Hydrocracker

Heavy raw materials are generally difficult to process by FCC or reforming, but can be converted by hydrocracking. The feedstock is cracked by catalytic cracking in the presence of hydrogen, which produces a mixture of gasoline and distillate. There are about a dozen different hydrocracking processes in use.

Challenges

The level control of catalyst stripper, separator liquid and flash tank liquid must be adapted to harsh process conditions to maintain optimal operating state of the hydrocracking unit. These conditions include elevated temperature and pressure, the presence of vapor, high pressured hydrogen and corrosive liquids.

Products

- **ZTD Displacer Level (Interface) Transmitter**

ZTD displacer level (interface) transmitter is an intelligent level measuring instrument with international leading level independently developed by DDTOP after many years of technical research. The simple buoyancy principle is used to detect the change of level, and then the magnetic signal is converted into a stable 4-20mA current signal and output through the torque tube assembly and the hall sensor. The instrument has a variety of configurations and pressure levels, which are suitable for various applications.

Equipped with DLT9010 level controller, output 4~20mA current signal. At the same time, it has HART communication protocol, which can query, configure, calibrate or test level controller. It can also accept the information of a single measurement loop and transmit the information from site to the control system.

Features

1. SIL2 certification certified by both French Bureau Veritas and Shanghai SITIIAS.
2. Verification is not needed, only configuration is needed.
3. The product provides 4-20 mA with HART, and can be configured, calibrated and diagnosed on site using the 475 Communicato.r
4. Comprehensive fault diagnosis, warning and status history.
5. EU PED pressure vessel certification, the applicable pressure can be up to 42Mpa.
6. Maximum process temperature which is applicable in non-vapor condition can be up to 500℃.
7. Flame-proof and Intrinsic safety certified by CSA, ATEX and IEC.
8. Process parameters can be adjusted online.
9. The transmitter can be converted arbitrarily in 8 positions without affecting the on-site use.
10. It is suitable for interface measurement and density measurement.
11. EU EMC directive CE certification.

- **TRG802X Guided Wave Radar Level Transmitter**

The latest generation of TRG802X series guided wave radar level transmitter is a two-wire 24VDC powered level transmitter, which adopts advanced microprocessor and unique echo processing technology.

TRG802X series guided wave radar level transmitter can be applied to various complex working conditions and applications. Whether it is a light hydrocarbon or water-based solution, it is suitable.

Features

1. Multi-variable 2-wire system and 24VDC loop-powered level transmitter can be used to measure level, interface, volume or flow.
2. The level measurement results are not affected by the change of medium properties.
3. It is no need to calibrate by adjusting the actual level.
4. Select the probe with function of "anti-overflow ", the true level to the process connection seal can be measured directly without special algorithm.
5. 4 buttons and graphical LCD display can easily observe the instrument configuration information and signal waveform diagram

6. Use split structure, the electronic device can be replaced without opening the storage tank.

UHC Magnetic Level Gauge

UHC magnetic level gauge provides a safer, more reliable and more visible option than conventional glass level gauge. The float moves up and down with the change of level, and the float transmits the level signal through the coupling magnetic field, which divides into the local indication type and the remote transmission output type.

Chamber and float have a variety of materials and pressure-grade options and are suitable for complex process applications of current major operating devices.

Features

1. The float adopts 304,316 L, TA2 and TC4 material. It has good temperature resistance and can reach to 450℃.
2. The welding process meets the requirements of PED welding process. The chamber is made of 304,316 L. The maximum pressure can reach to 26 MPa.
3. Local indicator type and remote output type with level alarm are optional.
4. According to customer requirements, through a variety of production types, the products can be applied to a variety of working conditions.

UTK Displacer Level Controller

UTK Displacer level controller takes float or displacer as measuring element. The measuring element is connected to the magnetic sensor. The magnetic control switch is sucked through the magnetic induction magnetic coupling to realize the control and alarm of the liquid level. UTK displacer level controller is highly stable, anti-vibration, and suitable for extreme temperature and pressure.

