

Heidenhain 3+2 Axis Programming

Course description and information

The course covers the tilting functions of the Heidenhain TNC control for machines with swivel heads and/or tilting tables. Typical applications are, for example, oblique holes or contours in an oblique plane. The TNC always tilts the machining plane around the active datum and you then program the part in a reference plane. The TNC functions for tilting the working plane are coordinate transformations. The working plane is always perpendicular to the direction of the tool axis.

Objectives

The objective of the course is to teach the learners the use of tilting functions available in the Heidenhain TNC control.

<p>Course duration</p> <p>5 Full days at a regional PtSA Centre of Excellence</p>	<p>Cost</p> <p>*R 12 625 (excl VAT) per attendee Subject to group minimum size</p>
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**All required learning material and access to the relevant software during the course is included in the price.*

Registration

Participants should register through the relevant PtSA (Production Technologies Association of South Africa) Regional Centre of Excellence offering the course. See www.ptsa.co.za for contact information.

Course content

- Basic Knowledge: Tilting the Working Plane
- Tilting with Spatial Angles
- Graphic Simulation, Transformations
- Preset Table
- Safe Positioning with 5-Axis Machining
- Aligning the Working Plane
- Cycle 19, Incremental PLANE RELATIVE
- Tilting with Axis Angles, PLANE AXIAL
- M Functions Related to Tilted Machining
- PLANE FUNCTION (Further Variants), Interrupting Machining
- Cylindrical Surface Machining

Outcomes/Understanding/Theory

- Tilt the working plane
- Axis arrangements
- Tilt with spatial angles
- Graphic simulations & transformations
- Preset Table
- The necessity of safe positioning
- Align the working plane
- Cycle 19 with PLANE RELATIVE
- Tilt in PLANE AXIAL
- M functions related to tilt
- PLANE FUNCTION & variants
- Cylindrical surface machining

Assessment

Completed Heidenhain self-studies workbook (30% of mark) and completed Heidenhain 3+2 Axis exam (70% of mark) with a minimum pass mark of 60%.

Training manual

Heidenhain 3+2 Axis Programming Course Training Handbook.
HIT Workbook Tilted Machining HEIDENHAIN Conversational Programming.
HIT software install and license key.