BILLET & SLAB MARKING STATION

SMARKTEC
Engineering traceability.
BILLET & SLAB MARKING STATION

GENERAL DESCRIPTION

This equipment is intended to mark OCR characters using specific paint & spray technology on to the hot Steel Billets & Slabs (up to 1,100°F surface temperature).

The equipment is based on an automatic robotic cell integrated in the production process.

The robotic marker is equipped with all mechanical and electrical protections to be included into the factory’s security plan.

The equipment is designed to be integrated on the factory’s PLC network to work on an automatic way with remote access.

The equipment is designed to work on a non-attended way, except for the recommended preventive maintenance operations.

Main advantages

- High visibility
- Uniform marking for automatic data capture via OCR vision cameras
- High flexibility due to reprogramable robot tasks
- Fast writing cycles
- Low maintenance
- High reliability of robot working technology
- Reduces traceability risks and man labor
- ROI < 2 years
- Increase of Overall Equipment Availability (OEA)
- Decrease of Time Between Failures (TBF)
### SCOPE OF SUPPLY

A standard Billet & Slab Marking Station includes:

- An ABB 6 axis robot foundry type.
- The robot base.
- The robot enclosure for heat protection & human access control.
- A control cabinet including PLC, touchscreen 15” panel Pc-HMI.
- A REA JET paint cabinet & spray head.
- A machine vision system for an accurate positioning of the text and our character recognition.
- A laser measuring unit to verify “z” position of the billets.
- Temperature measurement & cooling devices for camera, laser and printhead.
- A blowing device to remove the husk of the billet.

### Non included

- The necessary civil works at the area to install the robot cell.
- The power, data, or pneumatic supply lines.
- Any specific “crash-protection” structure around the robot cell to protect it.

### Options

- Extra machine visions systems for the rolling mill.

### Main features

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
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<tbody>
<tr>
<td>Product temperature range</td>
<td>Up to 1,100º C</td>
</tr>
<tr>
<td>Paint</td>
<td>White colour</td>
</tr>
<tr>
<td>Print speed</td>
<td>1 Character/sec</td>
</tr>
<tr>
<td>Print height</td>
<td>20 - 150 mm</td>
</tr>
<tr>
<td>Number of characters &amp; lines</td>
<td>On request</td>
</tr>
<tr>
<td>Marking type</td>
<td>OCR-B characters (special characters on request)</td>
</tr>
<tr>
<td>Power supply</td>
<td>3 x 400 V, 50Hz (other voltage possible)</td>
</tr>
<tr>
<td>Power consumption</td>
<td>Approx. 10kVA</td>
</tr>
<tr>
<td>Pneumatic supply</td>
<td>Min. 5 bar, filtered &amp; drained</td>
</tr>
<tr>
<td>Pneumatic consumption</td>
<td>Max. 1m³/min including cooling, husk blowing &amp; marking</td>
</tr>
<tr>
<td>Data network</td>
<td>Profibus, Profinet...</td>
</tr>
<tr>
<td>Remote assistance</td>
<td>Via VPN</td>
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<tr>
<td>Standard free space needed for the installation</td>
<td>3 x 3 meters (it's possible to be adapted to other dimensions)</td>
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