Features

1. Stable output signal is not affected by surface fluctuation.
2. Process temperature range is from -40° to 300°C.
3. The product uses 304, 316 high-quality materials which make it more durable and reliable.
4. This product is suitable for the working condition of pressure vacuum ~26MPa, temperature -40℃~+300℃.
5. The product has passed SIL2 functional safety certification and explosion-proof certification, and can be used in a variety of working conditions to effectively avoid the occurrence of accidents.
6. The pressed part and the switch contact part are completely isolated by magnetic coupling, which has high reliability and safety.

LG ORIFICE PLATE

Flow element, also known as differential pressure flow meter, consists of a primary detection piece (flow element) and a secondary device (differential pressure transmitter and flow indicator). Flow element is the most stable and reliable of all flow meters, which has a history of more than 100 years. Its wide applicability, high reliability and accurate accuracy make it widely used in the measurement of gas, liquid and vapor.

Standard Orifice Plate: LG orifice plate with simple structure, easy installation, stable performance, high measurement accuracy is used in modern industry liquid, vapor and gas flow measurement. It is in line with GB/T2624-2006, ISO5167-1-2003, BS1042-1989, American Society for Mechanical Engineering standard and so on.

Features

1. Structure is simple, easy to install, reliable to work, accuracy can meet the needs of engineering survey.
2. It has pure mechanical structure, according to the site high temperature and high pressure conditions to select appropriate structure and material. The highest pressure is 42 MPa and the highest temperature is 500℃.
3. Flow element has a long history of use, it has rich and reliable experimental data. Design and processing has been standardized. Standard orifice plate is no need to carry out the real flow calibration and maintenance.

LG VENTURI FLOW METERS

Flow element, also known as differential pressure flow meter, consists of a primary detection piece (flow element) and a secondary device (differential pressure transmitter and flow indicator). Flow element is the most stable and reliable of all flow meters, which has a history of more than 100 years. Its wide applicability, high reliability and accurate accuracy make it widely used in the measurement of gas, liquid and vapor.

Standard Venturi Flow Meter: LG venturi flow meter has the characteristics of high precision, stable performance and low pressure loss, especially suitable for energy saving work and has the advantages of accurate measurement and reducing the energy consumption.

Features

1. Structure is simple, easy to install, reliable to work, accuracy can meet the needs of engineering survey.
2. It has pure mechanical structure, according to the site high temperature and high pressure conditions to select appropriate structure and material. The highest pressure is 42 MPa and the highest temperature is 500℃.
3. Flow element has a long history of use, it has rich and reliable experimental data. Design and processing has been standardized. Standard orifice plate is no need

to carry out the real flow calibration and maintenance.

- **LG NOZZLE**

Flow element, also known as differential pressure flow meter, consists of a primary detection piece (flow element) and a secondary device (differential pressure transmitter and flow indicator). Flow element is the most stable and reliable of all flow meters, which has a history of more than 100 years. Its wide applicability, high reliability and accurate accuracy make it widely used in the measurement of gas, liquid and vapor.

LG nozzle is the oldest and most widely used flow measuring instrument, which can be used in the flow measurement of liquid, vapor and gas in modern industry. It can meet requirements of GB/T2624-2006, ISO5167-1-2003, BS1042-1989 and American Mechanical Engineering Association standards, etc. According to AQSIQ 2018 Document No.515 for power plant boiler flow meter requirements, Dandong Top Electronics Instrument (Group) Co., Ltd is the first enterprise in Northeast China which obtains the pressure pipe components production qualification. All power plant boiler flow meters produced by Dandong Top Electronics Instrument (Group) Co., Ltd are all in the design of original, material procurement, manufacturing of all links by the pot inspection institute supervision and inspection to ensure product quality.

Features

1. Structure is simple, easy to install, reliable to work, accuracy can meet the needs of engineering survey.
2. It has pure mechanical structure, according to the site high temperature and high pressure conditions to select appropriate structure and material. The highest pressure is 42 MPa and the highest temperature is 500℃.
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- **ULB Type Glass Level Gauge**

ULB Type glass level gauge is a local indicating instrument produced according to the principle of connector. The medium in the container was led to the glass level gauge, and the actual height of level can be read from the transparent glass. Cylinder type glass level gauge is a large-diameter glass level gauge, which is suitable for medium with high viscosity or strong bubbles. For low-temperature medium, glass level gauge can use anti-frost fins. Using the temperature gradient principle, add anti-frost fins on both sides of the window, and observe the liquid level through the anti-frost fins.

