

# 66 MW, Coal/Oil/Gas fired Power Plant

Complete Power Plant mainly hard- coal fired, with:  
heat extraction,  
electric- precipitator,  
DeNO<sub>x</sub>- and desulphurization plant.

Start up 1962  
Operating hours 232 000hours

SO<sub>2</sub> in waste gas 4000 mg/m<sup>3</sup>  
SO<sub>2</sub> in cleaned flue gas 200 mg/m<sup>3</sup> max

## Boiler

2- pass boiler with natural circulation, boiler casing bricklined, with 2 fresh air blower,  
Ljungstromtype  
air preheater and ID- fan.  
The boiler was refurbished and modified from burning lignite to burning hard coal in 1997  
Steam output 240 t/h  
Design pressure 110 bar  
Operating pressure 90 bar  
Steam temperature 530 deg C

## Coal and ash handling

Built in 1984  
Chain conveyor below underground silo 300 t/h  
Belt conveyor to day bin 130 t/h  
Chain conveyor to fee 2 x 130 t/h

## Coal mills ( 3 ) bowl type,

Manufacturer: EVT  
Built in 1997; Operating hours 61 000hours  
Coal mill capacity 9,2 t/h each  
Mill air fan 8,6 m<sup>3</sup>/s



## **(Coal Mill)**

### **Electric precipitator** double-, 2- zones

Built in 1985; Operating hours 120 000hours

High tension 2 x 96 kV

Precipitation area 5400 m<sup>2</sup>

Efficiency 99,81 %

Ash extraction pneumatically

### **Desulphurisation plant**

Built in 1993; Operating hours 73 000hours

Spray absorber with rotating spray machine and bag house with 2 500 bags

Waste gas flow 310 000 m<sup>3</sup>/h

SO<sub>2</sub> in waste gas 4000 mg/m<sup>3</sup>

SO<sub>2</sub> in cleaned flue gas 200 mg/m<sup>3</sup> max

Efficiency > 90 %

Dust content in flue gas 30 mg/m<sup>3</sup> max.

Flue gas temperature 85 -90 deg C

### **Denitrification plant**

Primary NO<sub>x</sub> reduction plus SNCR plant

### **Turbine**

Built in 1962; Operating hours 232 000hours

Manufacturer BBC (Alstom)

Rating without heat extraction 66 MW

Rating with 20 MW<sub>th</sub> heat extraction 57 MW

Live steam pressure 89 bar

Live steam temperature 530 deg C

Rotating speed 3 000 rpm

### **Generator**

Built in 1962; Operating hours 232 000hours

Manufacture BBC (Alstom)

Voltage 10,6 kV

Rating 75 000 kVA

Rotating speed 3 000 rpm

Exciter 230 V, 1 300 A



**(SteamTurbine und Generator)**

**Transformer U5**

Built in 1961; Operating hours 232 000hours  
Voltage 10,6 / 110 kV  
Rating 75 000 kVA

**Transformer U20**

Built in 1961;  
Voltage 10,6 / 5 kV  
Rating 8 000 kVA

**Transformer U30**

Built in 1960;  
Voltage 5 / 0,4 kV  
Rating 1 000 kVA

**Transformer U31**

Built in 1960;  
Voltage 5 / 0,4 kV  
Rating 1 000 kVA

**Boiler feed pumps ( 2 )**

Built in 1961; Operating hours 75 000hours / 150 000hours  
Manufacturer KSB Type HDC 5n, 6 stages  
Flow 276 t/h  
Pressure 128 bar  
Coupling with speed control Voith

Motor 1 500 kW, 5 000 V, 1 490 rpm

Built in 1990; Operating hours 30 000hours / 90 000hours



**(Feed Water Pump)**

**Exchanger for district heat extraction**

Built in 1985

Heating water temperature 80 – 114 deg C

Rating exchanger 1: 12 000 kW (96 000hours)

Rating exchanger 2: 8 000 kW (53 000hours)

Rating exchanger 3: 3 000 kW