

**Subject: Hot Line Washing of HV Line & Switchyard Equipments**

The method and equipment used for Hotline Washing was developed by **Yashmun Engineers Ltd**, and has been in use internationally for the last two and a half decades. This process entails cleaning of Insulators and Switchyards under live line conditions.

**Need for Hot Line washing:**

- Atmospheric pollution in the form of dust, coal dust, ash and chemicals in industrial areas, form a layer of contaminate on the Insulators.
- The pollution build up on these transmission lines provide a conducting path, resulting in flashover, that in turn cause power disruptions to industries affecting production. To arrest such contamination of Insulators, it is necessary to have a regular program of cleaning insulators at regular intervals.
- The earlier solution to the problem was to de-energize the line or Sub-station and have workmen climb up and clean the Insulators in a tried and proven method of “hand rub”, which entails physical manual cleaning. In today’s ever increasing demand for electrical energy this process proves to be un-economical as the power industry does not make money unless electricity is flowing.

**Operating Principles:**

- Whenever a jet of water is released in the air, the water particles split due to resistance.
- At a sufficient distance the jet moves in the form of small particles separated by air ,and the water path is not continuous.
- This forms a product similar to an aerosol, which in turn guarantees a sufficient electrical re sensitivity, hence there is no leakage current .



- The high pressure jet is produced by means of a pump. Water with conductivity of 200 micromhos or less per cc is used for washing purposes up to 220 KV.
- Hence normal lake or river water or treated municipal water that has a conductivity of 90 to 120 micromhos can be used.
- In the case of 400 KV, washing only by D.M water is recommended.

Prepared by

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