framatome

Commissioning and Maintenance Tools for Motor Operated Valves and Actuators

To assist operators in guaranteeing reliable functionality of valves and actuators, dedicated commissioning and maintenance tools for valves and actuators are provided tailored to the specific customer demands.

Challenge

Valves and actuators must be installed correctly to avoid damage to the valves. Damaged and malfunctioning valves or actuators may lead to unplanned shutdowns of the plant. To ensure the proper functioning of the Motor Operated Valve, periodic monitoring is recommended. After maintenance, actuators must be set to the correct torque switch value, which then must be documented. However, during the maintenance of the switchgear, installation at the valves is impossible.

Solution

Framatome supplies all required hard- and software to perform the needed commissioning steps, following the commissioning procedures for logic actuators, to achieve reliable results to perform permanent monitoring.

Baseline measurements and torque switch settings for the actuator are realized with the test bench (ATESY) and the electro-mechanic brake (MDP).

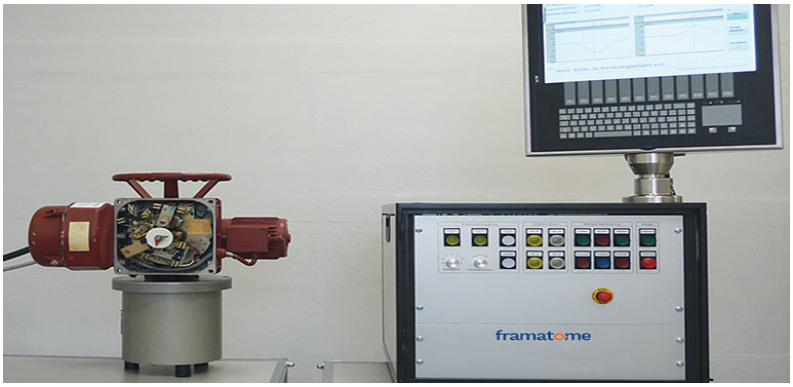
Actuator set up on the spot is possible with URSULA, a universal control unit for actuator adjustment and valve diagnosis.

Our commissioning and maintenance tools ensure improved performance during an outage.

Customer benefits

With our commissioning and maintenance tools all issues concerning the setting up of valves and actuators can be easily solved.

- Precise torque switch settings for the reliable functioning of actuators
- Simple, one step software to ensure efficient set-up and documentation
- Quick and easy set-up at the valve following ALARA principles
- Set-up not dependent on switchgear availability
- Available for various types of valves and actuator, with tailorable solution



ATESY - Actuator Test System

Electro-mechanic brakes with different measurement ranges

Your performance
is **our** everyday **commitment**

Technical information

MDP (Mobile electro-mechanic Brake)

- Different measurement ranges available:
  50 Nm, 200 Nm, 500 Nm, 1000 Nm, 3000 Nm
- Precise measurement with calibrated torque cell
- Rotation speed sensor included
- Simulation of the valve

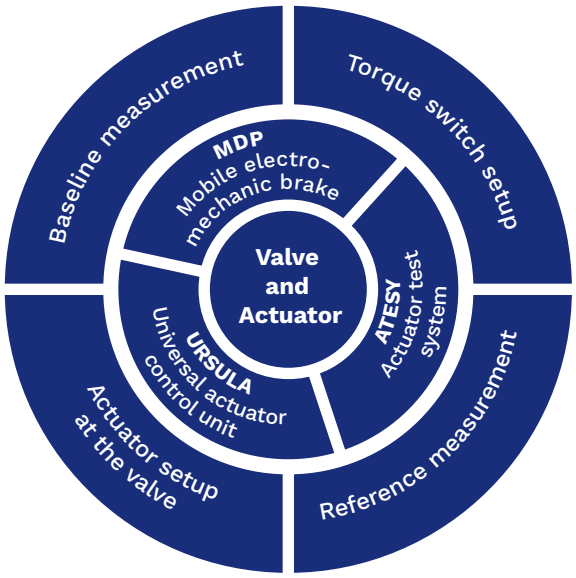
ATESY (Actuator Test System)

- Different measurement ranges available:
  5 A, 10 A, 20 A, 50 A, 100 A
- Simultaneous acquisition of electric and mechanic values
- Automatic brake control for ramp speed and hysteresis
- Special measurement channel, e.g. for displacement

URSULA (Mobile actuator control unit)

- Actuator control up to 70 kVA
- Up to 30 different cut-off switch variants available
- Switch variants are documented for correct actuator setup via active power measurement and evaluation of measurement data with ADAM® valve diagnostic software

URSULA - Actuator control unit

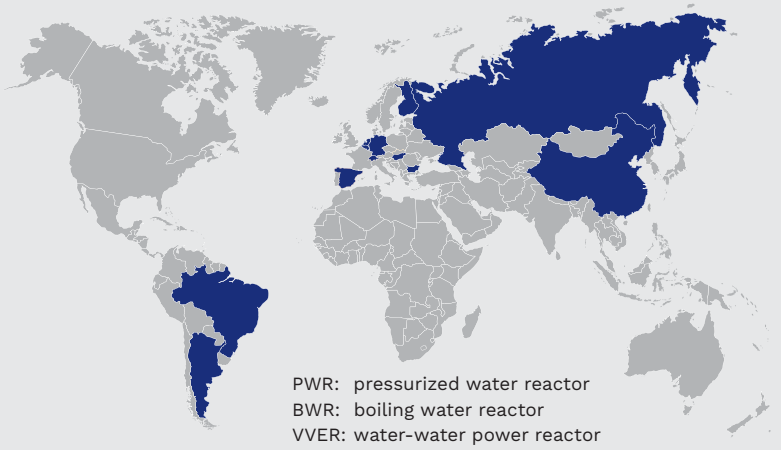


Use of Framatome's commissioning and maintenance tools at valve and actuator

References

Different system configurations with high customer satisfaction were sold to PWR, BWR and VVER plants.

Depending on the local requirements or authority demands, tailored solutions were created in direct dialogue with the customer and operators.



PWR: pressurized water reactor
BWR: boiling water reactor
VVER: water-water power reactor

Related Products

SIPLUG® 4 Active power measurement component for switchgear installation. With this tool, permanent monitoring of valve and actuator is only possible with electric measurements. Together with test bench measurement data, it is possible to calculate mechanic values.

ADAM® 64 Powerful software tool for data acquisition and evaluation. ADAM 64 ensures straightforward data handling and storage, as well as automatic evaluation of measurement data.

DAW 4 Mobile device for measuring mechanic and electric signals for the diagnosis of valves and actuators.

Contact: monitoring-and-diagnostics@framatome.com
www.framatome.com

framatome