

GENERAL DESCRIPTION

USED, 50 Hz, 106 MW_e NET, TWIN-UNIT, COAL-FIRED TPP FOR SALE

Type:
Steam Turbine Power Plant

Location:
Western Europe



This thermal power plant comprises two identical units, which both have been commissioned in 1989. These units are designed for base-load or medium-load operation with electricity feed-in into the 50 Hz public grid.

Both steam-based power generation sets, made in Germany, are designed for approximately 120 MW_e gross total power generation.

Both turbine-generator sets have been reliably operated since they got commissioned in 1989 and have mainly been operated in base-load. Such an operation mode is reflected in the corresponding number of approx. 250,000 operating hours, each.

Due to overall overcapacity in the European electricity market, the operator has decided to decommission both units in 1st quarter 2027. Due to the continuous supervision and maintenance, both units are still in excellent condition.

Both units of this hard-coal fired power plant are still fully in operation; site visits can be arrange subject to a signed Letter of Intent.

Offering

item / type / layout	twin unit - thermal power plant two coal-fired boilers and two identical steam turbine-generator sets heat extraction possible designed for full-load operation, very flexible partial load operation possible
typical usage	combined heat and power plant (CHP) for the generation of district heating and electricity

	operation for electricity generation only is possible, too
special features	full documentation, full maintenance history and many spare parts are included
status	both units will be in operation until early 2026, by then, with approx. total 250,000 operating hours
availability for dismantling	both units are in operation ready for dismantling in early 2027
sales prices	Euro 6.95 million (US\$ approx. 7.95 million) for all re-usable components of both units, as it is and where it is or Euro 1.49 million (US\$ approx. 1.69 million) for just one steam-turbine generator set, as it is and where it is or also selected equipment, EXW, price negotiable ! The buyer is responsible for disassembly !
new build cost (for comparison)	Euro 210 million (approx.) (for entire new 106 MWe plant as per Western Europe model case)
new build time (for comparison)	4 years (approx.) including engineering, procurement of long-lead order items, construction, commissioning

Key Figures

main fuel type	hard coal, LFO additional for start-up, backup firing and as substitute (up to 30% of LFO of total heat value possible)
electrical output	2 x 60 MWe (gross) 2 x 53 MWe (net) for each unit wide range from 10 to 60 MWe output for partial load operation possible

thermal output	2 x 90 MWth steam (at 18 bar) - optional
flue gas filter technology (maximum values adhered to)	- fly ash filter (< 20 mg / m³ dust) - desulphurisation (< 200 mg / m³ SO₂) - denitrification (< 200 mg / m³ NO_x)
grid connection	110 kV, 50 Hz
plant size	15,000 m ² (two boiler houses + ancillary facilities) 6,000 m ² (coal yard + NH ₃ / oil storage vessels)
year of commissioning / year of last retrofit	1989 commissioned
total operating hours	250,000 approx., each unit expected in 2026
last overhaul	information will be provided on request
major upgrades / events	information will be provided on request

Operating Figures

max. generation capacity	each unit: 60 MW _e (approx., at full load)
min. generation capacity	each unit: 10 MW _e (approx., at minum load)
cold start time:	information will be provided on request
fuel quality	high calorific coal blend: mix of US and Canadian hard-coal with max. 12% moisture content
fuel consumption at full load	each unit: approx. 27 t/h at full load (80 t in coal bunker last for approx. 3 full load hours) two units combined: approx. 1,200 t/day (24h) at full load:

	ash content: 8-10% ash content
fuel storage capacity	each unit: 80 t hard coal in boilerhouse bunker storage
type of cooling	water-cooled / hybrid operation: • fresh water cooling (river water) • drain cooling (river water and cooling tower) • recooling operation (closed circle)
amount of cooling water	both units: 1,750 kg/s at full load
ash disposal requirement	facilities exist in site
gypsum disposal requirement	facilities exist in site

Technical Figures of Main Components

This power unit for sale comprises two complete 60 MW steam turbines, two 80 MVA generators, related transformers and all further technical equipment.

coal handling	1x coal silo 2 x stationary belt conveyors, 200 t/h / 2.33 m/s / 11 kW each 2 x traveling feeder belts, 200 t/h / 2.33 m/s / 18 kW each
boiler	simple reheat hard coal
steam turbine	each unit: 60 MW gross capacity HP: AEG-Kanis KR50 2MAA potted turbine live steam: pressure range, min./norm./max. – 70/140/150 bar start-up pressure – 70 bar temperature range, min./norm./max. – 380/530/538 C° start-up temperature – 380C° MP/LP: VE80 standard layout live steam: pressure range, min./max. – *) / 45 bar temperature, min./max. – *) / 538 C° *) variable, according to the partial-load use

generator	each unit: 80 MVA TLRI 93/30; air-cooled, 10,5 kV output weights each: 140 t stator + 228 t rotor
water / steam cycle	complete. closed feedwater, steam and condensate system combined cooling system: river water and cooling tower
transformers	each unit: 80 MVA TLSM 7951, 10.5 >> 110.0 kV (weight 106 t) 15 MVA TSAN 7241, 10.5 >> 6.3 kV (weight 22,45 t) 15 MVA TSSN 7251, 110.0 >> 6.3 kV (weight 35,6 t)
control and communication system(s)	each unit: Siemens 8PU.011 Siemens 8BD1
Further equipment	• auxiliary power supply system • control and instrumentation systems • fuel supply and disposal systems incl. coal mills • hydrogen supply and disposal system • fresh air and flue gas ducts, incl. FD und ID fans • district heating extraction incl. pumps • cooling water system incl. pumps • circulation chemistry system, monitoring of chemical dosing, further auxiliary systems

Additional Information

spare parts	some spare parts included
documentation	original as-built documentation comprehensive operating instructions with many technical details complete maintenance records

marketing service fee	will be paid by the seller
dismantling of unit	Management and costs shall be borne by buyer; technical assistance by seller negotiable

Impressions



power house with lift gear,
power train in noise protection bonnet - steam turbine power generator set



power generator set and steam turbine (in the back)

Disclaimer:

Although the statements and technical information contained herein are believed to be materially accurate, no representation or warranty is given as to the accuracy of any of the information provided.

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