

ABS ACCIAIERIE
UDINE, ITALY

01 CLIENT BRIEF

The client, Danieli Environment, is the division of Danieli specialized in the environmental protection offering proprietary technologies for water treatment, air pollution control, energy saving, and more. The final user is ABS Acciaierie, a steel mill plant located in the North of Italy.


The client was looking for ways to improve the energy efficiency of the final user as well as reducing the impact on the environment of the plant.

02 THE SOLUTION

EXERGY's solution was the installation of the ORC system for waste heat recovery with EXERGY's Radial Outflow Turbine. The ORC system is applied to the electric arc furnace (EAF) and, by exploiting the hot waste gas generated by the steel mill, it produces 1 MWe.

03 THE RESULT

The client is able to recover the maximum amount of energy, thus increasing the electric efficiency of the installation and saving 1,500 tons of oil equivalent per year.

 See the ABS video case study at <https://youtu.be/anVagxrkTSA>

CLIENT NAME	DANIELI ENVIRONMENT
PLANT NAME	ABS ACCIAIERIE
PLANT LOCATION	POZZUOLI DEL FRIULI (UD), ITALY
DATE OF IMPLEMENTATION	SEPTEMBER 2014
PRODUCTION LINE CAPACITY	100 TON/CYCLE
APPLICATION	HEAT RECOVERY (STEEL MILL)
MODEL USED	EPSd110
FLOW OF PRESSURIZED WATER	250 t/h
TEMPERATURE OF PRESSURIZED WATER	200°C
ELECTRICAL GENERATION GROSS	926 kWe
OUTLET TEMPERATURE OF PRESSURIZED WATER	180°C
EFFICIENCY GROSS	16.8 %
CONDENSING SYSTEM	COOLING WATER FROM COOLING TOWERS (28°C)
GENERATOR VOLTAGE	LV
INSTALLATION	OUTDOOR