**DDTOP ZTD Displacer Level Transmitter**

**Reliable Atmospheric and Vacuum Unit Level Measurement**

**RESULTS**

* Reliably solve the problems of high viscosity, easy solidification and perishability of the medium in the atmospheric and vacuum unit;
* Better ensure that the device can operate stably.

**APPLICATION**

**Equipment**：Atmospheric and Vacuum Unit

**Medium**：Crude Oil

**Medium Characteristics**：High viscosity, Easy Condensation, Large Pressure Fluctuation, Easy to Corrode.

**CUSTOMER**

Hengli Petrochemical (Dalian) Refining and Chemical Co., Ltd.

**CHALLENGE**

With the determination of the country's seven petrochemical bases, Hengli Group's 20 million tons refinery project settled in Changxing Island, Dalian, and the surge in refining capacity has brought great challenges to the instrumentation. The process medium in the atmospheric and vacuum distillation unit is the primary intermediumte product of crude oil, and the operating pressure in the production process is not high. The process temperature of the atmospheric and vacuum distillation unit is generally between 40 ° C and 60 ° C, and the operating temperature of the unit generally does not change much. The corrosiveness of the medium is not high. Although the operating pressure is not more than 0.7 MPa, the fluctuation of the pressure is large, and sometimes occurs vacuum. The flow of gas in the device due to pressure changes will blow the displacer, applying an extra force to the displacer, causing large fluctuations and errors in the measurement; When the medium contains wax oil, since the wax oil is easily solidified, the operating temperature is generally above 200 ° C, It is often accompanied by sulfur-containing sewage, which is corrosive due to the inclusion of H2S, so it has high requirements on the material of the instrument.

**SOLUTIONS**

DDTOP's displacer level transmitter has two solutions for pressure fluctuations:

* First, properly close the root valve to reduce the impact of airflow on the displacer；
* Second, install a round baffle with small holes at the entrance of the side flange of the displacer chamber to reduce the impact of airflow on the displacer.

When the medium contains wax oil, the wax oil is easy to solidify, resulting in high temperature operation and corrosiveness of the medium. The wetted material of DDTOP displacer meets the NACE MR0103 standard. Insulation racks or heat sinks (pieces) are installed on the meter head to eliminate the adverse effects of high temperature medium on the electronic components in the meter head. This ensures that the entire device can operate safely and stably for a long time.

Hengli Petrochemical (Dalian) Refining & Chemical Co., Ltd. Dalian Changxing Island 20 million tons refinery project

**Dandong Top Electronics Instrument (Group) Co. Ltd.**

**Reliable Process Instrumentation and Automation Solution Provider**

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