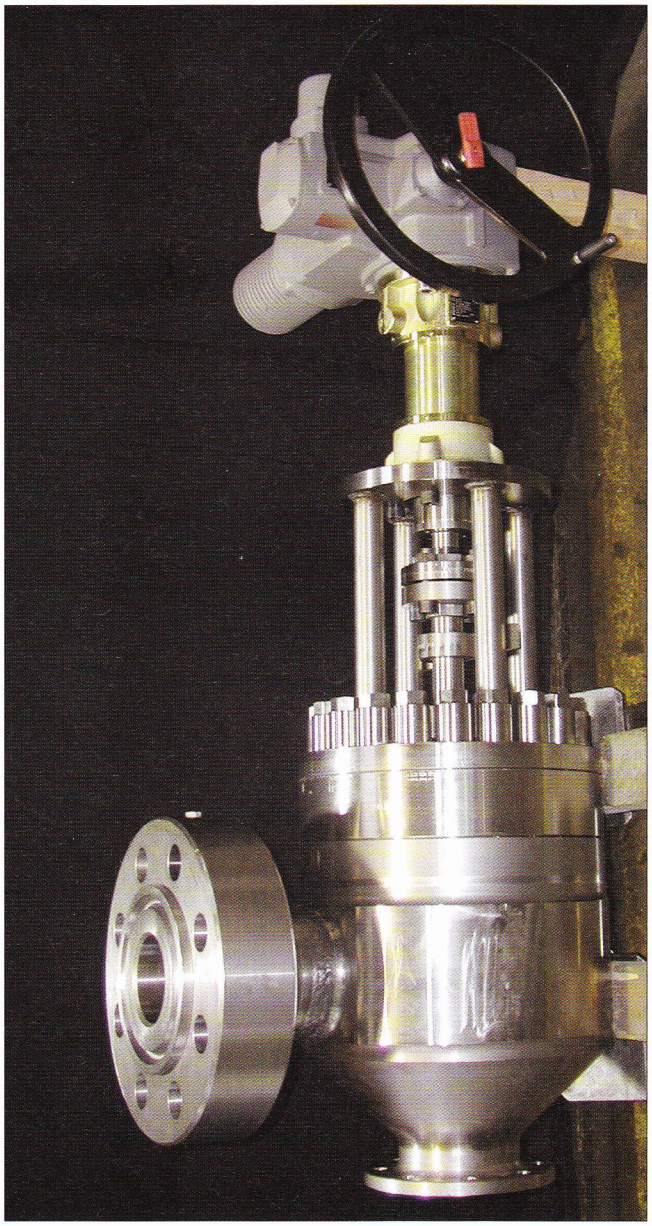
Pump protection valve for high pressures and temperatures

The market for pump protection valves has changed significantly in the last ten to 15 years. While in the past mainly valves were in demand, which had the fundamental advantage of the automatic and purely flow-driven functionality, today control valves with individual control are increasingly demanded. This trend is observed in the industrially advanced countries of Europe or the USA, but also in emerging countries.

The necessary requirement for ever more efficient energy and raw material use has resulted in the development of a new generation of pumps for thermal power plants as well as for oil production and processing. Commercially available products, especially self-medium controlled minimum flow valves, can also cope the technical characteristics of these pumps: discharge pressures up to 600 bar, media temperature of more than 200 °C and some high degree of contamination by solid particles. However these products cannot be monitored yet. Automatic minimum flow valves can not be meaningfully integrated in a modern computerized control system, which in an ever-increasing level of plant automation is no longer acceptable. A special situation is found in the nuclear power plant construction. The new EPR reactor systems are based



on entirely new security concepts to which the valves must be specially adapted.

Due to these developments and to the increasing pressure and temperature level especially in power plant demands, the company Schroeder Valves from Gummersbach developed a control valve, which withstands safely pressure differences up to 600 bar and medium temperatures of more than 200 °C. It also meets the safety requirements for new nuclear plants.

The high-pressure control valve of the type SR / SA is suitable for simple volume control (type SA) and for volume regulation (model SR). The valve is compatible with all common types of drive – electric, pneumatic, hydraulic. For units with the "OPEN / CLOSE" characteristic a self-medium-operated version is available. It requires no auxiliary power. Depending on the medium, the housing of ferritic, austenitic or austenitic-ferritic steel fittings are manufactured.

Through the use of actuators and sensors the high-pressure control valve is also easily integrated into the computerized control systems of modern machines. This allows a very efficient minimum flow-rate which can be checked and easily influenced at any time by the process control system. They therefore make a valuable contribution to low-energy, low-wearing pump operation. Schroeder Valves thus meet the ever-louder calls for more efficient energy and resource use.

"With the SR/SA, we offer the only control valve on the market that can withstand such high pressures and temperatures", says Schroeder's Managing Director Axel Muecher. "Its properties make our control valve the ideal partner in power engineering, chemical engineering and in all places where pumps must be protected."

www.schroeder-valves.com

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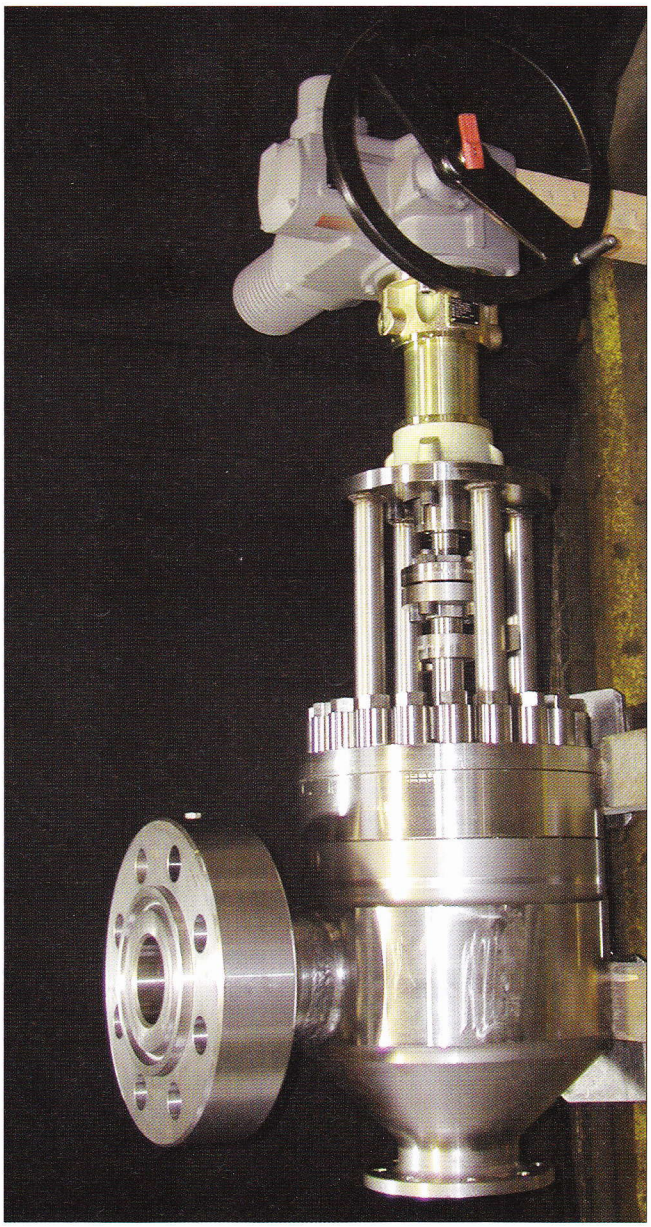

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