Training SPECHT® 600 (SIEMENS 840D sl)

Mechanical Maintenance – M2
(Repair and Replacement)

Target group: The Training is provided for mechanics of SPECHT machine centers

Number of Participants: Maximum 5 participants.

Training Period: The nominal training period of course M2 is 5 days (each 7 hours). Deviations require prior consultation.

Prerequisites:

- Completed vocational training as an industrial mechanic
- Additional training as a technican/ engineer
- Knowledge of measuring instruments
- Experience in the detection of wear marks

Training Target:

- Safety regulations for maintenance personnel
- Use of suitable auxiliary and measuring equipment (from catalog)
- Use of the machine logbook
- Diagnosis possibilities, faultand wear detection
- Adjustments for repairs (SafetyIntegrated monitoring)
- Repairs on axis and spindles
- Repairs to doors, hatches, fixtures
- Machine check after collision

Training contents:

- Safety instructions
- Alarms, messages, alarm protocol
- Fixing of errors, cancelling messages
- Repairs on main axes (servo or linear drives)
    - Replacement of motors
    - Replacement of glass scale
    - Switching the active encoder
    - Replacement of ball screw assembly
    - Replacement of linear guides
    - Replacement of linear motors
    - Replacement of weight compensation
    - Setting the axis zero points (absolute encoder)
        - Use reference points to gantry axes
    - Adjustment of the gauge X1 / X2 and Y1 / Y2

        - Synchronizing the measuring systems X, Y
    - Use of the crash bore for referencing
- Repairs on rotary axes
    - Removing / installing bridge
    - Replacement encoder, sealing center pin
    - Replacement of pneumatic clamping
    - Motor exchange (rotor / stator)
    - Adjust commutation angle on motors connected in parallel mode and individually operated
- • Repairs at auxilliary axes (magazine)
    - Chain magazine HSK 63
        - Motor exchange at CT1, CT2, CT3, YT1 und ZT3
        - Setup axis zero points and transfer positions (*POS_PREP*)
        - cone cleaner
    - Tool breakage control
    - Chain magazine HSK 100
        - Motor exchange CT1, ZT1
        - indexing of chain
        - Motor exchange VT1
        - Setup axis zero points and transfer positions (*POS_PREP*)
        - cone cleaner
        - Tool breakage control
- Repairs at spindles
    - Replacement motor spindles CS1 (comp.) and CS2
    - Setting the spindle geometry CS1 and CS2
    - Setting zero point of the compensation axis W1 to CS1
    - Adjustment CS2 in Z direction
    - Adjust the analogue encoder of the spindle collet
    - Adjust spindle orientation
    - Tool seat check
- Machine check after collision
    - Check spindle geometry
    - Seat points of the clamping device: "Small geometry“
    - Recognize and correct tensions of the gantry axes
    - QC20-check