

ABIS^{3D}

3D Anode Butt Inspection System

How it works

Anode quality is very important in order to optimize the electrolytic production of aluminium. Depending on the baked anode properties and characteristics, the quantity of carbon used to produce one ton of aluminum can be very different from one plant to the other. For example, it can easily vary from 410 kg to 450 kg of carbon per ton of aluminum (Kg C/tAl). This variation represents a huge difference for the production costs, both for carbon itself and for the many disadvantages related to excess carbon consumption, for example carbon dust.

The ABIS^{3D} is a fully automated Anode Butt Inspection System based on the latest 3D technology already in use in other sectors of the industry. It can be adapted to all anode butt sizes and shapes. The system is developed, integrated and manufactured based on state-of-the-art 3D hardware & software designed and supported by world-class suppliers.

The ABIS^{3D} uses proven 3D industrial sensors. The sensors are used to scan the entire volume of the anode butt and to build a complete point cloud 3D image. In addition, the 3D sensors capture the intensity level of each 3D pixel (256 gray levels). This feature allows for more possibilities like bath detection, etc. Acquiring the full HD 3D point cloud including the gray intensity level allows an infinity of measurements.

« Fully automated artificial vision system for anode butt inspection. »



Key features

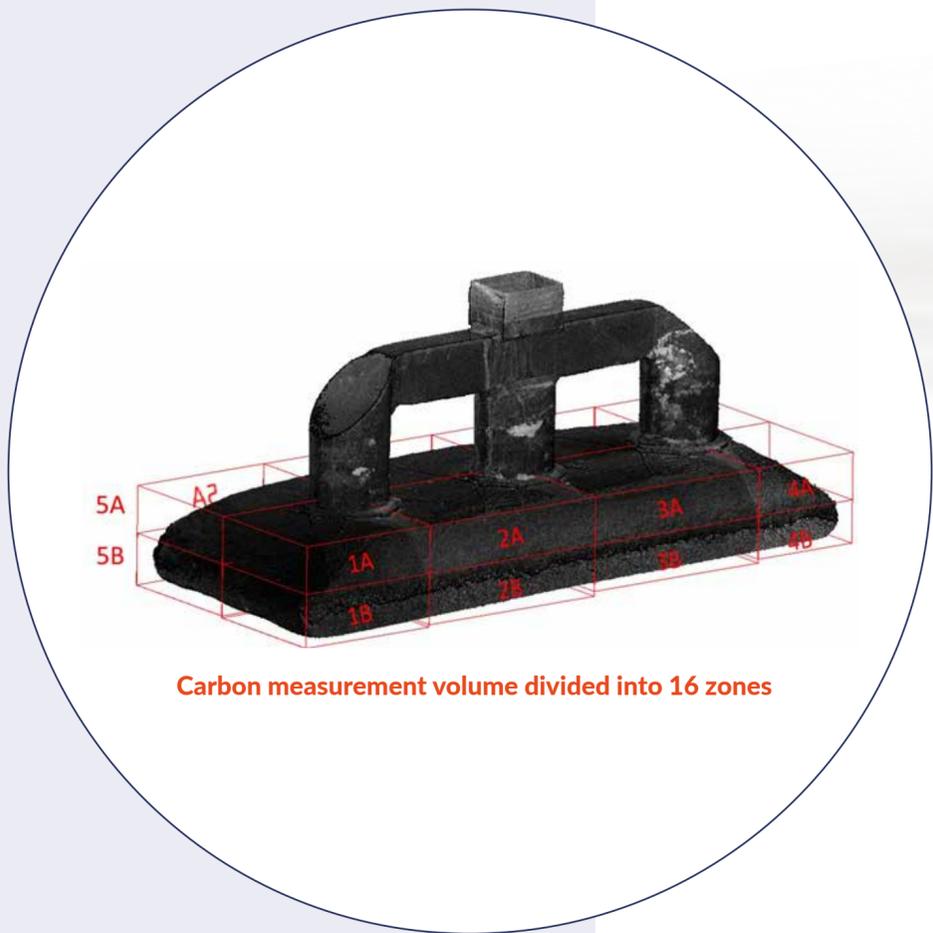
PRODUCTIVITY IMPROVEMENT

- > All anode butts are inspected.
- > Minimizes residual bath contamination in recycled material.
- > Provides feedback on anode quality.
- > Provides feedback on electrolysis conditions.
- > Allows anode cycle optimization
- > Simple system, easy to implement and maintain.
- > Complete inspection process requires between 30 to 40 seconds.

SAFE OPERATING ENVIRONMENT

- > Fully automated system.
- > No more need for manual measurements.





Typical specifications

Main unit Overall dimensions			Approximative weight	
Lenght (mm)	Width (mm)	Height (mm)	Enclosure (kg)	ABIS (kg)
2000 - 4000	1500 - 3300	2000 - 3000	2300	1200