

CASE GYPSUM BOARD FACTORY

Process industry

#processindustry #processteam
#heatrecovery

Gypsum board factory is using liquified gas in producing heat to their drying line. A significant amount of water vapor is released to the atmosphere from the process. The vapor formed a visible white cloud from the factory chimney and could be seen from far away. At the same time the local energy company was looking for ways to increase their heat production in the local district heating network.

In a meeting with Caligo experts the potential energy source was spotted, and a survey related to the heat recovery was completed by Caligo. After a while a cooperation model was found and an investment decision of CSx-SHP scrubber with two heat pumps completed.

As result of the project, the new heat recovery plant produces 6-8 MW heat in 85°C from the waste steam, directly to the district heating network. Two heat accumulators are also connected to the system and CSx-SHP is used in both directions: in loading and discharging the accumulators. Thus, an extra capacity is gained from the heat storages. Also, about 30 000 m³/year of condense water is recovered to be used in the drywall process again.

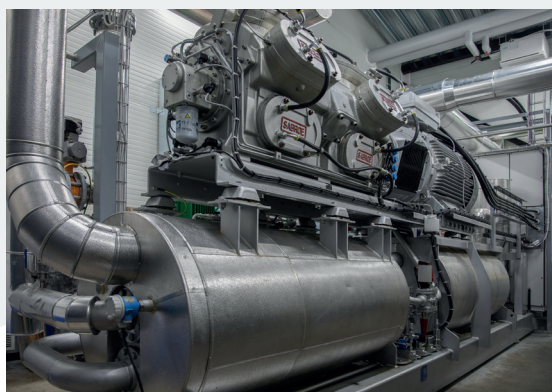
In fact, CSx-SHP scrubber is used as primary energy production for entire heating network of the nearby city during May - September. The system automation, together with the heat accumulators, also takes care of heat supply to the network during factory shut down periods (weekends, service etc.) despite the main production interruption during the year.

COP value of the heat recovery system is >10. Payback time of the investment is 2–3 years. A new delivery of CSx scrubber to the same client is confirmed.

Caligo scrubbers, with or without integrated heat pump, are delivered always as factory tested Plug and Play units, including all HW&SW needed to autonomous running of the unit. Site time during installation of CSx is only a few days.

BENEFITS

Capacity increase
Emission reduction
Energy efficiency
Fuel saving
Postponing boiler investment
Recovering of waste heat



Caligo Industria Oy is a Finnish CleanTech company, who markets and sells product and system solutions for energy recovery and purification of flue gases in the energy and processing sectors as well as for the utilisation of waste heat from the processes. Caligo is a part of Swedish Addtech Group.

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