**DDTOP Compact Orifice Plate Flow Meter**

**Reliable Steam Flow Measuring Instrument**

**RESULTS**

* The measurement error of steam due to high temperature, high pressure characteristics and temperature and pressure changes is well solved.
* Better ensure that the device can operate stably.

**APPLICATION**

**Medium**：Superheated Steam

**Medium Characteristics**：High Temperature, Temperature and Pressure Changes

**CUSTOMER**

China National Petroleum Corporation Dalian Petrochemical Brunch

**CHALLENGE**

Steam is one of the important secondary energy sources of various petrochemical production enterprises, and some directly participate in chemical reactions, but most of them use their own heat energy. In terms of steam settlement, the high temperature of the steam (up to 500 ° C) is important for the material selection of the instrument, and the temperature and pressure often change, resulting in inaccurate measurement data.

**SOLUTIONS**

* For high temperature conditions, the flange material of the compact orifice plate flow meter can be selected from domestic grades 1Cr5Mo and 12Cr1MoV, American grades A182 F11 and A182 F22, and the throttle material is made of austenitic stainless steel grades 316 and 321 .
* When the condensing tank is equipped to conduct steam to the transmitter, the temperature of the medium is lower than the allowable temperature to

prevent the transmitter from being damaged by high temperature.

* For temperature changes, a temperature sensor can be added downstream of the meter to connect the temperature signal to the multi-parameter transmitter.
* For pressure changes, a pressure transmitter can be installed in the upstream section of the meter to connect the pressure change signal to the multi-parameter transmitter.
* The multi-parameter transmitter uses the temperature and pressure signals that are connected and the data from the design meter to perform temperature-pressure compensation calculations to output accurate measurement data.
* The structural design can better protect the entire device to operate safely and stably for a long time.

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

**Reliable Process Instrumentation and Automation Solution Provider**

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