Clean coal technology industry solution

FISHER™

Coal plants utilize Fisher™ regulators for precise pressure control

Clean coal technology industry overview

Coal is an abundant, reliable and inexpensive source of energy, but it does have some technical limitations. Coal is not suitable for use in some applications such as transportation and it produces a range of environmental pollutants when burned. In recent years, several clean coal technologies have been developed to help reduce the environmental pollution caused by burning coal and make coal more energy-efficient. Among these, coal gasification and coal liquefaction are the most popular technologies to date.

Common clean coal technologies

Coal gasification is considered one of the most versatile and cleanest ways to convert coal into an alternative and cleaner form of energy. In gasification, coal is broken down to its basic chemical constituents rather than directly burned. The resulting syngas (a gas mixture made up of carbon monoxide, hydrogen and other gaseous compounds) can be used as a fuel source or as an intermediate for the production of other chemicals.

Coal liquefaction converts solid coal to synthetic oil to supplement natural sources of petroleum. This well-developed technology requires coal to be in contact with hydrogen in the presence of a catalyst at high temperatures. Coal liquefaction can either be direct as described previously or indirect. Indirect coal liquefaction consists of two stages: gasification to produce coal gas and subsequent conversion of the gas to liquid via the Fischer-Tropsch process.

Products derived from coal through these clean coal technologies can be used as fuel for transportation vehicles and electricity generation and as raw materials to other valuable products. These recent developments in the clean coal industry can also help ease the burden of oil production and import.

Emerson pressure control solution

Emerson is the market leader in the field of pressure control with a history of over a hundred years. With more than 100 product families, Fisher regulators are widely used to control various fluids, including gas, liquid and steam.

We take an active part in the clean coal industry by offering a variety of products and expert process solutions. Pressure Reducing and Tank Blanketing Valves are available for pressure controls for tanks and pressure vessels used in the coal gasification and liquefaction processes.

EMERSON™

Recommended Fisher™ regulators applicable for clean coal technologies

Pressure Reducing

Type MR95

- Direct-operated
- Multi-purpose - can be used for most process media
- Rugged construction
- Multiple end connections available
- Available in differential pressure control, high temperature and low/high pressure optional constructions
- Easy maintenance

Relief / Backpressure

Type MR98

- Direct-operated
- Multi-purpose - can be used for most process media
- Close, stable regulation
- Available in differential pressure control and low/high pressure optional constructions
- Easy maintenance

Pressure Reducing

Type 1098-EGR

- Pilot-operated
- NPS 1 through 12 x 6 / DN 25 through 300 x 150 Body sizes available
- Quick change trim package
- Optional noise abatement trim
- No atmospheric bleed
- In-service travel inspection
- Easy top entry in-line maintenance

Tank Blanketing

Type T205

- Low pressure design with fast speed of response
- Direct-operated for economic pressure control
- Easy conversion between constructions
- Sour gas service capability and corrosion resistant
- NPS 3/4 and 1 / DN 20 and 25 body sizes

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