TMT 3D TOPSCAN™
REAL SURFACE PROFILE MEASUREMENT
MONITORING THE BF CHARGING PROCESS

3D surface measurements inside the blast furnace

The TMT 3D TopScan™ uses the latest in radar- and antenna technology and provides a real surface scan with multiple thousand data points within a few seconds. Asymmetries are now detected and the charging feedback is drastically increased, taking process analyses to the next higher level.

For maximum reliability, the number of components and complex mechanical movements have been minimized in TMT’s design.

In the measurement position, no mechanical parts protrude inside of the top cone area. Interferences with the rotating chute are impossible and no negative effects on the falling burden material can occur.

As blast furnaces only make money when producing iron, BF stops only occur a few time per year. To allow for maintenance without causing BF downtime, the TMT 3D TopScan™ can be retracted and maintained, while the furnace is in operation.

The key process monitoring tool

Profilemeters have evolved to become one of the key process monitoring tools in blast furnace operation. Until recently, all profilemeters were based on single point radars providing a limited amount of data points, at best some 200-300 points, worst case only about 8-10 points. Under the assumption of rotational symmetry these points were then computed into a burden surface for further analyses.

/ YOUR BENEFITS

Real 3D surface measurement:
Continuous measurement after and during charging at highest resolution

Fast and efficient
No charging time loss
One complete surface measurement every 20 seconds

Compact and simple design
No protrusion into the BF top cone area, no potential interferences

Maintenance friendly
Maintenance possible with furnace on blast
No platforms required
**PROCESS FEEDBACK**

- Live burden surface monitoring
- Detection of all asymmetries
- 3D layer model
- Cross-section at any radius
- C/(C+O) curve at any radius
- Areal burden descent speed distribution

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**TECHNICAL DATA**

- **Field of view:** ± 60° cone
- **Accuracy:** ± 50 mm
- **DN500**
- **Building height:** ~ 3 m
- **N2:** 100 Nm³/h
- **Cooling water:** 2 m³/h
NO MATTER WHERE, SUPPORT IS JUST AROUND THE CORNER. WORLDWIDE.

Maximum equipment availability

With TMT you have local support around the world. OEM subsidiaries and workshops spread around the globe are ready to assist you throughout the lifetime of the equipment.

/ SERVICES

➤ Comprehensive refurbishments to extend the lifetime of your equipment

➤ Tailor made technology upgrades to boost the performance of existing equipment and to increase the safety level

➤ Site surveys and preventive maintenance to ensure availability of the equipment

➤ Supply of OEM spare parts and consumables to ensure reliable performance

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