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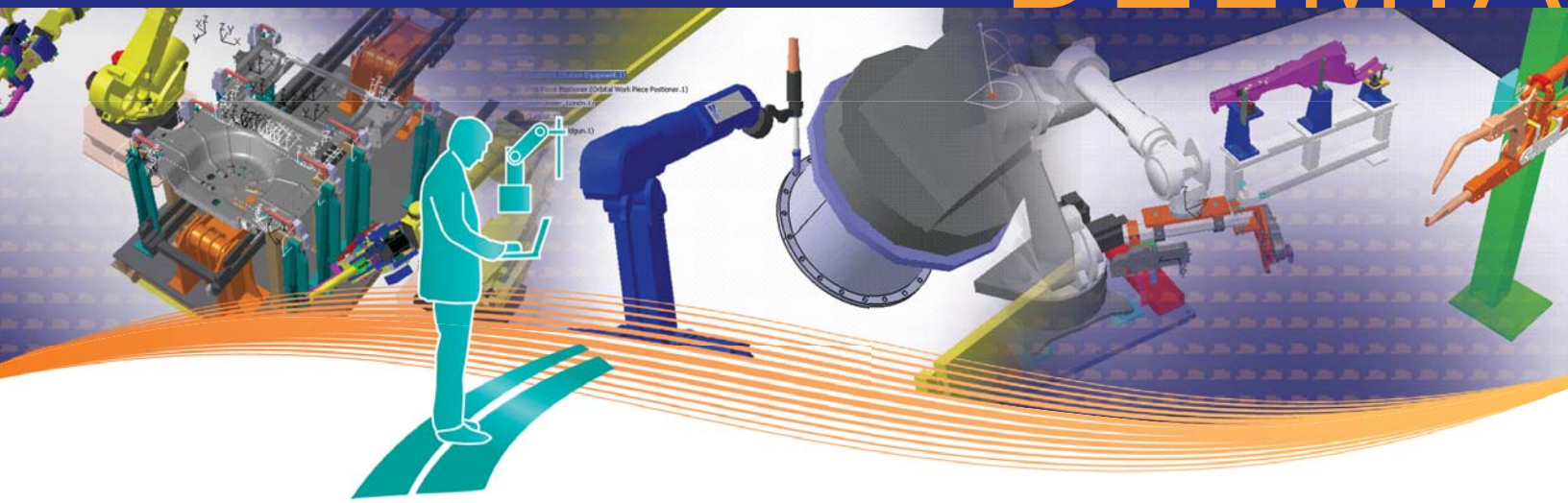

ROBOTICS PROGRAMMER SOLUTION

Easy-to-use robotic workcell simulation and offline programming solution

Overview

To meet the needs and challenges of OEM suppliers and the small-to-medium business marketplace, DELMIA delivers a comprehensive, role based robotic programmer solution that offers advanced simulation capability with dedicated offline programming tools for arc and spot welding applications for accurate, real world robotic welding processes. It provides an environment for teaching and simulating robotic tasks as well as the complete workcell cycle to validate the mechanical processes.

Service organizations and tooling suppliers play a vital role in today's marketplace, providing automated manufacturing systems, designing flexible workcells and robot programming for leading OEMs. They use a variety of tools to accomplish the task but many spend several weeks manually programming robots on the shop floor to later realize that resources need to be adjusted or reprogrammed once it is commissioned, causing production delays and increases program costs.

DELMIA's Robotic Programmer solution will enable companies to significantly reduce production ramp-up time and costs due to the manual teaching of robots task, motions by validating the complete process and "what-if" scenarios in a 3D digital environment before any physical deployment on the shopfloor.

Dedicated offline programming tools for the arc and spot welding robot programmer. DELMIA Robotic Programmer solutions provide a dedicated set of off-line programming, calibration, and post processing tools to allow users to accurately program Robotic systems offline for specific welding applications. DELMIA ARC WELDING PROGRAMMER and SPOT WELDING PROGRAMMER offer an easy-to-learn and easy-to-use graphical programming paradigm to teach and sequence robots and associated tooling. Robot programmers can visualize and edit many aspects of the robot program directly in the 3D view.

For example, users can change the robot pose by directly moving the robot joints by dragging them with the mouse, or they can modify the TCP position orientation by directly interacting with the 3D model. Robot target points, the sequence of points, I/O signals, and even tooling actions performed at the points can also be displayed and modified in the 3D window without having to use text or dialog boxes. This novel use of 3D-direct manipulation in a Windows standard user interface dramatically shortens the learning curve and improves the user's efficiency in designing and programming a robotic workcell.

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Key Functionality

DELMIA Robot Simulation

- Robot positioning/workspace reachability analysis
- Simulate device motion
- Analyze reachability of robots with clash analysis
- Associate tools and positioning equipment with a robot
- Simulate multiple devices for robot & related kinematic tooling
- Cycle time analysis and optimize throughput
- Define robot & device tasks
- Simulate & validate multi-resource operations

DELMIA Arc Welding Programmer

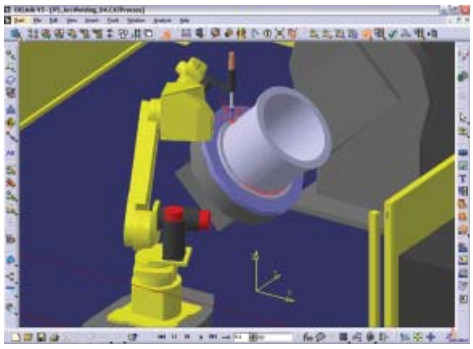
- Geometry-based arc weld robot path generation & modification
- Analyze weld consumables for accurate cost estimation
- Supports curve fastener import
- Supports modification of curve fasteners
- Robot task generation based on curve fasteners
- Seam search robot path generation
- Work piece positioner programming
- Supports rail/gantry program

DELMIA Spot Welding Programmer

- Automatic weldgun search command to check for feasible weldguns from a weldgun library
- Features commands such as “analyze welds”, “section stack-up” and “manual gun check” to analyze weldgun orientation and approach angles
- Detail robot tasks to check the accessibility of each weld point
- Basic weld gun library

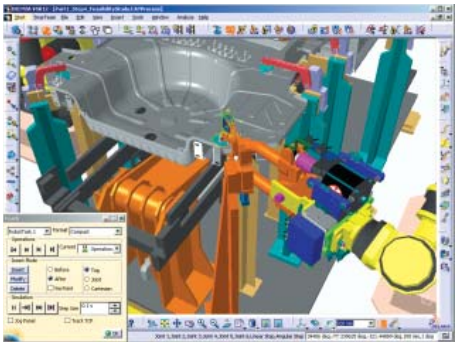
Benefits

- Virtual workcell set-up before actual, eliminates costly rework
- Virtually perform “what-if” scenarios for the optimum solution
- Validate tooling design with robots in the same environment
- Enables multi-brand robot simulation in the same workcell
- Enables communication & synchronization between multiple robots and kinematic tooling devices working simultaneously
- Validate robot programs prior to download
- Enables reuse of workcell set-up built by the resource planner in the DELMIA WORKCELL BUILDER solution



Plan and create arc welding programs while keeping hard-ware in production and minimize mistakes and rework in arc welding robot cell development.

Virtually create spot welding robot programs, simulate the workcell to check feasibility and cycle time, and download the final robot programs.



For more information on DELMIA, visit our website at www.delmia.com

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