



Lowest emissions  
Highest ambitions



CASE STUDY

# DECADES OF ULTRA-LOW EMISSIONS

## **New ESPs and upgrades drive performance for Bahrain Steel**

**Bahrain Steel is a leader in the production of the world's best-quality iron ore pellets for direct reduction and blast furnace steelmaking. Located in the heart of the Persian Gulf, Bahrain Steel and its twin plants have a combined capacity of 12 million tons of pellets, making it a major contributor to the growth of the steel industry.**

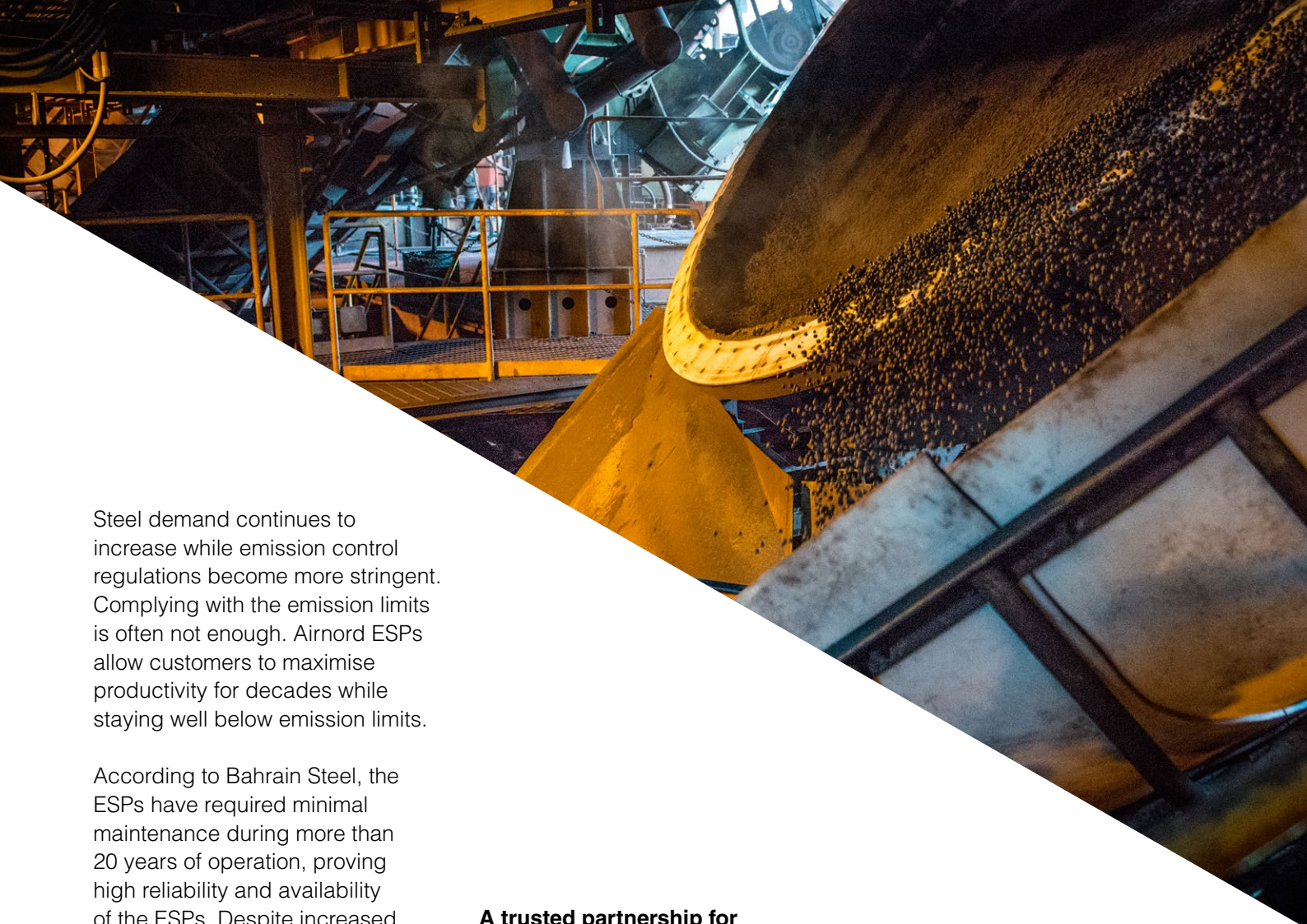
### **Setting the benchmark for pellet production**

Bahrain Steel more than satisfies international standards for environmental control and safety, with Airnord (beginning when it operated under its former name of FLSmidth Airtech) playing a key role in achieving consistently low emissions and high productivity. By using an Airnord Electrostatic Precipitator (ESP), Bahrain Steel has reduced particulate emission from steel production to well below 3 mg/Nm<sup>3</sup>.

### **Increasing production without compromising performance**

Despite the ESP installation being over 20 years old, Bahrain Steel has successfully increased its production by 15-20%, while maintaining high ESP availability and low emissions. This remarkable accomplishment is attributed to the superior design of the ESP and the close collaboration between Bahrain Steel and Airnord for the service, maintenance, and upgrade of the ESP installation.

Airnord ESPs offer trouble-free dust emission control for a wide range of industries, including iron and steel, metallurgical, pulp production and cement. Our experience and know-how allow us to create optimally efficient ESPs while complying with the strictest dust emission regulations. Our proven solutions often outperform competition in emission removal efficiency, reliability, availability, Total Cost of Ownership, and Operational Expenditure.



Steel demand continues to increase while emission control regulations become more stringent. Complying with the emission limits is often not enough. Airnord ESPs allow customers to maximise productivity for decades while staying well below emission limits.

According to Bahrain Steel, the ESPs have required minimal maintenance during more than 20 years of operation, proving high reliability and availability of the ESPs. Despite increased production, the ESP footprint has remained unchanged.

### **Continuous upgrades to secure long-term reliability**

Airnord has recently upgraded one of the ESPs by replacing existing power supplies with new 3-phase transformer-rectifiers, and installing a new PIACS® DC4 ESP controller. Due to the high proven benefits, Bahrain Steel has decided to do the same in the other ESPs, all in collaboration with Airnord.

Bahrain Steel appreciates Airnord's commitment to continuously support and provide the expert recommendations that enable maximum plant productivity for many years, while more than satisfying international emission standards.

### **A trusted partnership for future-ready emission control**

At Airnord we're proud of the results we create together with our customers. Through strong customer relationships and continuous product development, we deliver technology and upgrades that allow customers to increase their production while exceeding performance expectation – and that comply with even the strictest emission standards.

For Bahrain Steel's high-demand pelletiser plant, selecting the right ESP supplier was about more than meeting environmental commitments and emission limits. They needed a globally trusted partner who could ensure maximum production reliability and uptime.

“Airnord has been a valuable partner enabling us to increase production and efficiency while staying well below emission limits, thanks to close collaboration and strong technical solutions to prolong the life of the existing ESP installation.”

– P. M Edwin,  
Group CTO Bahrain Steel

[FIND OUT MORE ABOUT THE PRODUCT AT WWW.AIRNORD.COM](http://WWW.AIRNORD.COM)

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