

STS 5000 SMART TAGGING SYSTEM

Smart Tagging System **5000** series is the most modern and up to date marking system for **hot Billets, Blooms, Beam Blanks, Slabs and Ingots**.

The system marks the tag on-line and applies it on the hot product by welding process. The tag, laser marked, has an excellent contrast and readability. Markings can contain characters, logos, **Barcode, Data Matrix** etc.

Barcode, and especially the Data Matrix, allow the easy and automatic reading of the product code, making the **tracking systems** very reliable.

The small laser spot allows to mark characters of any size, thus the amount and size of markings are limited by the tag size only (typically 100x75mm).



Tag attached by MIG welding

STS 5000 is mainly composed of:

- Robot arm
- Tag preparation group
- Electrical cabinets
- HMI

The system is specifically designed for harsh environment as Continuous Casting area. The tagging tool is engineered to operate for long times requiring very small maintenance and few and cheap wear parts.

The marker is fully automatic and equipped with advanced diagnostics, making the maintenance and troubleshooting easy.

The system receives the marking data from the factory automation system, or by HMI and prints the tag. The robot picks the tag up and reaches the waiting position. After the start, the robot points the camera towards the product to detect the welding point and welds the tag on it. After welding, the camera verifies the tag readability and allows the product evacuation.

Long autonomy is guaranteed thanks to the large tag feeder capacity (typically 2000 tags or more). Welding materials stock guarantee equal or longer autonomy. Refilling operations are easy and require very short time.

SmartMetalMarkers™
FAMILY



Marking and reading systems for metallurgical products



Configuration is very flexible allowing to satisfy the customer needs. Typical configurations are:

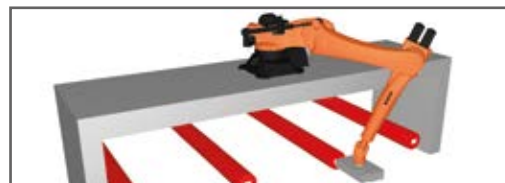
- Small robot at cooling bed
- Big robot at the end of strands
- Big robot over a bridge just after the cut



Cooling bed



End of strands



Over the strands

The marker is equipped with the appropriate laser printer to mark the desired type of tag as:

- Coated Metal Tag
- Metal Tag

(see Tag brochure for more details)

The tags can be attached to the product by:

- MIG welding
- PIN welding (**Patented System**)

STS 5000 optionally can be equipped with the innovative **Surface Preparation Tool** (Patent Pending), specifically developed by IMTS,

to successfully weld on:

- Any kind of Steel as Low/High C, High Cr, Stainless, Low/High Alloys, etc.
- Any kind of Cut as Torch, Torch with Iron Powder Injection, Shear, etc.

From today onwards, thanks to the IMTS's special Surface Preparation Tool, it is possible to successfully weld on surfaces as shown here, regardless of scale/slag/roughness, a goal which was not achievable till yesterday!

Tagging cycle can be repeated in case the camera fails to read the code, improving the global performances close to 99.X %. With respect to other marking technologies, tagging technology has the big advantage to overlap a new marking on products previously marked with a wrong code.

Main features:

- Tag Auto Centering on product
- Tag Auto Orientation in the stock (for PIN only technology) to improve the human readability
- Code Readability Check
- Automatic Cycle Repetition
- **Surface Preparation for Welding Optimization**

Typical Specifications:

- Product temperature: up to 1000 °C (or more)
- Tag size: 100x75 mm (others on request)
- Markings: Characters, Logos, Barcode, Data Matrix
- Cycle time: 15 – 20 s

Contact us to know more about special versions.

STS 5000 EN rev0



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