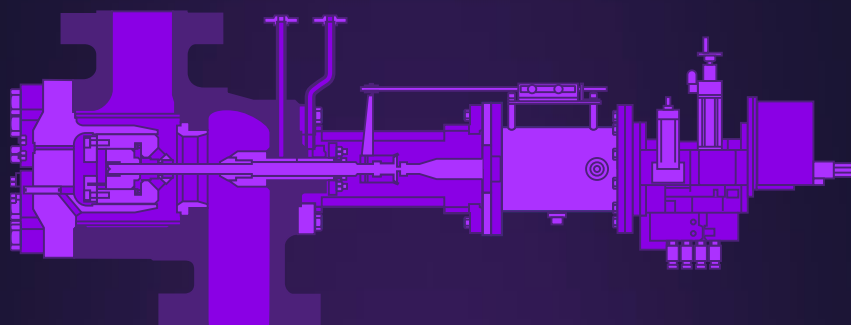
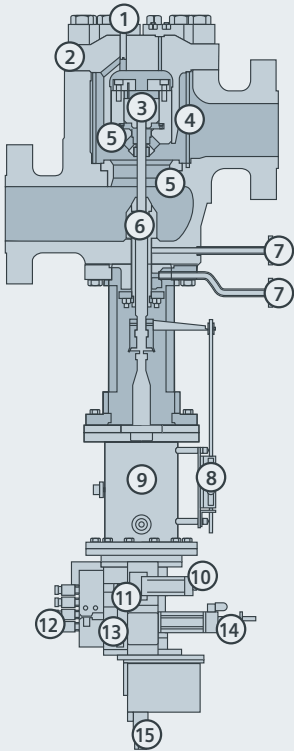

EHTTV

Gimpel Electro-Hydraulic
Trip & Throttle Valve
(Globe and Offset Bodies)

PIB 104-2020



EHTTV features



- 1 Field adjustable throttling screw
- 2 Cover
- 3 Pilot design
- 4 Drilled strainer
- 5 Stellite wear-resistant seats
- 6 Backseat design
- 7 Leakoff and seat drain-connections
- 8 Optional limit switches
- 9 Spring housing
- 10 Expansion reservoir
- 11 Dual acting cylinder
- 12 Integrated trip solenoid valves, optional API 612 7th Edition trip block and in-line exerciser solenoid
- 13 Geared pump
- 14 Motor
- 15 Position feedback sensor

Background

SE Gimpel electro-hydraulic trip throttle valve (EHTTV) is a microprocessor-controlled trip throttle valve with a self-contained electro-hydraulic actuator. It is designed specifically for emergency shutdown and throttling on steam turbines.

The EHTTV uses the same steam section design as traditional Gimpel oil-operated valves with the advantage of a new electrohydraulic actuator that efficiently pumps hydraulic fluid from one side of a doubleacting cylinder to the other. Once the correct position is reached, the motor shuts off; therefore, minimal power is required to maintain the actuator position.

Design

The EHTTV is controlled by two major components: the actuator (cylinder, feedback and electro-hydraulic power module) and the control panel. The actuator is installed on the valve, while the control panel has the flexibility to be mounted anywhere on the turbine deck. The EHTTV is supplied with color coded cables that connect the valve to the control panel.

Pre-programmed software designed into the controller allows our factory-trained personnel to set the valve operating parameters. The standard features supplied on the EHTTV include the option to throttle open/close, exercise and trip either locally or remotely.

In addition, the EHTTV has a CSA Class I Division 2 area classification and the steam section is built to ASME/ANSI B 16.34 and B 16.5 standards.

The EHTTV is API 612 compliant. It includes online solenoid valve testing and replacement.

Features

The EHTTV can be furnished in several body styles and flow arrangements and can be installed with the valve stem in any orientation. The user also has the flexibility to operate the valve locally or remotely.

Standard features

- ANSI NPS 3 to 24 and Class 300 to 2500
- SIL 3 certificated
- Steam temperature up to 1,004°F (540°C)
- Trips in 0.3 second or less
- Backseat design prevents steam loss when valve is full open
- RF valve body drain and valve stem leak-off connections standard
- Stainless steel, integral, replaceable steam strainer basket
- Self-contained control oil system
- Integrated solenoid trip valves
- Accurate position feedback (+ 0.1 %)

Optional features

- Limit switches to monitor valve stem in open, closed and exercised positions
- API 612 (7th Edition) solenoid trip block
- Protective cover (for harsh climate installations)
- Temporary start-up screen and spare cover gasket
- Blowdown kits
- Integrated trip solenoid valves (solenoids to be tested in-line)

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