

Discover Mourik

Infrastructure

Industrial services

Catalyst handling

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Project development

DP Measurement



The tubular division is a specialized worldwide contractor for catalyst changes in tubular reactors. Besides the unloading, cleaning and loading of the reactor, Mourik also provides services for checking loaded catalyst tubes for density, and making corrections if necessary.

In order to determine the homogeneity of the catalyst bed, the pressure drop for each tube is measured. To ensure that all tubes are measured in an identical manner, Mourik uses specially designed pressure drop equipment.

Mourik's own in-house developed and patented pressure drop measurement equipment uses mass flow controllers instead of orifices to ensure a stable, reliable and repeatable air flow per measurement stick.

This air flow can be adjusted to the required demand and the system provides automatic electronic stability of this flow using the electronic mass flow controllers.

So in the event that the air feed from the compressors is not stable, this will not result in fluctuating measurements, in contrast with an orifice based system.

Mourik's pressure drop system will measure and records up to eight readings simultaneously, which can be extended in the event of very large reactors by using multiple systems. This way Mourik can expand the system up to 16 simultaneous measurements.



Digital readings ensure accurate measurement and make progress control and qualitative reporting possible. Each tube is checked by measuring the pressure drop, the data and correlating position are stored in a computer and will be used for reporting.

First the equipment is prepared for use with specific tube size of the reactor and the data of the tubesheet is entered into the computer. The equipment is prepared for a procedure that includes both measuring and dust blowing, or just measuring.

When dust blow is required, the system will use up to eight bars of pressure with a maximum airflow. This is also different than an orifice based system where the dust blow is performed over the same orifice used for measurements, which will result in a restricted airflow.

During the measurements, pressure drop readings were taken to calculate the average pressure drop across the reactor. When all tubes are measured, the system will show which tubes are out of range and need to be corrected.

The pressure drop equipment is also used during the filling of the thermocouple tube to achieve the calculated value.

Mourik can provide you with the best pressure drop equipment currently available on the market.

For more information:
Mourik Global
Nieuwesluisweg 110
3197 KV Botlek-Rotterdam
T +31-10-296 54 00

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