Steam Accumulator
Energy Storage for Thermal Processes

Optimize processes with time-varying steam demand

Optimize system operation with energy and economic efficiency
Steam supplies energy needs for numerous applications in the fields of power and process technology. The user’s steam demand often varies with time and fluctuates widely so that the steam generator is unable to meet this variable demand. The solution is to use steam accumulators in combination with other thermal accumulators to minimize steam rejection and optimize energy efficiency. During the design phase of new process plants or as a part of refitting existing process plants, we perform a cost-benefit analysis. The analysis consists of five process-oriented steps.

Process-oriented project execution

1. **Assess demand**
   Analyze the process plant operational behavior to determine the required steam storage capacity and filling and discharge rates.

2. **Design the optimized accumulator**
   Determine the accumulator geometry, accounting for steam demand, time transients and structural boundary conditions.

3. **Plan for integration**
   Integrate the steam accumulator into the process plant design.

4. **Perform cost-benefit calculation, determine subsidies**
   Compare the required investment and the potential cost savings. When appropriate, determine subsidies.

5. **Project execution**
   One business partner accompanies the owner from the design to the commissioning phase.
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Our many years of experience in the aspects below contribute to successful project management:

• Operating many types of steam accumulators with varied filling and discharge rates
• Designing and constructing power and process plants
• Designing control technology for power and process plants
• Simulating transient filling and discharge rates of steam accumulators using configuration programs
• Commissioning power plants and process plants
• Executing projects involving entire plants

Your benefits at a glance

• Analysis and optimization of steam storage
• Analysis and optimization of steam accumulator geometry
• Customized design for individual processes
• Cost-benefit calculation
• Project execution with a single partner
• Operational experience with our own steam accumulators

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