

About us

BVT Sweden was started with the ambition of becoming world leading in critical applications in process steam and thermal power plant turbine bypass. Based in Säfte, BVT Sweden employs experts with over 30 years experience in turbine bypass, steam conditioning, temperature control, design and manufacturing processes. We design turbine bypass valves, select actuation to fit our customer's requirements. Our products are optimized on a per-order basis, and we have the experience necessary to design special solutions. These products cover steam conditioning valves, pressure reduction valves, stop valves, desuperheaters and spray water control valves.

Field Service

BVT service can dramatically improve reliability and reduce ongoing issues, when carrying out our maintenance program. Our certified technicians perform detailed inspection and service on our own products as well as those from other suppliers. Based on our extensive experience, we always guarantee a level of quality and service at a competitive and cost-effective price.



We do root cause analysis and help the customer solve their ongoing issues. Our specialists are available globally, 24/7 to support customers with short notice.

Plant Engineering

BVT Sweden supports you in choosing the correct technology and solutions for unique requirements considering all available options. These solutions can increase the efficiency of thermal power plants.

We have over 30 years experience and world leading competence regarding critical applications within the power industry, as well as the design of related products. We perform prestudies and planning of new facilities.

The prestudy determines if the project can be carried out regarding economic, technical and time aspects. Prestudies are adapted for each individual project.

When working on site at our customers, we contribute to the competence of your team. We perform trouble shooting, review operating conditions and support in optimization and preventative actions. Problems may include noise and temperature control.



We specialize in many areas related to valves and actuation

Technical solutions

Desuperheating

Desuperheating involves several challenges, from the mechanical design to temperature control systems. Cavitation can result from too high pressure drops being taken over a single pressure stage or component. Flashing can be caused by too low water pressures or too high water temperatures. Both can result from inappropriately designed or selected water valves or spray nozzles, or a change in operating conditions. Temperature control systems depend on operating conditions, response time of control systems, rangeability and operation of control valves, and placement of temperature sensors. A temperature sensor placed too close to the water injection point can be subject to spray water droplets, throwing the measurement off. Coupled with a temperature control system controlling the spray water flow, this can result in system instability.

Installation

Pipe bends and branching pipe connections can cause rotational forces in the steam flow. They can also result in spray water hitting the pipe wall if installed too close to a desuperheater. Spray water can also hit pipe walls or welds resulting in cracks due to thermal cycling. Inappropriately designed draining systems can result in free water accumulating in the steam pipes which can cause damage to valves and pipe systems.

Magnetite and other particles in steam

Magnetite coming loose from pipe walls can be carried downstream with the pipe steam and cause clogging in trims and desuperheater internals. Valve plugs can become stuck, stopping the valve from being able to close or open. Particles can erode seat sealing surfaces, causing leakage, or control elements changing their functionality.

Noise

Acoustics in steam conditioning valves are of great importance. High pressure drop and flow rates generate high levels of noise emission which can pose challenges in maintaining acoustic requirements. Steam conditioning valves reduce steam from a higher-pressure level to a lower pressure level by use of pressure reducing stages. Noise levels depend on the pressure distribution over these stages, their drill patterns and noise abatement provided by insulation. Each valve designed by BVT is uniquely optimized based on operating conditions present.



BVT technicians on site

Erosion damages

Wet steam and particles result in erosion on trim parts. If erosion affects sealing surfaces, this might result in valve leakage and overheating of downstream piping. This is most common after supercritical pressure drops, where particles and steam have very high velocity. It is also more common when the valve is operating at a small opening degree.