

Electric arc furnace (EAF) steelmaking and the circular economy

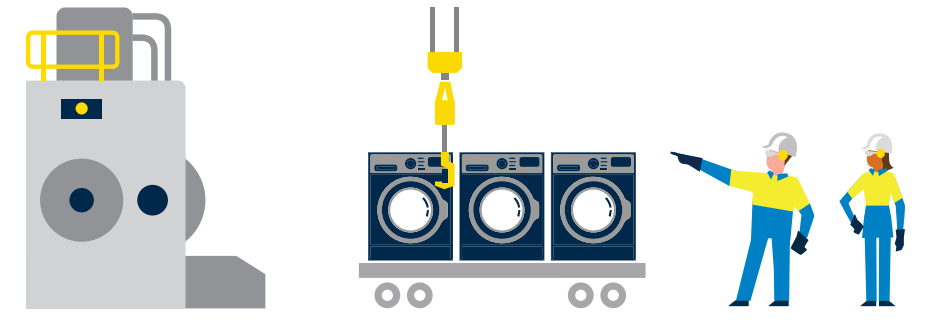
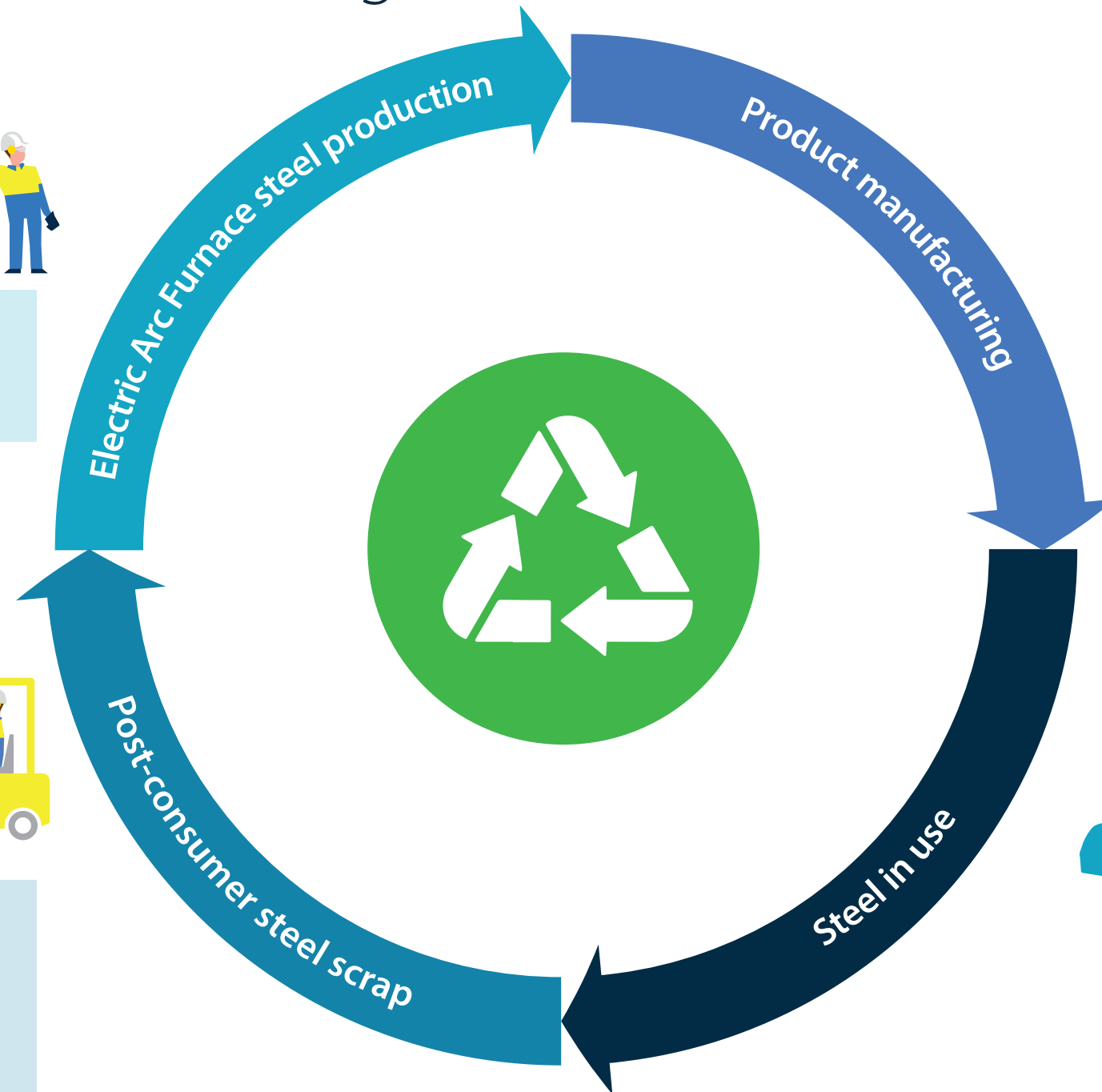


Through EAF steel production, new steel can be made with scrap steel. This significantly reduces energy use and the reliance on raw materials. Each item of recycled steel saves one and half times its weight in CO₂.



Steel's magnetic properties makes it easy to sort from waste, enabling high recovery rates and avoiding landfills. The UK has an abundance of steel scrap that can be used to make new steel. The sorting process also recovers other elements, such as copper, which can in turn contribute to circularity in their own supply chains.

To enhance durability, steel is often coated in zinc. The EAF is not only excellent at recycling steel, but also very efficient in recovering zinc which is then returned to its own circular supply chain.



Once produced, recycled steel is readily used for cars, buildings, domestic appliances and thousands of other applications. Following production, leftover steel scrap can be used to make more new steel. Each tonne of steel recycled saves over twice its weight in raw materials.



Steel is 100% recyclable, can be reused infinitely and will play a critical role at the heart of a future sustainable green economy. Steel is vital in modern modular construction methods facilitating the reuse of components and Tata Steel UK is already playing a leading role in this area with many more solutions in development.