**DDTOP MTF Variable Area Flow Meter**

**Reliable Flow Meters for Sulfur Recovery Units**

**RESULTS**

* Effectively solve the high temperature condition of sulfur recovery unit and the corrosive of the medium.；
* Better ensure that the device can operate stably.

**APPLICATION**

**Equipment**：Sulfur Recovery Unit

**Medium**：Acid gas，the main ingredients are :hydrogen sulfide、thiol type、carbon dioxide、water, hydrocarbons, ammonia, etc.

**Medium Characteristics:** High temperature and corrosive properties

**CUSTOMER**

Anqing Shuguang Chemical Co., Ltd.

**CHALLENGE**

Sulfur recovery unit is an important part of oil refining and natural gas enterprises, its main role is to make crude oil containing sulfur elements in the state of the elemental or certain compounds can be recycled to reduce or avoid their direct emissions of environmental pollution. The acidic gas from the tower at the top of each desulfurization unit in the refinery is transported to the sulfur recovery unit by pipeline. The main components of acid gas are: hydrogen sulfide, mercaptan, carbon dioxide, water, hydrocarbons, ammonia and so on. Sulfur recovery unit is a high temperature, catalytic reaction process. In the high temperature reaction stage, the main components of acid gas hydrogen sulfide are oxidized by high temperature to sulfur oxides and some elemental sulfur. During the catalytic reaction phase, the oxidation-reduction reaction of hydrogen sulfide and sulfur dioxide produces elemental sulfur.

**SOLUTIONS**

**1.For medium containing large amounts of hydrogen sulfide and other corrosive medium issues:**

* The liquid material of the instrument needs to conform to NACE MR0103 standard.
* Design lining PTFE structure, that is in the measurement tube lined with PTFE, and for the measurement tube and PTFE contact surface, in order to double protection, spraying PTFE, the relevant limit device and the float design for PTFE material.

**2.For high temperature medium issues:**

* The internal magnets of the float are made of samarium cobalt, and samarium cobalt magnets can maintain strong magnetism at high temperature, which can meet the working requirements of the rotor flow meter.
* Sulfur recovery process will produce gas or steam, for the medium is gas or steam, designed a damping limit structure, so that the flow measurement is more stable.
* Variable area flow meter generally used for measuring small flow, the company meter measurable flow range to water marked flow rate of 0.3l/h to 100000l/h.

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

**Reliable Process Instrumentation and Automation Solution Provider**

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