The *Independent* Solution Provider for Smart Digital Transformation

ATS Global B.V.

ATS Inspect Raises Product Quality on MRO Line at Turbine Blade Manufacturer

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About the Customer

The customer is one of the world's largest suppliers, installers and service providers for power generation plants. It is a full-cycle, integrated operator, with the capability to build turnkey power plants on green field sites using its own technology and its own independent design, production, construction, commissioning and service resources.

The Need

In 2016 the customer made the decision to start a new internal MRO (Manufacturing, Repair, and Overhaul) line instead of outsourcing repairs to external companies. To be effective in this business they needed an effective software tool to support their visual and dimensional inspection processes.

To be effective in repairing turbine blades, the customer needed:

- Paper-less inspection processes
- Short preparation time for audits
- Full integration with PLM and ERP systems
- Intuitive user interface with guidance for repair operators
- Possibility to collect dimensional data and have real-time validation

ATS Inspect was the perfect fit.

The ATS Inspect Solution

Entering Defects

ATS Inspect allows inspectors to place identified defects directly onto imported 3D CAD models of the turbine blade, dramatically reducing configuration time and giving operators a realistic inspection experience.

Defect details, such as the root cause and which part of the production process was responsible for the defect, are recorded along with the defect itself. All of the extra information provides a detailed analysis of the issues that are being found and allows processes to be modified quickly so that they aren't repeated.

Carrying Out Repairs

Once the defects have been identified repair operators, using exactly the same user interface, are then able to view the defects on the CAD model so that they can easily locate them on the real product. Once repairs have been carried out they can record all the necessary details using intuitive touch-screen operations.

Electronic Checklists

To ensure inspections are carried out correctly and that everything has been checked electronic checklists must be filled out by the operators. These also allow other information, such as measurements, to be entered that can be of use when analyzing the quality of a product.

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Reporting and Analysis

Some of the biggest benefits of ATS Inspect come from the reporting and analysis that it allows. The detailed reports can be viewed securely online so that no matter where the management team is in the world they can review the status of their product quality. ATS Inspect comes with a large range of ready-made reports that allow the customer to really dig into the essence of the data. They can also design and implement their own reports that fit exactly to their business needs.

An Integrated Solution

ATS Inspect is made more efficient by integrating with:

- SAP ERP, to receive the inspection sequence of turbine serial numbers.
- Siemens Teamcenter Manufacturing to receive 3D CAD models and engineering instruction.

The Business Benefits

- No risk of errors during MRO operations thanks to the support of electronic checklists and 3D CAD models
- Accurate mapping of every defect helping repair team to solve every identified issue
- No paper in the shop-floor
- Full process visibility
- Contextualization of defect data using dimensional data
- Advanced web-based business intelligence
- Reduced change management issues due to intuitive user interface

Planning and Implementation

A large part of the success of ATS Inspect is down to the groundwork carried out before an implementation that ensures that the customer is getting the most from the solution. For this reason ATS first delivered a pilot project, where the standard functionalities of ATS Inspect were used as a basis to identify potential gaps in conjunction with the new MRO business processes.

Having a pilot on-site was crucial to let key users start using the software and acquire knowledge of the product. It also made the identification of the functional and technical gaps easier for the customer.

During the design and implementation phase the identified gaps were addressed in an iterative/agile manner. This allowed the customer to test and validate the implementation, point-wise, and to suggest improvements in a very collaborative way.

Thanks to this advanced planning the solution has been successfully implemented and is now supporting the customer's business needs.