BSI^{3D}

3D Billet Surface Inspection system

> « Our BSI^{3D} improves the quality and objectivity of your billet surface inspection process while ensuring traceability, productivity and customer satisfaction »

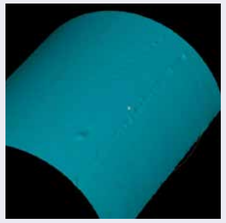
How it works

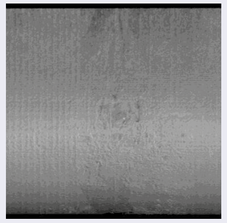
- The BSI^{3D} / Billet Surface Inspection system is usually placed above the existing conveyor, prior the ultrasonic inspection process;
- Billet code identification is automatically performed;
- A set of sensors collect high resolution tridimensional & photographic pictures;
- The defects are automatically detected and quantified;
- Inspection status is automatically transmitted to the process control system;
- Complete information about defects found is stored into the database.

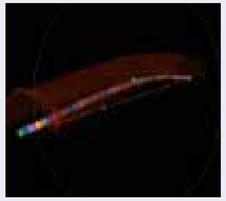
Key features

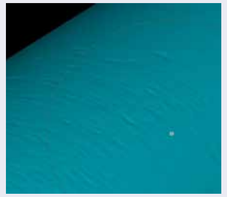
- Operator free – completely automated;
- Threshold values regarding defect detections can be adjusted;
- Automated detection of defects like:
  - Out of gas cushions;
  - Slip;
  - Zipper;
  - Bleed out;
  - Oxide patches;
  - Billet deflection;
- Generates historical data allowing process optimization & quality follow-up / traceability;
- Reads billet identification or/ add ID code (option);
- Allows partial acceptance of the billet depending on the sub-lengths to cut;
- Improves quality and objectivity of the inspection;
- Integrates the state of the art 3D & 2D machine vision technologies;

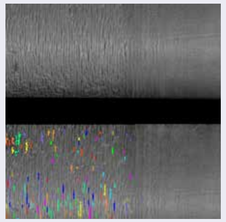
Surface defect examples


Scratch

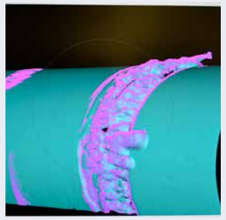

Oxyde patches


Billet deflection


Slip


Out of gas cushion

HMI results


Bleed out


HMI results

Typical specifications

- Average resolution of 0.2 mm (regular configuration);
- Cycle time fewer than 60 sec;
- Overall dimensions are customized to fit existing conveyer, the maximum billet length and billet diameters to scan.

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