Features

1. Glass level gauge are all installed with safety steel balls. If the glass level gauge breaks accidentally, under the effect of the pressure difference, the steel ball

seals the valve port, blocking the passage of the medium into the glass level gauge

2. The glass level gauge can realize the measurement of high temperature, high pressure, high temperature and high pressure working conditions.
3. When the medium is vapor, alkali liquor, and PH>7, add mica pads between the glass plate and the sealing pad to protect the glass plate from corrosion by the medium.

ULG Glass Tube Level Gauge

ULG-S type double color quartz glass tube level gauge is made according to the principle of light reflection and refraction. The liquid phase in the quartz glass tube is green and the gas phase is red. It is a clear and intuitive display, good quality with competitive price local indicator instrument.

Features

1. Visual display, clear and eye-catching;
2. Stainless steel housing, novel and beautiful;
3. Simple structure, loose flange connection;
4. Good sealing, reliable work, easy installation and maintenance
5. The glass tube is made of borosilicate glass or quartz glass tube that is resistant to harsh environment, and is resistant to the temperature, pressure and corrosion.

LGNC INTEGRAL ORIFICE FLOW METER

Differential pressure flow meter is one of the most widely used flow meters in the field of industry nowadays. Its simple structure, stable precision and high reliability are favored.

Integral orifice flow meter is a kind of non-standard differential pressure flow meter used in small diameter pipe. It is stable and accurate flow measurement because of the highly integrated structure, the straight pipe section with sufficient length, the precise machining and the inspection by standard flow device. It is widely used in oil refining, chemical industry, electric power and natural gas industry.

Features

1. Whole installation of transmitter and flow element can save installation and maintenance workload.
2. Integral orifice plate adopts inner polished straight pipe section, upstream with 20 times pipe diameter, downstream with 10 times pipe diameter, can achieve good rectification effect and reduce the uncertainty of measurement.
3. High accuracy and the basic error of integral orifice flow meter calibrated by real flow can reach up to ±0.5%.

4. Tap body is made of stainless steel forgings, which ensures the overall strength and minimizes the possible leakage points.

LBTC POSITIVE DISPLACEMENT ROTARY VANE FLOW METER

LBTC positive displacement rotary vane flow meter belongs to volumetric flow meter, which is one of the more accurate instruments in modern industrial liquid measurement.

Features

1. Stable performance, no vibration, no noise
2. Insensitive to changes in upstream medium flow
3. Almost unaffected by the viscosity of the medium
4. High accuracy, max can be up to 0.2
5. Withstand the high pressure, good applicability, long service life
6. Convenient installation, no need of straight pipe section, rectifier and other ancillary equipment, not affected by elbow, valve and other pipe fittings.

LGP Balanced Flow Meter (Multi-Hole Orifice Flow Meter)

LGP balanced flow meter is a flow element developed on the basis of standard orifice plate. Its sensor is a porous disk throttling rectifier mounted on the section of the pipe. Size and distribution of each hole are customized based on test data and become function holes. The balanced flow meter sensor can realize the fluid balance measurement skillfully, obviously reduces the eddy current formation, reduces the dead effect and the fluid kinetic energy loss.

Features

1. High accuracy.
2. Low requirement of straight pipe section, in most cases the straight pipe section can be as small as 0.5 D~2 D, a large number of straight pipe sections can be saved by using LGP balanced flow meter.
3. Low permanent pressure loss and the differential pressure value is not reduced under the same measuring condition, the permanent pressure loss can be reduced by ½ ⅓.
4. Wide range ratio.
5. Good repeatability and long-term stability.
6. Wide range of application, can measure the gas-liquid two-phase, slurry and even solid particle. The balanced flow meter measures the complete symmetry of the left and right of flow element, so the bidirectional flow can be measured.