

Modern and ready for the future: our central boiler house

Since 2016, SYNTHOPOL has been operating a state-of-the-art boiler house to generate steam and heat thermal oil. It offers the option of adding further boilers and steam generators to double its current capacity in the course of future expansions. The boiler house uses natural gas as its energy source, as heating thermal oil to a temperature of up to 300 ° C requires the use of directly fired burner systems.

In everyday operation, utilisation of the boiler depends on how much heat is recovered from our thermal waste disposal unit TAR, which extracts waste heat from our exhaust gas flow to provide energy for heating thermal oil and generating steam.

In terms of both building technology and plant engineering, the main factors in designing the boiler house were high availability, maximum efficiency, robustness and adherence to applicable environmental protection standards. The entire structure is founded on a waterproof concrete shell and equipped with state-of-the-art insulation. We also designed the primary and secondary pumps for the heater and consumer circuits redundantly to increase reliability.

In day-to-day use the boiler house only supplies a small amount of additional heat to supplement the output of the TAR. The majority of the heat output required to provide steam and hot thermal oil for production can be obtained through heat recovery from thermal waste disposal. This thermal recycling process is also performed by burning natural gas, as a minimum combustion temperature of 850 ° C must be maintained at all times.

The electrical power units for the burners, pumps and fans are all load-dependently run by automated systems and driven by frequency-controlled electric machines that meet the requirements of the latest energy efficiency class.

SYNTHOPOL operates an energy management system and is DIN EN ISO 50001 certified.



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