

MECHANICAL DESIGN ON CUTTING TOOL LIFE

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Abstract

Abstract Tool life and tool quality belong to the most decisive factors of cold forging technology. Therefore, the activities of the International Cold Forging Group (ICFG) were focusing as well on this subject for the last years. The presentation will summarize the main topics of a special ICFG Document, Part I "General Aspects of Tool Life" published recently. Prior to the start of any tool life improvement activities it is most important to have a clear view of the actual tool life problem and its root causes. Since tool life reacts rather sensitive to the influence of various process parameters, a comprehensive analysis of the circumstances of tool failure starting from development phase to production phase is highly recommended. The paper presents a practical, process oriented concept of tool life approach, reaching from systematic recording and analysis of tool life data to process data monitoring and FE-simulation of tool failure.

Keywords: International Cold Forging Group ICFG, cold forging tools, tool life, fatigue damage.

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