Abstract:

Technical changes of products in industry, particularly during the late stages of product development processes, give rise to enormous costs and loss of time. Valuable capacity is involved, which should be used for the development of innovative products. In this paper, the concept of Integrated Engineering Change Management is presented. This concept has been generated on the basis of major problems which were identified in surveys and case studies in industry. Based upon these major problems, eight fields of activities (the prevention of technical changes, the early determination of technical changes, etc.) were derived in order to optimize and support the process of technical changes. As the Engineering Change Management was developed regarding both the aspects of business administration and engineering science, this concept is a practical and flexible solution to the previously highly formal rudiments realized in industry. The main focus of this paper is the flexible and problem specific technical change process regarding, on the one hand the new requirements of today’s product development processes (e.g. globalization of the product development, distributed product development processes or...
interdisciplinary processes for mechatronic products); on the other hand the human way of thinking and working should be supported. Therefore this process is derived from the procedural cycle for solving problems (Figure 1), a process based on the results of psychological observations of problem solving processes in mechanical design and systems engineering. The potential of the Integrated Engineering Change Management and its processes has been demonstrated in projects with German industry.

Stichworte: Änderungmanagement; Eigenschaftsfrüherkennung; Kostenmanagement

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