

Waste heat recovery for chocolate cooling at a leading confectionery company



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Project Overview

Thermax Profetherm bagged an order for a 660 TR (2317 kW) exhaust gas driven absorption chillers for a leading confectionery company in Nigeria. This absorption chiller provided process cooling and air-conditioning using heat recovery from a 3.7 MW gas engine.

Project Description

Our client faced a major problem of unavailability of reliable power supply and so it set up its own captive power grid with a 3.7 MW engine to meet its requirement of reliable and continuous power supply. With the increase in its production capacity there was a need for additional cooling requirement for process cooling and air-conditioning. The client had an existing gas engine and the exhaust from this engine was liberated in the atmosphere without any recovery, hence Thermax Profetherm offered the client to recover this waste heat from the exhaust of the gas engine. The project involves the supply of exhaust gas driven chiller for process cooling and air-conditioning applications. The vapour absorption machine generates chilled water at 6°C which is used in process cooling and air-conditioning applications at the plant. For continuous cooling even if the engine is not working the chiller is provided with 100% backup direct fuel firing.

Industry: Food Industry

Project Snapshot

Location: Lagos, Nigeria

Total Capacity: 660 TR (2317 kW)

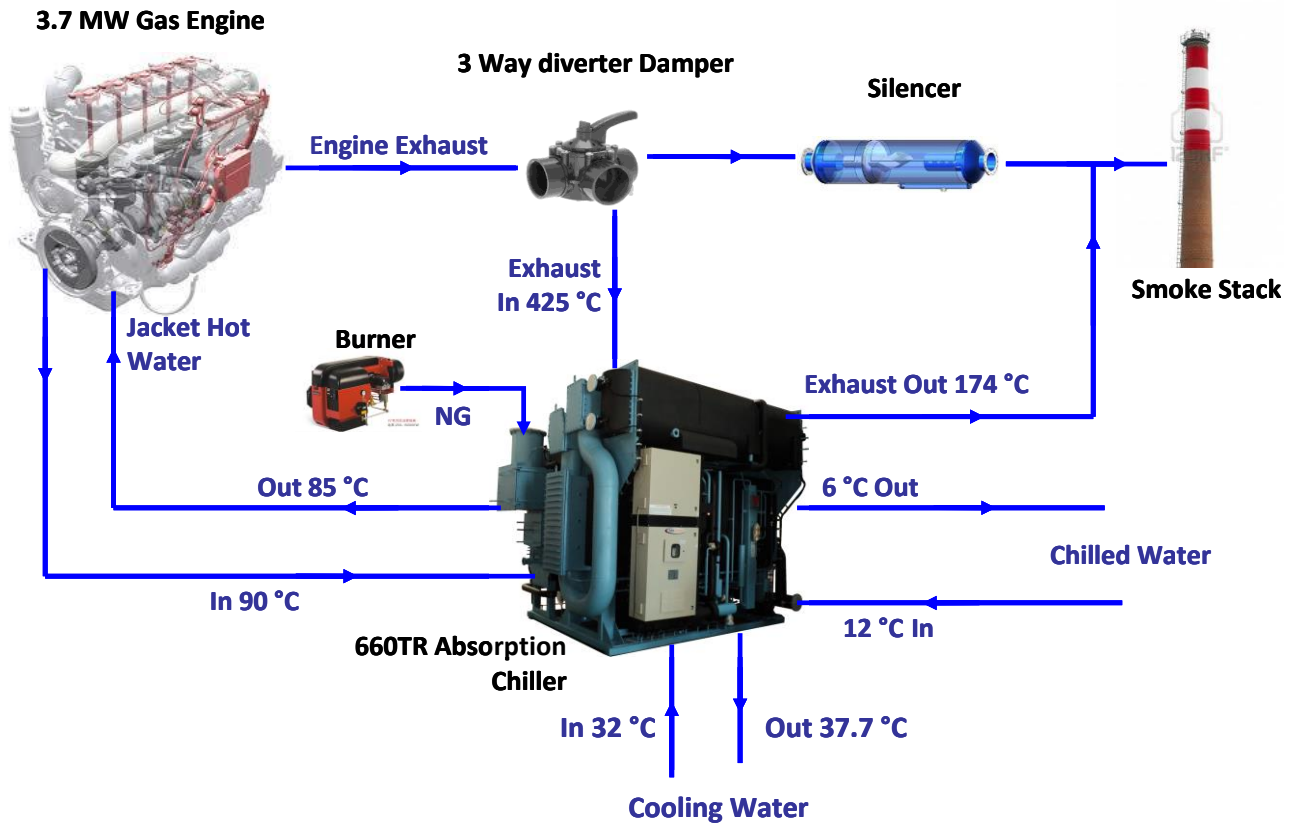
Application: Process cooling and air-conditioning

Heat Source: Exhaust + Jacket water + Direct fuel Fired Chiller

Carbon emission saving: 2400 Tons /annum (In/Out)

Highlights

- Thermax helped the client make optimum utilization of the waste heat from the engine exhaust.
- There were savings made in energy consumption and in operational costs.
- The installation of our vapour absorption chiller helped the client make 2400 tons of carbon dioxide (CO₂) reduction which is equivalent to planting of 129,514 trees per annum.



400 TR Exhaust & Jacket water + 260 TR Direct fuel Fired