

STAS

BATSCAN[®]

METAL TREATMENT & CASTHOUSE TECHNOLOGIES



We provide high-tech solutions for the global aluminium industry



BATSCAN®

« Your ultimate solution for continuous inclusion monitoring »

How it works

The BATSCAN® is a continuous inclusion monitoring system that can be positioned in the trough at any point between the furnace and the casting pit.

The BATSCAN® is a technology developed by Constellium.

The system is designed to measure inclusion levels in the molten metal using ultrasounds through a transmitter and a receiver (waveguides) immersed in the liquid metal.

Measurement principle

- In-line measurement directly in the trough.
- Continuous immersion in the melt.
- Measures variations between emitted and received ultrasounds caused by particles present in the melt.
- Continuous acquisition of the signal.
- Automated post-treatment after the acquisition period.
- Post-treated file provides ultrasonic intensity signal versus time for different ultrasonic thresholds.

Key features

METAL QUALITY MEASUREMENT EFFICIENCY

- > High sampling volume (2% of the whole cast volume).
- > High measurement frequency (inclusions are tracked every 0.1 sec).
- > Ready to measure in a very short time (typically 15 sec).
- > Patented technology embedded to cancel bubble interaction with the waveguides hence stabilizing signal sensitivity.
- > Key measurement positions targeted by the BATSCAN®, particularly at the filter or furnace outlet.

PRODUCTIVITY IMPROVEMENT / OPERATING COST EFFICIENCY

- > Very low operating and maintenance costs (no consumable parts thanks to the use of non-reactive ceramic).
- > Compatible with all aluminium alloys.
- > Not sensitive to electromagnetic interferences (induction furnace, electromagnetic casting).

SAFE WORKING ENVIRONMENT

- > Automated operation (option available with fixed BATSCAN® only)

BATSCAN®
TECHNOLOGY

Manufactured by
STAS

under license from
 **Constellium**

Models available

Fixed unit:

The fixed BATSCAN® can be mounted on the side of a trough or directly on the floor at a specific location along the casting line.

Mobile unit:

The mobile BATSCAN® is mounted on a wheeled frame and can be used anywhere along the casting line.

Included in a typical kit

- Frame supporting the measuring head with up/down actuator and manual horizontal translation arm.
- 2 Module 0 units with transport case.
- Main electrical/pneumatic cabinet (PLC).
- Built-in data post treatment software (local display).
- Air hoses and electrical cables with connector kit.
- For mobile unit: manual dolly with telescopic support column and wheeled main cabinet.



Typical specifications

Models	Main unit Overall dimensions*				Power supply	Compress air supply			Sound level (dB)	Certification
	Length (mm)	Width (mm)	Height (mm)	Weight (kg)		Pressure (Bars)	Flow rate (l/m)	Temperature (°C)		
Fixed unit	1325	800	1900	120	220V 50Hz 12.5 amp / 115V 60Hz 25 amp	6	<1000	<30***	80	CE
Mobile unit	800	800	1200	200						
Cabinet**	1350	800	1200	300						

* Dimensions in reference. The dimensions may differ. ** Included with the two models *** Air cooler needed if the air temperature is >30 °C

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