

Case Study

Industrial Energy Efficiency

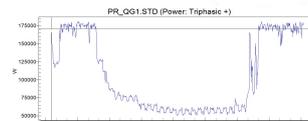
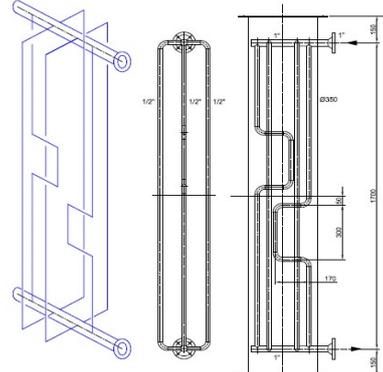
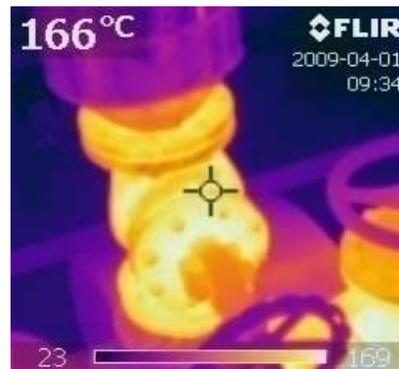
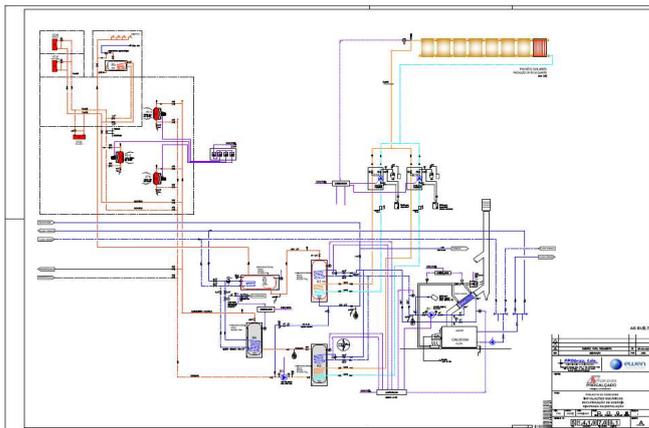


Sector: <input checked="" type="checkbox"/> Industry	<input type="checkbox"/> Large Buildings	<input type="checkbox"/> Infraestruturas	<input type="checkbox"/> Small buildings / residential
Subsector: Injection of rubber soles for shoes	Year: 2010		
Client: Procalçado	Implementation (months): 11		
Location: Vila Nova de Gaia (Portugal)	Performance Contract (years): N/A		
Type of Contract: Lump-Sum contract with pay-back guarantee by EWEN			

Project description:

After a detailed and comprehensive energy audit performed by EWEN, a horizontal energy efficiency project was defined, including energy measure in several sectors of the plant, including:

- » Painting sector - Strengthening of the water heating system, and the ambient heating system, by using heat recovered from the boiler exhaust gases;
- » Rubber mixing sector - Motor flux controllers were installed (90 to 150kW);
- » Water heating (for bathing) - An electric heater was substituted with a heat accumulator, using solely heat from the boiler exhaust gases;
- » PV solar energy - Solar PV panels (3kWe) were installed. The energy is sold to the grid;
- » Solar thermal energy - 8 solar panels were installed, to pre-heat the water for bathing and for ambient heating;
- » Thermal insulation - Flexible thermal insulation was installed in thermo-fluid uninsulated valves (240°C);
- » Rede de ar comprimido - Auditoria dedicada com identificação de fugas e recomendação de medidas correctivas;
- » Sistema de Gestão de Energia - Foi instalado um sistema RMS (Remote Monitoring System) da EWEN, para gestão dos consumos de energia eléctrica e alocação dos custos às unidades consumidoras.



Project results:

Procalçado's specific energy consumption was significantly reduced (+15%).

The RMS (Remote Monitoring / Energy Management System) installed by EWEN, is used to control specific energy consumptions in each sector, helping to identify energy wastage and opportunities for new savings, and is also used to check / validate the energy invoices from the power supplier. Procalçado adopted dynamic electric energy tariff, which also contributed to further energy costs reductions.

Apart from the implementation of several energy efficiency projects, a new energy efficiency conscious culture was created in the company, motivating all workers to contribute with ideas for new saving opportunities.