حديد الإمارات أركان
emirates steel arkan

Sustainable Sheet Piles:

Pioneering Green Solutions

www.emiratessteelarkan.com

Committed to creating a sustainable future for the steel industry

At Emirates Steel Arkan (ESA) we believe that accelerating the transition to a low-carbon economy is crucial to achieving the steel industry's decarbonization goals.

We are actively reducing the climate and environmental impact of our industry across **5 pillars:**

- Fostering integration to the circular economy
- Maximizing energy efficiency
- Accelerating adoption of clean energy & hydrogen
- Enhancing value chain sustainability
- Harnessing innovation

CO_2 40%

Our production process produces 40% less carbon* than our peers, driven by a range of decarbonization initiatives and spearheaded by the utilisation of a carbon capture facility, the use of scrap and clean energy in our production process.

CO_2

Our commitment to a greener future fuels our comprehensive decarbonization strategy. As sustainability pioneers, we have led the way in becoming the first steel company worldwide to capture carbon emissions at an industrial scale. This remarkable achievement enables us to annually capture up to 800,000 tons of CO_2 – equivalent to removing emissions from 170,000 cars.

*Engie Impact Benchmarking Study

Our relentless pursuit of progress in decarbonizing has led us to a significant milestone –80% of our total electricity consumption is now derived from clean sources, powering our innovative Green Steel products predominantly with clean energy.

As a fron-trunner in sustainability, we hold ourselves accountable for safeguarding our planet and environment.

Our dedication to sustainable steel production processes plays a pivotal role in combatting climate change.

Emirates Steel Arkan is dedicated to meaningful environmental initiatives aimed at reducing our steel products' carbon footprint and fostering a circular economy.

Through state-of-the-art technologies and smart digital solutions we continually enhance energy efficiency and work to mitigate emissions.

Moreover, we emphasize clean electricity use and repurpose scrap and slag as raw materials for steel and building materials production, further advancing our sustainability goals.

Our Sustainable Sheet Piles:

Ultra Low CO_2 Emissions

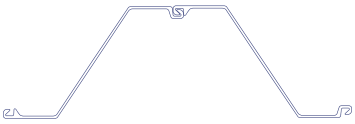
Emirates Steel Arkan's Sustainable Sheet Pile product range represents a brand that epitomizes sustainability, featuring a low carbon intensity of steel produced. Through this innovative product, **Emirates Steel Arkan** is taking the lead in spearheading the global journey toward sustainability.

Our Sustainable Sheet Piles leverage the Electric Arc Furnace (EAF) production process, in conjunction with clean electricity, CCUS integration, and the strategic reuse of scrap and slag. This EAF route enables us to manufacture steel with a reported Global Warming Potential (cradle-to-gate A1 - A3, corresponding to Scope 1, Scope 2, and Scope 3 - upstream) of just **350 kg** CO_2 per tonne of steel produced. This figure is significantly lower than the industry average of approximately 1910 kg* CO_2 per tonne of primary steel produced within the global steel industry.

Our commitment to transparency is underscored «Cradle-to-Gate» life-cycle analysis, rigorously **reviewed and endorsed by an independent carbon auditor in accordance with ISO 14025 and EN 15804 standards.** Increased scrap charging, carbon capture and verified clean and renewable energy sources further enhance the credibility of our analysis.

Our sustainable steel manufacturing aligns with the UN's Sustainable Development Goals. By prioritizing climate action, responsible consumption and production, and fostering partnerships, we make a meaningful contribution to the global pursuit of a better tomorrow.

*2021 World Steel Association data



Sheet Piles Range

ESZ18-700

Netherlands Expo 2020 Dubai Pavilion

Dubai, United Arab Emirates

Project Details

• **The Netherlands Pavilion for the EXPO 2020** was designed with sustainability and circularity in mind, as it was a temporary structure intended to stand for only six months.

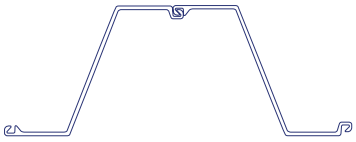
• It was constructed without the use of any concrete, even for the foundations; only our sheet pile was employed. The structure incorporated innovative engineering to establish a "closed-loop" biotope, generating its own energy, water, and even food.

• The sheet piles and steel tubes used in the pavilion's construction reached lengths of up to 18 meters, and the roof was composed of large metal tubes bound together into panels.

• The pavilion **won 10 awards,** with the **"Sustainable Construction Project of the Year"** being the most prominent.

• Our specific sheet piles, **ESZ18-700**, were utilized in this project. We provided design engineering, technical support and fabrication works.

• On the conclusion EXPO, all the steel recovered and re-sold.



Sheet Piles Range

ESZ36-700 & ESZ19-700

Mina Al Hamriya

Dubai, United Arab Emirates

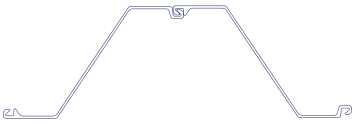
Project Details

• **DP World's Mina Al Hamriya** thrives as a port for traditional boats and medium-sized vessels, pivotal for connecting businesses across the emirate and beyond.

• The Port manages diverse cargo exports to the Arabian Gulf, East Africa, India, and Pakistan.

• Recognizing global trade dynamics, Mina Al Hamriya expanded its facilities to meet customer demands. This offers diverse cargo services via RORO vessels, GC vessels, containers, dhows, and more.

• By offering value engineering, technical support and just-in-time delivery, Emirates Steel successfully supplied **ESZ36-700 & ESZ19-700 sheet piles** for the construction of the new quay wall.



Sheet Piles Range

ESZ36-700

Sladdens Pier Port

Lowestoft, UK

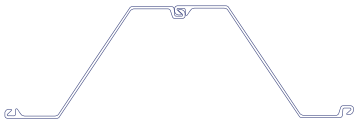
Project Details

• **Associated British Ports (ABP) Sladden Pier in the Port of Lowestoft** is over 100 years old and provides protection for the Trawl Dock.

• In order to protect both the strucutre and the Trawl Dock, construction of a new quay wall in front of the offshore face of Sladedens Pier was required.

• This provided ABP with security and longevity of the structure.

• In total 815Te of Emirates Steel **ESZ36-700 sheet piles** up to 24.0m long were supplied for the construction of the new quay wall.



Sheet Piles Range

ESZ19-700

Major Irrigation and Flood Management Project

West Bengal, India

Project Details

- The project aimed to optimize the joint use of surface and groundwater for **agriculture and to reduce flooding.**

- It improved irrigation and agriculture in the Damodar Valley Command Area and reduced flooding in the Lower Damodar subbasin area.

- Projects main five components: irrigation modernization, water resources management, command area development, project management, and institutional development.

- The technical design was based on **ESZ19-700** sheet piles.

حديد الإمارات أركان
emirates steel arkan

Contact us
for more details

sales@emiratessteel.com
+971 02 507 2286 / 2112 / 2811