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Refractory solutions for the transformation to Green Steel production – solving challenges due to new furnace designs and complex raw material demands for minimum conversion costs and high productivity.

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The ongoing transformation of steel production to Green Steel making is a demanding and collaborative effort involving various stakeholders, including steel producers, Original Equipment Manufacturers (OEMs) and technology providers to overcome technical and economic challenges. For example, the upscaling of Electric Arc Furnaces (EAF) with tapping weights exceeding 250 tonnes and more complex raw material supply from steel scrap to DRI and HM necessitate additional systems to enhance process efficiency, as automatic maintenance systems or inert gas stirring. New DRI smelter furnaces require entirely new lining designs. The application of H2 gases provides new challenges to furnace linings. Refractory materials and solutions are pivotal in ensuring the efficiency, sustainability, and economic viability of EAF and continuous electrical smelting aggregate operations, playing an essential role in the green steel transformation. This paper outlines the roadmap, opportunities, case studies and benchmarks for the respective EAF and continuous electrical smelting aggregates.

Speaker Country

Austria

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