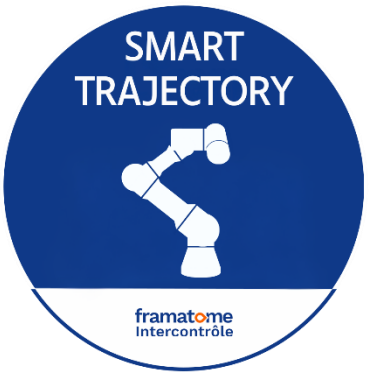
framatome
Intercontrôle

SMART TRAJECTORY

Easy and automated inspection of complex geometries

The Smart Trajectory solution optimizes NDT sensor deployment in complex environments.



Challenge

Inspecting critical infrastructure in complex environments comes with major challenges :

- Irregular geometries making analysis more difficult
- Limited access to areas to be examined
- Lack of field data before intervention
- Need for comprehensive and reliable coverage
- Optimization of time and costs

Solution

Smart Trajectory addresses these challenges through an automated, flexible and efficient approach.

Smart Trajectory provides a solution by combining:

- Intelligent robotics and advanced vision for precise positioning of sensors
- High-precision 3D scan to model the environment and optimize inspection
- Modular and adaptable system, compatible with all 6-axis robots
- Automation of the process, reducing intervention time and operator exposure

Customer benefits

- Reduction of plant downtime, thanks to faster inspection
- Optimized and simplified inspection, even for non-experts in robotics
- Improvement of the reliability of analyses thanks to automated control
- Flexibility of use, suitable for various industrial environments

Sensors and integrated technologies

- Precise sensor positioning system (ultrasound, 3D...)
- High-precision 3D scan for detailed modeling of the environment
- Conformable UT sensors for advanced defect detection and characterization
- Multi-angle inspection of welds and complex surfaces

Performance and inspection capabilities

- Inspection 2 to 5 times faster than traditional methods
- Suitable for complex geometries, including irregular and difficult to access surfaces
- 100% coverage of the area to be inspected with sub-millimeter precision
- Precise positioning of the UT sensors: 1 mm and 1° on the welds
- UT inspection with depth measurement (0°) and defect detection (45° and 55°)

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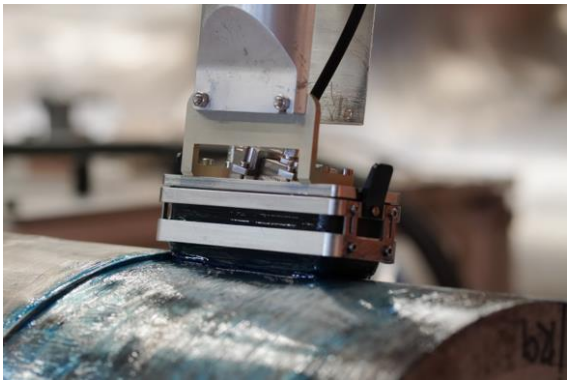
Risk management

- 100% mastered and reproducible control, ensuring a risk-free intervention
- Less exposure of operators to irradiated and harsh environments
- Secure planning via the simulation of trajectories before intervention
- Reduction of human errors through automation of controls

Interface and compatibility

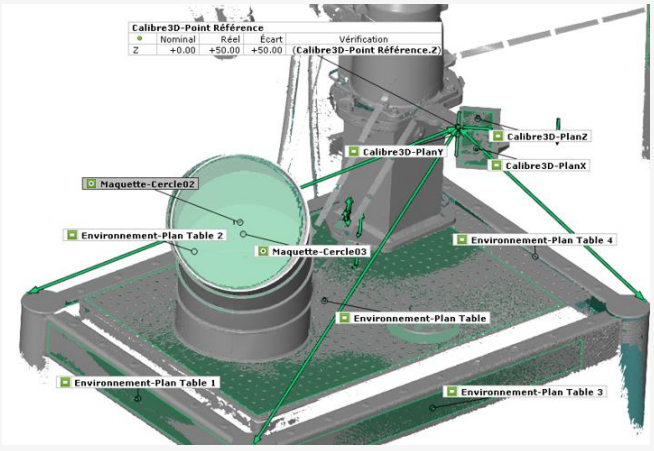
- Modular solution adaptable to different industrial environments
- Compatible with all 6-axis robots for flexible integration
- Ergonomic and easy to use system, even for non-experts in robotics
- Simulation and optimization of trajectories before inspection for a 100% reliable control

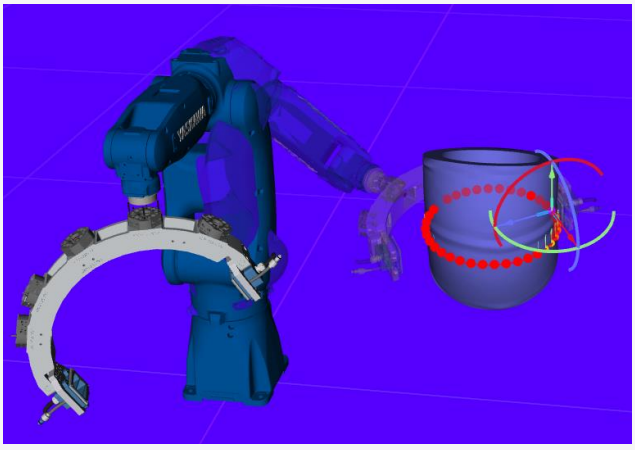




A qualified and constantly evolving system

- Qualified system used in nuclear power plants since 2023
- Continuous improvement of the system in order to cover other industries (Oil & Gas, Transport...)





Simulation to create and optimize the inspection ensuring 100% safe and reliable control

Contact : sales.intercontrole@framatome.com
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