

CLIENT CASE STUDY

ArcelorMittal: €340K saved in one year thanks to energy optimization

Annual energy bill: €16 million

Scope: rolling mill auxiliaries

Products: forged steel plates, ingots and formed parts

| An energy saving issue

ArcelorMittal, a world leader in the steel industry, **wanted to improve the energy management** of a steel plant in France. Until that time, energy consumption was analyzed manually using Microsoft Excel. But corrective actions were implemented late and often postponed until the end of the month.

Additionally, only two criteria were taken into account in the linear regression estimation model (tonnage and setpoint temperature), whereas **many other factors can have a direct impact on consumption.**

Digital transformation to improve energy management

To optimize its energy management, **ArcelorMittal has opted for the METRON-EVA® Factory solution. The objectives?** To be able to monitor its energy consumption and flows continuously and in real time but also to benefit from automated reporting. First phase: **data collection.**



More than 3,000 data items per second from 7 OPC (Open Platform Communications) servers and other databases (internal and external) were aggregated and stored in the METRON platform. This information was used by Data Science algorithms to **consider all the influencing factors of the furnace used in the plant:** the tonnage and the set temperature, as well as the type of heat treatment used, the size of the products produced, the heating time and the temperature control method, etc.

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Detect gaps in real time

Before the METRON solution was used, it took 5 man-days to analyze the situation in a given scope. Thanks to the platform's computing power, ArcelorMittal can now monitor energy flows in real time and, what's more, over a much broader scope.

In addition, METRON's strength lies in the expertise of its Data Science engineers, who are able to **calculate reference models**, commonly called baselines. These are used to accurately compare actual and theoretical

consumption.

Thanks to these baselines, plant operators can **receive alerts as soon as a deviation in consumption is detected.** This allows for immediate corrective actions to be taken.

When ArcelorMittal's operators were informed of a consumption deviation on a reheating furnace, they noticed that a piece of metal had damaged the doors. Without this real-time control, the overconsumption would have continued, with a risk of damage

to the facility.

The **detection of consumption anomalies in the plant** has also enabled ArcelorMittal to refine certain operating procedures and to improve the training of its operators.

Results: in one year, ArcelorMittal was able to save

€340K

simply by optimizing energy management in the plant.





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of the webinar

Towards a more resilient industry

The roll-out of the METRON-EVA® Factory energy intelligence platform, combined with close collaboration between METRON energy experts and ArcelorMittal's operational teams, has made it possible for this plant to reduce the energy budget and the working time of its operators, with the same consumption. A saving of €340K in 12 months.

This project has enabled ArcelorMittal to **develop an energy performance strategy on two levels**. On the one hand, the company was able to create numerous dashboards with customized indicators for each operator in order to obtain rapid and satisfactory overall results. On the other hand, it has been able to establish an energy performance culture within the plant, which will have a **major impact in the long term**.

But this first phase is only the beginning of the project. We are now working on optimizing energy consumption in more specific areas in order to **build a more resilient industry together**.

The METRON solution

To reduce energy costs and the carbon footprint of industrial companies, METRON, a French CleanTech expert in energy efficiency, has designed and developed a platform based on the **digital transformation of sites** in order to monitor and optimize their consumption in real time. The result: a reduction in manufacturers' energy costs thanks to the application of these optimization suggestions.

This energy performance improvement solution **leverages existing data sources** to help companies adapt to a constantly changing environment.

Do you want to optimize
your energy performance?

CONTACT A METRON EXPERT