In recent years there has been an increased interest in the provision of energy services to achieve energy and environmental goals. That is why many companies are looking for energy services providers, including the supply, commissioning and installations of energy efficient technologies. Dominion provides those energy services developing projects to optimize the use of energy at industrial plants through the implementation of solutions designed to improve plant energy balance, achieving a real reduction in the energy cost per production unit and a decreasing level of emissions.

Dominion energy efficiency projects main features are:

• Comprehensive project management, including supply, installation and commissioning.

• Monitoring and analysis system for industrial plants.

• Our projects include solutions to improve existing thermal systems and processes.

• Furnaces, boilers and dryers performance optimization: Energy balance analysis, combustion engineering, heat recovery, thermal insulation.

• Integration of waste heat recovery technologies from different heat sources (solids, gases, liquids), to get back additional heat/cold to the process and electrical energy for the plant.

• Integrated programmable automation and motion control.

• Auxiliary Services Optimization: Compressed air network, cooling systems, air quality monitoring and water treatment plant.

Designed for different Industrial sectors where energy or heat is extensively used or where exothermic processes can be found:

* Chemical and petrochemical sectors. Oil and gas sector.

* Cement and lime, Ceramic, Glass, Paper, Wood.

* Metallurgic Sector: steel & iron, aluminum, non-ferrous metal industries.

* Thermoelectric plants (Biomass, Waste to Energy, Biodiesel, Biogas, Thermosolar), increasing electrical generation from detected waste heat.

* Agri-food.

Approximately 50% of energy is lost during production processes as waste heat: gases, cooling liquids, manufactured products and in the equipment.
SOME CUSTOMERS

- INYECTAMETAL
- SIDERPERU
- EXALMAR FISHERY
- PEMSA
- FERROSER
- UNACEM CEMENT
- CLECE

REFERENCE

CUSTOMER - CIE Inyectametal
LOCATION - Spain, Basque Country
PROJECT - Energy global optimization in aluminum plant, including core systems as smelting furnaces, injection presses, compressed air, and auxiliary services (heating and air system, etc). The technologies involved are energy and production monitoring, furnace optimization service, waste heat recovery project, electrical control, pressure control.

INSTALLATION - Aprox. 50 systems included in the monitoring and optimization project.

COMPLETION - 12 months with a payback period of 1.5 years.

TECHNOLOGIES:

ENERGY MONITORING

PRO-EFFICIENCY is an energy consumption management, monitoring and analysis system for industrial plants. The system integrates energy consumption data (electricity, gas, compressed air, water, fuel) and data from different production systems (SCADA, ERP, etc.). It features analysis algorithms which improve the efficiency of production processes in terms of energy and therefore reducing manufacturing costs.

HEAT USE OPTIMIZATION AND WASTE HEAT RECOVERY

The waste heat is one of the main concerns and challenge in industry. Dominion carries out projects updating and improving existing thermal systems at the plant (furnaces, boilers, exchange systems, dryers, ducting). Review, identification and estimation of plant waste heat and deployment of projects designed to achieve reduced payback, based on the selection of “cost-effective” thermal applications and innovative technologies (ORC, WST Screw Expander, Flue Gas condenser, Microturbine, etc.) that provide for the generation of high rating energy from identified waste heat sources.

FURNACE OPTIMIZATION SERVICE

Dominion develops innovative industrial furnace solutions. Furnace optimization service of Dominion quantifies the current use of energy and gives an approach of the performance improvement in industrial heating equipment such as furnaces, boilers and dryers.

Dominion field service technicians conduct in-depth equipment analysis and identify the problems that cost production time, output and energy consumption. Our diagnostic studies result in long-term solutions that significantly reduce costs while increasing productivity, efficiency and furnace life.

ELECTRICAL CONTROL

Integrated programmable automation and motion control for medium and low voltage applications.

COMPRESSED AIR NETWORK GLOBAL OPTIMIZATION AND RETROFIT

Applying best energy management practices and appropriate energy-efficient equipment can lead to significant savings in compressed air systems.

Projects developed by Dominion cover the study of all components from the system including the operation of the elements oriented to air generation (compressor, dryer), distribution network analysis (sectorization, leak detection), and analysis of the current and effective use (regulation elements, energy recovery and efficiency points).

AIR AND FLUE-GAS SYSTEMS QUALITY MONITORING SYSTEM

Dominion carries out projects over air quality monitoring systems in order to design and Assembly of CEMS platforms (Continuous Emissions Monitoring System) and inmission cabinets for measuring devices for a real time monitoring.

WATER TREATMENT PLANT

Dominion leads projects about deployment of the water treatment systems including design, supply and monitoring, filtering and re-use of process water.