

CONTROLLER FOR CNC-OPERATED MACHINE TOOLS

ABSTRACT:

A controller for optimization of metal-working on CNC-operated machine tools, includes a first unit (14) for monitoring the torque of the main drive of the machine tool to establish the actual, instantaneous cutting torque, a second unit (16) for setting the rated cutting torque in the teaching mode, a third unit (20) for calculating the feed rate required to maintain the cutting torque at a constant level and controlling the feed drive, and a fourth unit (18) responsive to the monitored main-drive torque and providing feed rate against breakage. The unit for calculating the feed rate is addressed by a compensator unit (30) responsive to signals from a comparator unit (24) comparing the torque as set with the actual, instantaneous torque as indicated by the first unit and to signals from an identifier unit (22) calculating the instantaneous cross-sectional area of the cut.

Figure 1 to accompany abstract upon publication.

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