

Reference RAUCH Fruchtsäfte

The companies involved

Operator: RAUCH Fruchtsäfte

- ▶ Headquarters in Rankweil, Austria, company founded in 1919
- ▶ Largest producer of fruit juices and tea beverages in Austria
- ▶ Wide range of 100 different Rauch products
- ▶ Filling volume at the Nüziders location in Austria: 125 000 l/h

Expansion of the process steam supply

in due consideration of maximum energy efficiency and saving of resources

Planning: ATP architekten und ingenieure, Innsbruck

Construction: Intemann GmbH, Lauterach



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Scope of delivery

Boiler

- ▶ Integration of an UL-S steam boiler with a steam capacity of 15 000 kg/h into existing steam network

Waste heat use by air preheating

- ▶ Integrated economizer uses flue gas heat for heating the feed water
- ▶ Efficient use of the residual flue gas heat to preheat the combustion air with the air preheating system APH

Efficient firing technology

- ▶ Modulating dual-fuel firing for operation with natural gas and biogas
- ▶ Use of a speed control for minimized electric power consumption and noise-reduced operation
- ▶ Optimized combustion and less fuel consumption with O₂/CO control



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Scope of delivery



Air preheating system



Economizer



Speed control



CO/O₂ control



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Scope of delivery

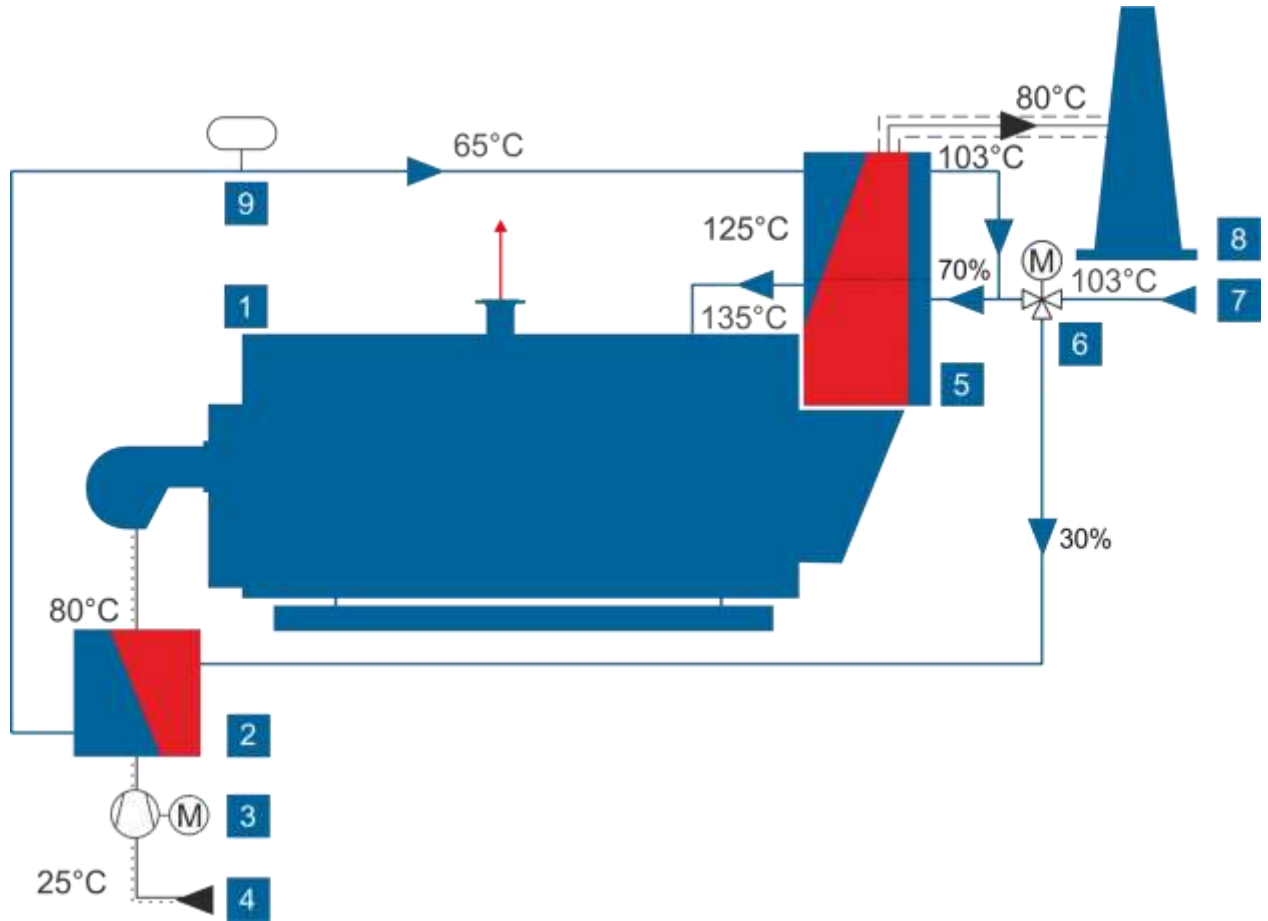


Intelligent control technology

- ▶ Boiler control BCO with efficiency and condition monitoring
- ▶ System management SCO with sequence control for long service life
- ▶ Reduced mandatory supervision
- ▶ Transfer of operating messages and process data to the central process control via Industrial Ethernet
- ▶ Remote service connection ensures quick support by the Bosch Customer Service

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The air preheating



- 1 Steam boiler
- 2 Combustion air heat exchanger
- 3 Fan
- 4 Combustion air
- 5 Combined flue gas heat exchanger
- 6 3-way valve
- 7 Feed water
- 8 Chimney
- 9 Temperature controller

— Water/Condensate
 — Steam
 - - - Flue gas

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The result

€ Air preheating alone saves **up to 41 000 euros annually** in fuel costs and reduces CO₂ emissions by **175 tons/year**

📅 Payback period of the air preheating system is **about one year**

💡 Boiler efficiency **higher than 97 %**

👉 Low flue gas temperature
Low NO_x emissions

**Air preheating increases the
system efficiency by 2 %**

