



Automatic scanning and robotized painting of steel rafters



Inropa™ SteelPainter automatically programs the robot by 3D-scanning the parts. Inropa™ SteelPainter ensures high flexibility and surface quality and reduces costs for personnel and paint material. It increases production by ensuring a constant and smooth paint line flow.

AUTOMATIC PROGRAMMING

The operator mounts the parts on the conveyor and sends them through the paint line. Inropa™ SteelPainter then scans the parts and programs the robots on the fly. This means that no human robot programming is necessary.



Inropa™ SteelPainter makes painting easier and creates reliable results.

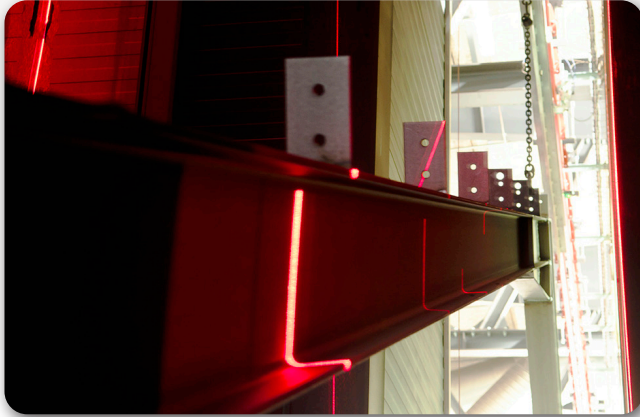
The laser scanning system operates in 3D which means that the position and orientation of each individual part is taken into account. Different

dimensions of components within the same part will be handled so that an optimal surface quality and minimal paint material consumption can be reached. Furthermore, it is possible to specify different colours and coverage for the individual parts, and to adjust the general settings of all painting parameters for specific paint and quality requirements, such as angles, speed, and paint pressure.

As each part is programmed automatically on the fly, the Inropa™ SteelPainter is optimal for painting lot size one products.

Very large steel constructions may be handled using robots with external axis. The movement of external axis can be automatically calculated

and controlled by the SteelPainter system. This may reduce the number of required robots.



The operator mounts the parts on the conveyor, and the parts are then sent through the paint line and scanned in 3D. From these scans, the Automatic Programmer generates the robot programs automatically.

HIGH SURFACE QUALITY

The 3D-scanner is parameter-based which means that the values for speed and angles remain the same for a given surface. As the risks of manual errors are removed, the system will ensure a repeatable high surface quality which will ultimately contribute to a higher market value of the products.

INCREASE PRODUCTION CAPACITY

The parts will be painted while moving on the conveyor line in a constant flow. The system will ensure a smooth flow in the paint line and it will be attainable to gain synergies by efficient integration with upstream and downstream production. Just-in-time production is strongly supported. The speed of the conveyor is automatically adjusted to run as fast as feasible when painting the part.

The system will automatically optimize the capacity of the paint line.

REDUCE PRODUCTION COSTS

Because of the repeatedly high surface quality the Inropa™ SteelPainter system will in most cases reduce costs for paint material and for re-painting. Using robots will furthermore reduce ventilation and heating costs by re-circulating the air in the spray cabin.

Personnel for painting and moving parts will in most cases be reduced significantly since the parts are painted by robots and automatically transferred to the drying area.

Also, it is possible to combine the system with automatic colour change which will enable fast colour changes with minimal waste of paint material.