

WASTE HEAT RECOVERY PROJECT WITH ORC BEEN AWARDED TO CTP ITALY

After the first two successful WHR projects in Turkey, CTP Team brings energy saving to Secil-Outão Cement plant

August 2020 - CTP Team Italy signed a turnkey EPC contract with Secil Group for a new Waste Heat Recovery System for Outão Cement factory, Portugal. The project consists of several new developments to provide a highly customized solution to feed a double-loop system (thermal oil + Organic), to recover waste heat and produce electricity from three different sources: kiln pre-heater and clinker cooler of the existing 4000 TPD cement unit N°9 and a new solar field, that SECIL will install nearby the production line.

The new heat exchangers by CTP will recover up to 29MW of waste heat to feed a new ORC equipped with a state-of-the-art axial turbine of 7,2MW by Turboden. The new WHR is expected to generate approximately 50 million of kWh per year, covering more than 30% of the current plant's electricity needs. The first kW generation is scheduled for the second half of 2022.

From an environment point of view, the new WHR system alone will drastically reduce the carbon footprint of cement plant by a total of 14.000 ton per year of equivalent CO₂. In addition, the system provided by CTP is totally water free, without any need to treat residual waters from the process.

The WHR system is fully automatic and drastically reduces the need of physical presence of operators during the daily operation. Thanks to this specific advantage of organic cycles and to the total absence of water treatments in the process, the OPEX is reduced lower by 75% respect in comparison to an equivalent WHR based on traditional Steam Rankine cycle and with the added advantage that the plant can run autonomously from remote even in problematic situations like those that we are living in these days.

The WHR Project is part of the major R&D Clean Cement Line Project (CCL Project) that Group SECIL is undertaking at its Outão cement plant in Portugal. The CCL Project, aims to bring the Outão cement plant to the forefront of energy efficiency and lowest CO₂ emissions among the European cement producers, and CCL Project is partly funded by the Portugal 2020 Government incentives program.

About CTP Team Italy

CTP is a leading engineering and manufacturing Company with 50 years of experience in components to Cement Plants for their EP & EPC projects, in the field of Dust Collectors, Filtration & their equipments, Chemical Treatments, Heat Exchangers and Waste Heat Recovery (WHR).

CTP is able to design different type of customized installations to meet Customer's needs and expectations, with strong understanding of cement production process and relative equipment. In addition to headquarter in Milan, Italy, through its manufacturing workshop located in Turkey with the team up to 140 people, CTP can ensure to all its customers a continuous assistance, with local manufacturing workshop and presence the qualified teams that can operate in emergency during the full life of the plant.



Office CTP Team Italy

Ctp Team headquarter is located in the north of Italy in Kilometro Rosso Innovation district , one of the leading private hub for innovation in Europe. Visit our website to know more www.ctp.mi.it