



EAF AC PROVEN TECHNOLOGY – HIGH PRODUCTIVITY

Based on decades of experience in designing electric arc furnaces, Primetals Technologies offers steel producers a broad range of powerful options for high-performance electric steelmaking.

This includes EAFs of all sizes and types, twin-shell furnaces, and shaft furnaces in addition to all related processes, automation, and environmental systems. The AC EAF from Primetals Technologies is the ideal melting unit for the production of all types of steel, from standard carbon grades to high-alloyed and stainless steel grades. Its overall furnace performance can be further enhanced with the latest oxygen and carbon injection technologies. Twin-shell EAFs are a highly attractive solution for increasing a plant's productivity, especially when the lifting and loading capacities of existing cranes and other infrastructural limitations do not allow an increase in the tapping weight. Poweroff times can be reduced to less than three minutes.

FEATURES

- Gantry design for self-supporting furnace roof
- Prismatic roller guide system for electrode masts
- High-current conducting electrode arms in copper-clad box design
- State-of-the-art electrode control system
- Split-shell design
- Copper or combi-panels with high-speed cooling water flow
- Oxygen and carbon injection
- All bottom tapping systems (EBT, EO-EBT, RBT, OBT)
- Special hot-metal charging facilities
- Continuous DRI/HBI feeding systems
- DRI fines and dust injection



Hadeed, Saudi Arabia, 150-t AC EAF

SELECTED REFERENCES

- Hadeed – Saudi Iron and Steel Company, Saudi Arabia
- NSIF – National Steel Iron Factory Company Limited, Saudi Arabia
- North Star Steel, USA
- MMK – Magnitogorsk Iron and Steel Works, Russia
- Revda – Maxi Group, Russia
- Dofasco Inc., Canada
- Chengdu – Iron and Steel Company Limited, China
- EVRAZ Rocky Mountain Steel, USA

MAIN BENEFITS

- Increased productivity due to shortest melting and idle times
- High power input (up to 1 MVA/t)
- High-impedance furnace
- Arc voltage up to 1,500 V
- Low tapping temperatures and minimum slag carryover
- Proven low consumption values (including energy and electrodes)
- Minimum maintenance using heavy mill-type components
- Highest flexibility with charge materials

FOR TWIN-SHELL EAFS

- High productivity levels resulting from reduced power-off times
- Parallel operational activities on separate EAF vessels

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