# ADVANCED COURSE

## Teach programming/EcoScreen 3D-OnSite "Handling"

#### Target group

Robot programmers, specialized maintenance and operating personnel.

#### **Course objective**

You will understand the necessity of calibrating tools and objects and can reproduce the relevant procedures. You will be capable of interpreting logical structures in the programs and understand anti-collision interlocking between the individual robots. You will know the different declaration levels of the variables and be able to assess them. You will know the commands specific to the handler of the **Eco**Talk programming language, their application and meaning as well as the functioning principle and programming of the handler sensor system.

#### Admission requirements

Participation in the basic course (DT-27) in teach programming or comparable knowledge.

#### **Course structure**

You will program with the teach pendant and with the programming software **Eco**Screen 3D-OnSite. You will test and optimize the programs on the training system in tracking mode.



#### **Course contents**

- » Calibration
  - » Calibration of objects (car body) to world system» Calibration of tools
- » Programming practice
  - » Programming the logic structures
  - » Creating/using variables at different declaration levels
  - » Anti-collision interlock between robots
- » Handling
  - » Integrating the handler communication in main programs
  - » Hardware and functioning principle of the force sensor system
  - » Handler-specific range of commands of the EcoTalk programming language
  - » Explanation of the specific handling menus on the teach pendant and the visualization
  - » Analysis of selected examples from production practice
  - » Testing and optimizing programs on the training system
  - » Possibilities and limits of optimization via EcoScreen 3D-OnSite
- » Simulation
  - » Checking the handler communication by simulating several robots
  - Testing for reachability, singularity, hand axis angle and other parameters for the movement path programs of individual robots
- Process
- » Explanation of brush tables and time programs
- Parametrization of the process

### Course length/registration

#### Length: 5 days

Identification: DT-29 (Please state when you register)

#### CONTACT

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