

## **Best Practices for Energy Management in the Steel Industry Facing Decarbonisation\***

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### **Abstract**

Decarbonising steel sector constitutes a global challenge in the context of regulatory constraints aimed at reducing carbon emissions or even achieving carbon neutrality by the end of 2050. Many solutions are currently being implemented and tested in the industry, but the problem of achieving the carbon target remains complex and difficult. This paper presents the best practices focused on energy management in the steel industry in the face of decarbonisation. Among the potential directions for decarbonising the steel industry, the following are mentioned in particular: using green hydrogen instead of coal, renewable energy sources, and the energy management of post-process gases. It is likely that no single option or technology will be the best or only solution, but a combination of breakthrough technologies should be developed and implemented to address the increasing energy consumption and CO<sub>2</sub> emissions in the iron and steel industry.

**Keywords:** energy management, green steel, decarbonisation, steel industry, greenhouse gases