



## CHINA STEEL CORPORATION CAST IRON STAVES FOR BLAST FURNACE 2

China Steel Corporation (CSC), located at Kaohsiung, Taiwan, has an annual crude steel production of around 10 million tonnes making it the largest steel producer in Taiwan. CSC produces a range of products including plates, bars, wire rods, hot and cold rolled coils, electrogalvanized coils, electrical steel coils, hot-dip galvanized coils, and Ti/Ni-base alloys.

China Steel Machinery Corporation (CSMC) is a subsidiary company which is 100% owned by China Steel Corporation (CSC).

CSMC, acting on behalf of CSC, awarded the contract for the supply of cast iron staves for the third rebuild of CSC BF 2 to Primetals Technologies UK Ltd.

This project signifies the continuation of a strong relationship between CSC and Primetals Technologies via CSMC.

Once this project is complete, five of the six blast furnaces operated by CSC and their subsidiary Dragon Steel will operate with equipment from Primetals Technologies.

### THE CHALLENGE

With a strong orderbook to satisfy, CSC must maintain operation of all its blast furnaces. This project should:

- Extend the life of blast furnace two by a further 18 years
- Be completed within 12 months to suit the shut down period

### THE SOLUTION

Primetals Technologies were the supplier of choice for this project after demonstrating that:

- We are a world-leading supplier of cast iron staves with a proven track record
- With our strong project management and project execution credentials the entire scheme of work from engineering design, equipment manufacture and FOB supply could be achieved within an 11 month timeframe
- The entire project could be successfully delivered at a competitive market price



Computer animated images of a cast-iron stave from Primetals Technologies

### SCOPE OF SUPPLY

- Nine rows of cast iron staves from hearth to throat area
- 1 set of stave templates for checking / marking holes on the inside of shell
- Installation manual for cast iron staves

### FURNACE DESIGN PARAMETERS

Average production	6900 t/d
Peak production	7250 t/d
Furnace hearth diameter	12.0 M
Furnace working volume	2815 m <sup>3</sup>
Furnace inner volume	3297 m <sup>3</sup>
Top gas operating pressure	2.5 bar g
Blast pressure at furnace	4.3 bar g
Normal productivity on inner volume	2.1 tHM/d/m <sub>2</sub>
Number of tuyeres	30 off
Number of tapholes	2 off
Sump depth / hearth diameter	20.0%

### PROJECT TIMESCALES

- Contract effective: July 2019
- FOB delivery: April 2020 / June 2020
- Planned blow-in: January 2021

“ We selected Primetals Technologies because their technical solution was one of the best and the entire project could be successfully delivered at a competitive market price.

Based on our past experience Primetals Technologies are good at project execution.”

China Steel Machinery Company

**Primetals Technologies Ltd**  
A joint venture of Mitsubishi Heavy Industries and partners

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