable for applications involving limited head-space above the tank. It can also be improvised with alarm switches and transmitter for remote indication and control.
- Float and Board Gauge (FBG) is the simplest but very reliable instrument used for indication of liquid level in large storage tanks of effluent/treated water. It can also be improvised with alarm switches.

Using level switches for waste water management

Pune Techtrol's wide range of level switches useful for in the application of waste water management are as follows:

- Float Guided Switch (FGS) is single or multipoint level switch used for in clarifier and aeration tank. These switching contacts can be used for alarm indication or pump control.
- Displacer Switch (DS) is more suited for application in clear effluent and potable water. Switching points rated for 5 A, 250 VAC and can be adjusted at site as required.
- Cable Suspended Switch (FCS) is a simplest type switch and easy to install. These switching contacts are rated for 5 A, 250 VAC and can be used for alarm indication or pump control and are ideally suitable for application in settling tanks.



- Conductivity Type Switch (CNS) is used only for conductive liquids. It can be used for treated and potable water. More suitable in applications where the depth of tank is large.
- Float Pivoted Switch (FPS) is side mounted, single point switch rated for 5 A, 250 VAC. It is suitable for over ground tanks.
- Miniature Float Switch (MFPS/MFGS) is used for level detection in small/medium tanks.

Using Level Gauges for Waste Water Management

Pune Techtrol's level transmitter useful for in the application of waste water

management is as follows:

- The Techtrol Ultrasonic Transmitter (TUS) is a non-contact type level transmitter, generally used for measurement of flow in open channel or level monitoring in tanks. It is compact, non-contact, and easy to install, integral type transmitter for continuous level measurement of non-corrosive liquids and slurries. It is programmable through Keys. Owing to its aforementioned characteristics, it proves highly useful in waste water management plants. It is used for various processes in storage tanks, filter beds, flotation cells, water / waste water/ effluent treatment (WTP, ETP), etc.

Since its inception, Pune Techtrol Pvt. Ltd. has time and again innovated and added on to the list of level measurement and control instruments which can be used for applications like waste water management.

Techtrol is recognized as a reliable and trusted brand, delivering quality products unsurpassed in terms of accuracy, workmanship, performance, safety and ease of installation, providing long uninterrupted service in wide and varied industrial applications. ■

Author: Mr. C N Shukla - Training & Development Consultant, Pune Techtrol Pvt. Ltd

Level Transmitters

