RLW NAVIGATOR PROJECT

Workstation Planning & OLP

Benefits

- Early process and robot path feasibility
- Significantly reduced robot programming effort and time
- First-time-right implementation due to complete calibrated digital model
- Shortened ramp-up process and accelerated time-to-market
- Optimized robot path and movement
- Increased throughput and less energy

Features

- Intuitive, easy-to-do modelling
- Accessibility analysis, feedback to fixture and product design
- Integrated welding task sequencing and robot path planning
- Collision detection and avoidance
- Complex kinematics modelling and simulation of the RLW workstation
- Detailed workstation configuration
- Robot and fixture calibration
- Automated off-line robot programming
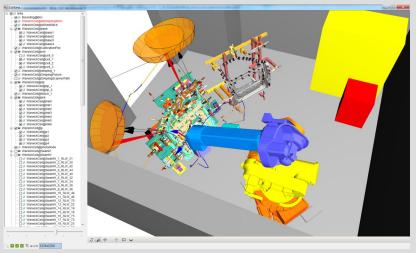- Advanced mathematical optimization

Summary

The software toolbox supports the detailed configuration, planning, simulation and automated off-line programming of RLW workstations. It provides an engineering platform to plan and optimize operation of RLW workstations. The workflow that takes industry-standard data as input is open to engineering interaction and produces executable code for an RLW robot. The software has advanced graphical user interface and 3D simulation service. The results have been verified and validated in physical welding processes, by making use the equipment and sample products of the project partners.

Business Value

By using the software toolbox you can build first-time-right products with less design efforts in the engineering phase and reduce programming time in the commissioning and launch phase. The toolbox increases your flexibility and reconfigurability while warranting the feasibility of your processes, which will run with minimal cycle time and energy demand.

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