



SPECIAL SOFTWARE

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Make simple what simple isn't. A simplicity that immediately becomes the indispensable prerogative of increasing efficiency. This is the spirit that has always driven companies that produce software for industrial plants and machines. A constantly evolving sector that moves within an increasingly automated production system in which the IT aspect cannot be a negligible item. Software are increasingly the variables that can make the difference, details that can no longer be relegated to a marginal second floor. An ever increasing complexity of calculation and operations that we want to be more and more refined - also in the face of an increasing sectorialisation of the production system - it is important that it is translated into a language that is as simple as possible. A language capable of taking advantage of an increasingly accurate graphic interface for the use and consumption of the largest number of people, even regardless of the different degrees of professionalization. Successfully carrying out this delicate (and complicated) synthesis operation allows an increasing number of companies (and people) to make their production system more and more efficient. A synthesis also able to bring in dowry a significant and decisive reduction of costs to the item waste and error. And that's not all: with software it becomes easier and easier to organize and program production flows allowing optimization of the work and the different times that must elapse between one phase and another. It is therefore difficult to think that companies, more and more accustomed to measuring themselves in a competitive international market, now more than ever, can give up such a spending chapter. Investing in simplicity is worthwhile.




3R SOLUTIONS


Using Software in a smartly-controlled Pipe-shop

The direct costs of pipe-spool pre-fabrication are easy to see. You need the workshop, the machines, and the man-power. The capital and operational expenses for these can easily be identified and calculated.

But the actual shop-floor operations are only a small part of the overall fabrication cycle, and the planning, tracking and documentation of operations are a much larger cost factor. Savings here are harder to quantify, but can be significant. And a streamlined process for these

tasks not only reduces their own costs, but can only reduce costs on the shop-floor itself.

In order to have smooth operations on the shop-floor you need to have the following data:

- What will be fabricated during the shift?
- Which machines / operators will handle which process?
- Is enough material available for all spools?
- Which worker has the necessary qualifications and permits to perform the work?
- How will the material be transported to the machine / work station?
- How long does it take a machine / worker to perform a specific task / process?
- What are the machine parameters for each pipe to cut or to flame cut?

In a conventional pipe-shop much of this information is prepared manually or using Excel sheets, so it can be a time-consuming and man-power intensive process. In addition using hard-copies for your work orders and documentation requires substantial amounts of paper (and space for your documents), so it is not very sustainable.

By using the RAMP workshop control system by 3R solutions you can reduce both the time and the man-power required for planning, tracking and documenting your workshop processes, while at the same time reducing the ecological impact of these operations.

The RAMP software can be used to create optimized work packages, which not only take the actual capacities of the machines into consideration, but can prepare all required instructions and data in a digital format. This can include actual CNC data for operating machines (plasma-cutting, bending, welding), or digital work-sheets for pipe-fitters and welders, which can be sent automatically to their destination



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By connecting the software to a scheduling and warehouse management system, RAMP can check whether the material for the selected spools is available, and also prioritize spools that need to be fabricated quickly. If material is not available, but there is a suitable alternative, the software can also make a substitution suggestion, and prepare the appropriate report.

For the scheduling the software takes every machine in your shop into consideration, the target goal is to maximize the workload on all available machine inside the pipe-shop. It will also show which machines will finish first with their workload to be able to assign additional work to that machines. Or in case of a machine breakdown a spool can easily be rerouted to free capacities. As the software also tracks the spools' current work state, it can also help to compare between the scheduled plan and the actual fabrication progress to check speed and detect bottlenecks. The software can also streamline cutting operations, creating a nested cutting plan that reduces scrap and rest pieces as much as possible. This can be achieved even if there are several parallel work packages. It can also check whether a joint can be welded on a mechanized machine or not, and can allocate work orders accordingly.

After fabrication and QA/QC the software can prepare a comprehensive report package for your customers and your own archives. And by tracking every piece throughout the entire fabrication cycle, it is possible to create a comprehensive spool and joint history for each item that leaves the shop.

By integrating the RAMP software into an automated pipe-shop, you can significantly boost your productivity and reduce costs even further. Depending on the current operations, savings of up to 70 to 90% of work time in planning and documentation can be achieved, along with the associated savings in expenses.



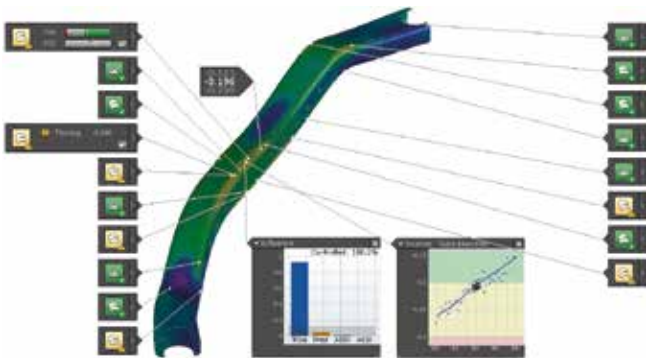
AUTOFORM



AutoForm TubeXpert R8

Unique Software Solution for Experts in Tube Bending, Forming and Hydroforming

AutoForm TubeXpert R8 provides a user interface, which allows for increased ease-of-use and workflow efficiency through an innovative navigation concept. With this software, experts in tube bending, forming and hydroforming can define the complete process based on imported part geometry and then use this information for rapid tool design and simulation set up.



With AutoForm TubeXpert R8 users can perform accurate springback simulation after any of the forming process operations. The software then automatically makes the necessary adjustments to the tool geometry and process parameters in order to compensate the effects of springback. The compensation functionalities can be applied to tool geometries created by AutoForm TubeXpert R8 as well as to

imported tool geometries throughout all of the process operations. Since AutoForm TubeXpert R8 is based on CAD surfaces technology, designs created can be easily exchanged with other CAx systems.