TATA STEEL, India

Construction of new Blast Furnaces “H”
2008
Introduction

In August 2005, Tata Steel awarded the Paul Wurth Group, in association with its local partner Larsen & Toubro, with the contract for the construction of the new blast furnace “H” at the Jamshedpur works.

With an inner volume of 3,814 m³ and an annual production capacity of 2.5 million tons of hot metal, this state-of-the-art BF “H” is the biggest blast furnace ever built in India, meant to increase Tata Steel’s yearly production from presently 5 million tHM to 7.8 million tHM.

Project Realisation

As a result of the quick pace of operations managed by Paul Wurth and L&T, the BF “H” project - the first of its kind in India - was completed in a record time of 25 months from the day the foundations where laid to successful blow-in on 31 May 2008.

One major challenge was to build the new BF plant in an extremely restricted area of 63 acres next to the existing BF “G”, while optimizing the logistic aspects, such as to minimise the transfer time between BF “H” and the steel shop.

It is noteworthy that layout and design of BF “H” and its auxiliary plants have been developed so as to guarantee the future expansion of the plant. The use of a 3D design tool to perform the complete arrangement engineering has allowed a reliable check of all possible interferences as well as a detailed analysis of the accessibility for operation and maintenance works.

Tata Steel’s BF “H” features the most modern and proven technological solutions, with special attention to energy and environmental aspects. One of the key elements of the project is that the new blast furnace “H” fully integrates all Paul Wurth’s in-house technology and proprietary equipment / design for the single BF key items.

Project Data

Project overall duration (from order placement to blow-in) : 34 months
Blow-in date : 31 May 2008
Paul Wurth’s Scope of Supply

Services

- Technology and concept
- Overall project coordination
- Basic engineering
- Detail engineering
- Inspection of all critical equipment (including local portion)
- Erection concept
- Erection supervision and general planning
- Training, operational assistance support
- Commissioning

Supplies

- Blast furnace proper, including:
  - Bell Less Top® charging system
  - Bleeder valves
  - TMT probes*
  - Tuyere stocks
  - Cooling circuits
- Casthouse, including:
  - Castfloors and runner system
  - TMT Casthouse equipment*
  - Casthouse dedusting system
- INBA® slag granulation plants
- Stockhouse, including:
  - Stockhouse equipment
  - Stockhouse dedusting system
- Gas cleaning plant
- Top gas recovery turbine (TRT)
- Pulverised coal injection plant
- Hot blast stoves, including heat recovery system
- Electrics, instrumentation and process control; automation systems

---

**Blast Furnace Data**

- Annual production : 2.5 Mio tHM
- Daily production (avg.) : 7 150 tHM
- Peak daily production : 7 850 tHM
- Hearth diameter : 13m
- BF inner volume : 3 814 m³
- BF working volume : 3 230 m³
- Number of tuyeres : 34
- Number of tapholes : 4
BF cooling elements: cast iron staves
Downcomer dustcatcher
BF piling ceremony
BF cooling elements: copper staves

Technical Highlights

© Copyright 2008-2015 Paul Wurth S.A. – all rights reserved
Non Contractual Data: Paul Wurth believes that the data contained in this folder are correct and accurate, but cannot guarantee same or better performances for any specific site without a detailed quote. Patents and Patents pending. — Paul Wurth equipment and processes are protected in many countries by patents.

© Paul Wurth, the Paul Wurth Logo, Bell Less Top, BLT and INBA are trademarks of Paul Wurth S.A. and may be registered in your jurisdiction.

International presence:
Brazil, Chile, Czech Republic, Germany, India, Italy, Japan, Korea, Mexico, P.R. China, Russia, South Africa, Taiwan, Ukraine, U.S.A., Vietnam