

TOOL 2006

Tool materials and their use, from research through to market



Historical picture of the Polytechnic

A leading international conference concerned with materials for tools and moulds has established itself for some years under the name TOOL. The seventh TOOL event was held in one of the strongholds of tool and mould making in Italy. Turin Polytechnic, Italy's oldest technical University, organised the four-day conference under the direction of Professor Mario Rosso, whose chair represents metallurgy and materials.

Steel has of course traditionally been a central focus of the event because of its fundamental importance for tool and mould-making. A total of 160 lectures and posters highlighted new possibilities in

cold- and hot-working steel applications, high-speed steels and plastic mould steels. There were also reports on ground-breaking aspects of heat treatment and finishing technology; other presentations dealt with the wear characteristics of materials, FEM simulation techniques, and future trends in mould- and tool-making markets.

The 130 authors of the papers came

from 25 countries, with a balanced mix of presenters from universities and research institutions and from industry, including Peter Vetter (Tool Steel Quality Planning) and Dr Frank Hippenstiel (Quality). The two Buderus Edelstahl representatives presented further results from successful applications of the new plastic mould steel Thruhard Supreme. A second paper gave the public an overview of the technical hurdles a steelmaker has to overcome in supplying materials for manufacturing large components for mould- and tool-making.

Tapping slag at the ladle furnace in the steel mill



Heavy ingot with mould in the casting pit



Depositing a heavy ingot on the 55 MN open-die forging press

