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Acciaieria Arvedi issues final acceptance certificate for electric arc furnace from Primetals Technologies

- **Production capacity up to 1.4 million metric tons per annum**
- **Integrated dedusting and heat recovery system improve environmental balance**
- **Commissioned in just 31 days, two weeks before the agreed deadline**

Acciaieria Arvedi S.p.A., an Italian steel producer, has issued Primetals Technologies the final acceptance certificate for a new electric arc furnace. The furnace was installed in the Cremona Steel Works. The production capacity is 1.4 million metric tons of crude steel per annum. The order also included a dedusting system for primary and auxiliary dedusting, and for supplementary extraction points. This is combined with a heat recovery system, which uses the thermal energy in the furnace offgases to generate steam, which is then used in the works' three pickling plants.

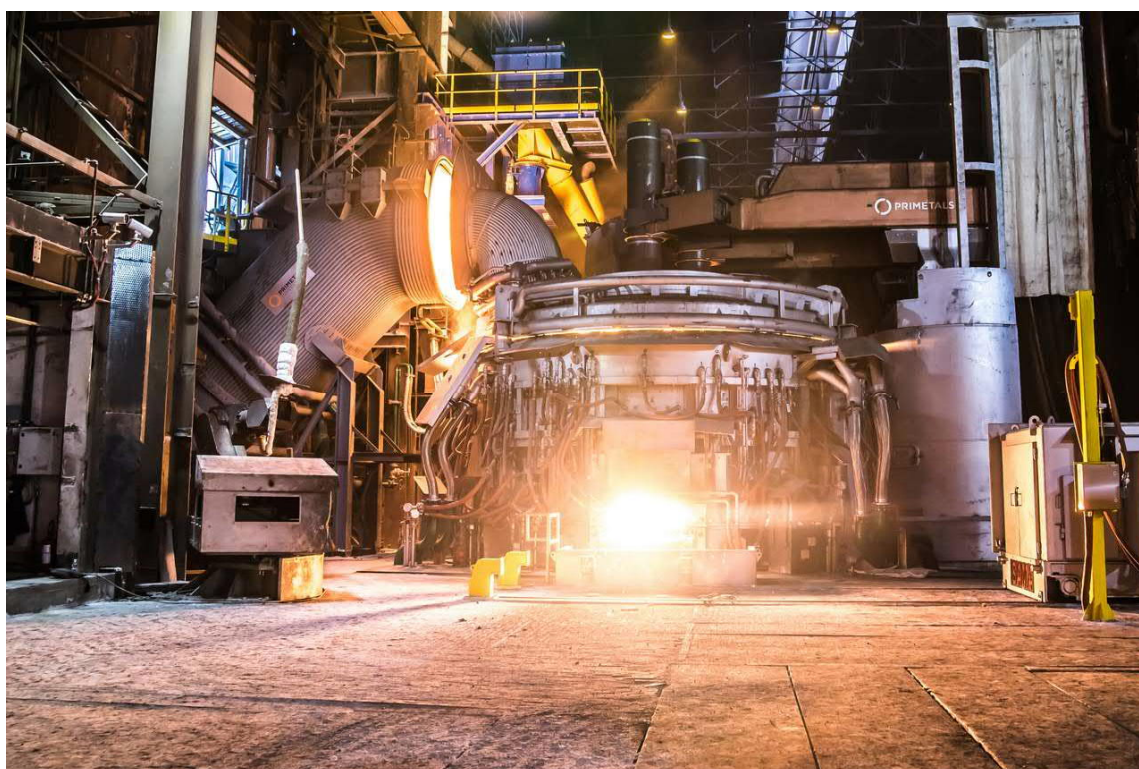
The new 150-ton electric arc furnace from Primetals Technologies increases the production capacity of Acciaieria Arvedi, and reduces conversion costs. The tap-to-tap time is just 36 minutes and is supported by single bucket operation. This enables around 200 metric tons of crude steel to be produced each hour. The electricity requirement of the furnace lies between 340 and 350 kilowatt hours per metric ton. The necessary energy is provided via a transformer with a power of 155 MVA. The furnace is usually charged with a mixture of 65 percent scrap iron, 25 percent pig iron and 10 percent HBI (hot-briquetted iron). The scope of delivery also included five refining combined burner (RCB) systems, burners for post-combustion, a newly developed electrode control system (Melt Expert), the FluidGuard system - a comprehensive water leakage control system, and a new type of automatic tap hole filling. This increases safety as no personnel need to be near the furnace. Primetals Technologies also supplied a level 2 process optimization system, well prepared for Industry 4.0.

An existing dedusting system was modified for the new electric arc furnace. The total extraction volume has been increased by installing an additional filter for both auxiliary and supplementary extraction points on the new electric arc furnace. The dedusting system meets the strictest European environmental

requirements, as it achieves residual dust contents of less than five milligrams per standard cubic meter of air.

To optimize the energy balance of the plant, the waste heat from the electric arc furnace is recovered and is used to generate steam. Some 17 tons of steam are generated per hour from the energy recovered from the waste heat. This steam is used for the three pickling lines in the steel works. The energy recovery system replaces the existing gas boiler in the steel works, thereby reducing gas consumption and thus energy costs.

Acciaieria Arvedi S.p.A. is part of the Arvedi Group based in Cremona, Italy. The works has two production lines for flat products. In addition to the steel works for the production of liquid steel, there are two casting-rolling lines in operation. One of these lines uses the innovative Arvedi ESP (endless strip production) process and was realized in collaboration with Primetals Technologies. Production is mainly concentrated on special steels, in particular high-strength steels and dual-phase steel (DP), as well as thin and ultra-thin sheet metal, which can replace cold-rolled products in many applications.



Electric arc furnace from Primetals Technologies at the Acciaieria Arvedi plant in Cremona, Italy.

This press release and a press photo are available at

www.primetals.com/press/

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