How to

MANAGE YOUR WELDING DOCUMENTATION

A strategic choice
for
today's managers

WELDINDUSTRY

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1. Welding Documentation Management System

- the next strategic decision for fabrication Managers

Welding constitutes a major part of any fabrication. Despite comprehensive technological development the last few years, it is still quite common to handle parts of welding documentation by using manual or in-house built non commercial solutions to cover the requirements.

Welding engineers and managers are under constant pressure to improve the quality of welds produced and to document compliance to strict requirements.

One way to do this is to improve the process control and documentation of welds produced.

A welding quality system supports more accurate processes and traceability of documentation, achieving time savings and fulfillment of requirements.

Are today's fabricators fully compliant to international requirements and customer demands in an efficient way?

Is it possible to increase the efficiency of documenting and controlling welding production?

2. Introduction

Fabricators must produce high quality products, with skilled resources, using state of the art machinery at the lowest possible cost.

On top of that, international standards define requirements how these processes should be performed and how it should be documented.

Welding is one of the most stringent and controlled production environments. Documenting compliancy to welding procedures, welders, welder certificates, qualifications, materials, NDT testing and commissioning is resource demanding and needs to be streamlined in order to be cost effective.

Near all areas of today's production areas, from planning, engineering and construction has since long time been under constant evaluation for improvements.

Just imaging building a crane, oil pipe, platform, windmill or nuclear power plant planned on paper and not by 3D modelling tools. Possible, but it is highly inefficient way to do so.

Now, the supporting system for welding production should be the next area where fabricators can improve efficiency by controlling the processes and structuring the documentation.

3.   The strategic choice

In order to weld, you need welding procedures and welders.
Welding procedures needs to be tested, verified and documented.
Welders need certificates to prove their knowledge and skill to weld according to the procedures.
The welder's certificates need to be re-signed internally every 6 month and externally every 2 year by a third party organization like DNV or Lloyds.
A company with 150 welders will typically have around 450 certificates to administrate.
This means 900 internal signatures and 225 external signatures to be documented.
Every year!

Welds needs to be tested by NDT personnel. Everything from visual inspections to magnetic, ultrasound or x-ray needs to be planned, executed and reported in a system.
Weld repair needs to be tracked and documented.
All activities and process steps during the complete production needs to be updated real time to be able to report progress and status.
Finally, the customer will request the final as-built documentation as part of the complete delivery.
Most of these requirements are actually handled today.

But imagine having complete control of all these requirements, from one system, at the same time, from all projects and all sites.
Fewer resources could control and handle more projects with better quality.

4.   How to solve the challenge?
- WeldEye® Quality System

WeldEye® Quality System is a software application covering welding documentation and quality requirements. It supports international standards and requirements with functionality for handling welding procedures, welders and their qualifications, NDT tests, production and status reporting as well as controlling the production processes itself.
WeldEye® Quality System will fit any size and type of organization with requirements from international welding standards like ISO, ASME and AWS.
It can be deployed on standard IT platform and accessed from any PC (with browser) and different devices (PDAs, mobile phones, etc).
The WeldEye® Quality System can also be integrated into existing systems like ERP, CAD and/or HR systems, so that it becomes a natural part of the complete production chain. This will provide the fabricator management with a true end-to-end solution covering all disciplines needed to optimize the production.

5. Welding process control software

With WeldEye® Quality System you control and manage what information can be inserted, extracted, signed and revoked.
The system enables management of documentation and reporting in the project.
WeldEye® Quality System links functions and documents with full traceability for all welding activities before, during and after welding.
The WeldEye® Quality System can identify all welds in any structure, when a weld was performed, by whom and with which WPS, material ID it was produced.
It can issue NDT requisitions as well as registrations of NDT results with reports.
Reports such as weld summary lists, remaining welds, NDT extent and defect rate can be generated.
The application provides full traceability of all welds and all activities on these welds during the whole production process.

6. Certificate and qualification database

WeldEye® Quality System includes a database for personnel certificates and qualifications which supports international standards.
The System automatically calculates range of approval for certificates.
It has extensive search capabilities, with options to print single certificates or batch print.
The System can find weld references for updating welders' certificates and support of the 2 year external signatures.
A prolongation (renewal) tool will help you find welder certificates that expire in a given time period along with production welds that can be used as references for updating these certificates.
The system will automatically find certificates that need six-month or two-year updates.

WeldEye® personnel and qualification database benefits include:

- Complete control of all welder certificates and qualifications
- Renewal status of all your certificates in your organization
- Time and cost savings due to administration improvements
- Avoid expired certificates and non-qualified welders

WeldEye® personnel and qualification is specially designed to meet strict database requirements from any third-party certifying body.

7.　How to solve the challenge

Since WeldEye® Quality System covers all steps in welding production and all the data is handled by one system, a unique overview during the complete projects are available for the users.
Who is doing what when and where and according to which procedure is traced.
The result from testing and repair is also in the same system.
This means that the output from the system is also unique.
In addition to follow the production process and status, the personnel, the welders and their certificates, there are additional statistical functions included.

WeldEye® Quality System benefits include:

- Control and traceability in the whole production process
- Better-quality and faster, more accurate, as-built documentation
- Quicker decisions based on correct information
- Time savings due to improved resource management
- Easy access through the Internet
- Real-time status on executed and outstanding production
- Complete project status for higher management
- Fulfillment of customer requirements
- Updated requirements from international standards
- New and innovative IT technology
- Re-use existing information
- Easy re-certification tool
- Effective compilation and recycling of welding procedures

Final as-built documentation can be printed as a complete package containing weld summary lists, NDT reports, WPSs and welding certificates together with weld repair reports and can be directly distributed to Customers.

8.　Usage technology

WeldEye® Quality System can be delivered by two different options:
- ➢ On Web
- ➢ By local installation at customer's own IT infrastructure

Our WeldEye® on Web solution uses a third party provider.
WeldEye® Quality System local installation is installed on Customer's own IT infrastructure. Requirements for this are defined in separate documents, but normal standard IT platforms are required

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The solution is:
> - server based
> - centralized
> - provides global access
> - handles multi site accessibility
> - is access, user and roles controlled
> - provides electronic signatures
> - controls productions processes
> - integrated into 1 solution (WP, PQ, NDT, Management)
> - support standard SQL and Oracle databases
> - have high capacity
> - scalable
> - secure through SSL
> - built on Java Enterprise Edition

9.   Conclusion

Today's fabrications Management are faced with a great challenge;

How to deliver the best product, with superior quality, at a competitive price with an enthusiastic workforce.

There are numerous ways to solve this and many ways to attack such a challenge.

WeldEye® Quality System is a unique system that helps you overcome the challenge related to your welding needs. It can efficiently document and provide information to you about your welding projects. The system is efficient, flexible and scalable to fit any organization irrespective of size and complexity. It supports international standards, multiple languages and multiple site installations. Overall, WeldEye® Quality System users have experienced the benefits of reduced rejections, reduced costs, better control of welding projects and easier method to track down the welding issues in case of welding related problems.

Make the best strategic decision for the future, now.

Visit www.weldindustry.com for additional information.