G-Team a.s. **IČO** 45358028
Šeříková 580 **DIČ** CZ45358028
334 41 Dobřany
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ELECTRO-HYDRAULIC CONTROL SYSTEM G-TEAM COMPANY A.S.

Electro-hydraulic control system based on microprocessor-electronic controller with high-pressure hydraulic system.

Advantages:

- Simple design – safety (reliability)
- Accurate and quick regulation
- Automatic turbine start-up to operation speed according to chosen starting curve
- Possible remote control of the operating regulation
- Possible data aquisition with data bus
- Valve modification according to (DN, PN)
- Independent oil system – less troubles with Impurities and oil filter clogging

VYSOKOTLAKOVÝ AGREGÁT REGULACE

Control valve (RURV) of single-stage turbine in connection with high-pressure electro-hydraulic system has very important advantage in simplicity compared to low-pressure control system (used with steam turbine). Mechanical gear-boxes (levers) and complicated oil servo-actuator are replaced with simple fabricated hydraulic cylinder. The photograph shows mechanical simplicity of high-pressure system with given accuracy and reliability. Control valve (RURV) doesn´t have clutches or joints thanks to these don´t exist mounting clearances which influence accuracy and service life.

Diagram and function description:

Regulator is used for start-up and operation of the (single-stage) turbine (the description is for TR, which drives el. generator). The ***speed governor*** is the base for the Turbine (TR) rotation onto nominal speed, its keeping in action when connecting generator and finally their limitation, for example at sudden load rejection (generator shut-down). Another regulator regulates steam pressure behind TR – ***back-pressure controller*** and the third regulator is used to ***limit the active power of generator***. All three regulators have operation sequence onto one actuator, which is turbine control valve (RURV) and sequence to this has always that regulator, what gives lowest level of action intervention.

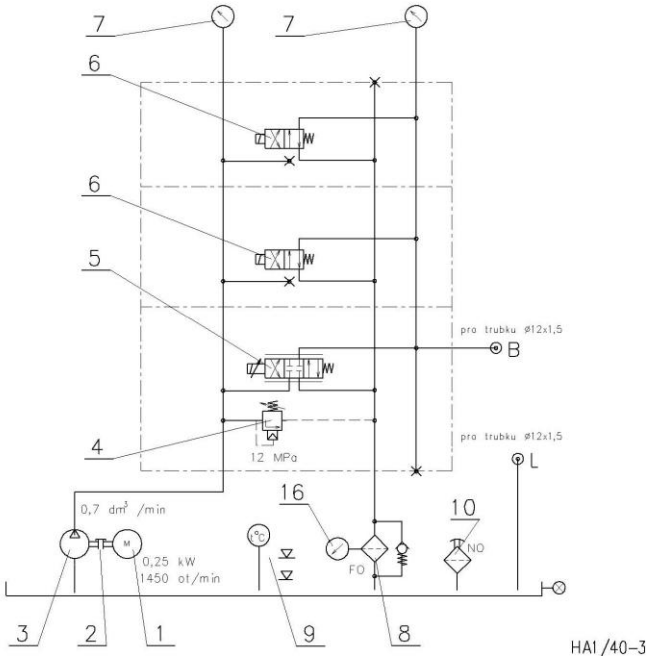

diagram: electro-hydraulic system scheme of Turbine regulation (TR)