

REFERENCE SHEET

Steam turbine and heat recovery boiler | Austria

MORE SUSTAINABILITY

Steam turbine and heat recovery boiler

This power plant consists of a heat recovery steam generator downstream of a recycling rotary kiln for catalysts. A steam turbine and a condenser with an air-cooled recooling unit on the roof of the machine house are also part of the scope of supply. The design of the power plant consists of a first, vertical duct with cooled membrane walls and a second horizontal convenctional duct with superheater, evaporator, and economizer heating surfaces.

A special challenge in the design is the high sulphur and dust content in the flue gas. Thus, an SCS cleaning system was installed in the first boiler pass. Rapping devices in the second boiler pass ensure an effective cleaning of the heating surfaces of the superheater, evaporator and economizer. An economizer with a water recirculation system controls the water inlet temperature in order to prevent sulfuric acid condensation at the cold end.

A back-pressure steam turbine with controlled extraction for MP steam ensures the process steam supply and hot water generation via a heating condenser. Additionally, the plant is equipped with a cascade-shaped ash collection system below the horizontal boiler duct and a warm keeping system for the evaporator and economizer using the client's hot water system and a heat exchanger.

Scope of Supply

- Heat revocery boiler
- Steam, air-cooled recooling unit and heating condenser
- Balance of Plant
- Warm keeping system

Technical Data

Electrical Output	1,2 MW
Steam flow (MCR)	17 t/h
Steam pressure	40 bar (a)
Steam temperature	420°C
Flue gas input	65.000 kg/h, 860 °C, up to 20 g/Nm ³ dust
Country	Austria

