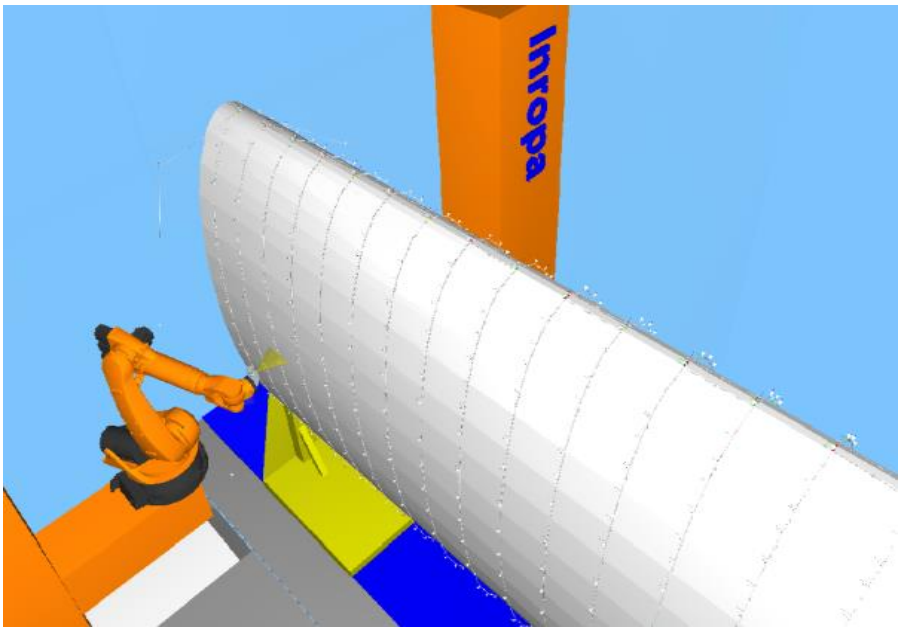
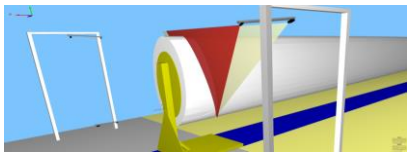
Inropa™ BladePainter

Robotized Painting of Rotor Blades for Wind Turbines.

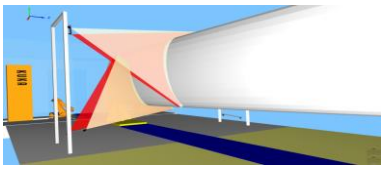
Inropa™ BladePainter is developed for robotic painting and gel coating of rotor blades for Wind Turbines.

The technology automatically adapts programs according to the shape, size, and position of the blade. It will consistently provide a higher surface quality along with a reduction of paint material and cost of labour. Inropa™ BladePainter is already proven fully functional in running installations in the wind industry worldwide.

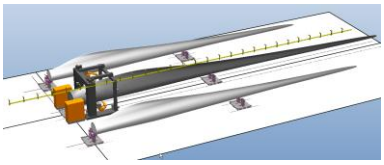




■ *The system automatically measures the shape of the surface and position of each product being painted*



■ *The composition of several laser scanners provides the 3D model of the complete surface*



■ *Move the blades or place the blades in a fixed position and let the scanning and painting facilities move along side*

BENEFITS OF THE BLADEPAINTER

The Inropa™ BladePainter utilizes the Inropa™ LaserScanner for establishing a correct surface model of each individual blade, including any off-sets due to varying positioning in the production situation.

The Inropa™ LaserScanner works in 3D which enables the system to generate a specific program, which is optimized for each individual blade, and will ensure a high quality with precise coverage, and visual quality independent of potential variations in size and shape of the blades or in the positioning of the blade. The precise application of paint means that it is possible to determine an optimal balance between sufficient surface quality and minimum consumption of paint material. The reduction in paint material (approximately 30% compared to the use of manual painting) will often provide a fast Return of Investment.

3D LASER

The system automatically measures the shape of the surface and position of each product being painted. The 3D laser scanning system establishes a full 3D model of the individual blade. Each scanner measures a specific area of the blade. The composition of several laser scanners provides the 3D model of the complete surface.

AUTOMATIC ADAPTION TO VARIATIONS

The robot programs used for painting the blades are generated automatically on the fly for each blade as the blade is being transferred through the scanning area on its way towards the painting robots. The scanned surface model of each blade enables the system to adapt precisely to each individual blade.

FAST ADJUSTMENTS

Because of the individual adaption to the blade's surface it is a lot faster to adapt the system to new sizes or types of blades. This is very often done without any re-programming.

Inropa™ BladePainter may also be equipped with a grinding or cleaning tool for robotic grinding and cleaning of the blades without manual interaction.

MOVING BLADES OR PAINT FACILITY

The concept for moving the blade requires some space in the production area. As an alternative to this, a feasible solution is to place the blades in fixed positions, and let the scanning and painting facilities move along the side of the blades. This solution can be established in order to fit the technology into already existing production facilities.

TECHNOLOGY FROM AUTOMOTIVE INDUSTRY

The technology behind Inropa™ BladePainter is used in numerous industries already, for instance in the automotive industry

For further information, please visit our website www.inropa.com

INROPA™
Intelligent Robot Painting

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