Pulp & Paper Sector

The locations should be as under-

Installation of Web Camera for ZLD Pulp & Paper Mills:

Web Cameras to be installed facing all possible discharge points, outlet of ETP/ empty drains.

Web cameras gather a lot of data which need to be transmitted to server and stored. To save the data transmission and storage, an option of saving automatic still photographs on server may be considered. These snapshots may be automatically saved at an interval of not more than 5 minutes. However, it must be made possible by the server/ technology provider to see 12-16 such consecutive images on a single screen to ensure that there was no discharge in between.

For the mills having ZLD by treating their effluent in ETP and recycling all of the effluent in process, a camera must be installed on the overflow weir of the tank where the effluent recycle pump is installed.

Installation of Flow Meter ZLD Pulp & Paper Mills:

In case of ZLD by using all of the process effluent back to the process, therefore fresh water consumption is just used as makeup water. Makeup water should be equal to the water loss in the process like in drying of paper, cooling tower etc. Some nominal amount of unaccounted losses can also be added to makeup water. Thus on line flow meter (s) (including running hour meter) shall be installed either at at borewell or at the inlet pump of the water reservoir and linked to central server. In case of more than one pump, flow meter should be installed either at all the pumps or single inlet pipe (outlet of all pumps should merge into this pipe.

The difference of the readings of flow meter and accounted water loss shall not exceed more than 5% of the water consumption in the process on a monthly basis. The figure of 5% has been considered against the unaccounted losses.

Location for installation of sensors for flow, pH, BOD, COD & TSS for Pulp & Paper Mills discharging treated effluent:

The effluent quality monitoring stations and its all sensors for flow, pH, BOD, COD & TSS are required to be commissioned at final discharge outlet. i.e., ETP final outlet after all treatment stages or tertiary treatment discharge of ETP. These sensors must be submerged in the final treated effluent and sample extraction flow cell methods should be avoided to avoid possibility of external dilution or manipulation of sample actual data. Sensors should be installed in the discharge line of effluent and connected to the server.