

عنوان مقاله:

Reverse Virtual Prototyping for Optimized Manufacturing

محل انتشار:

اولین کنفرانس بین المللی و هفتمین کنفرانس ملی مهندسی ساخت و تولید (سال: 1384)

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خلاصه مقاله:

Reverse Engineering enables the duplication of an existing part capturing the component's physical features, materials, and dimensional characteristics. The need to reverse engineer a component arises when: (a) repair and maintenance facilities require replacement parts with diminishing sources of supply, (b) original equipment manufacturers are either unwilling or unable to supply replacement parts, or demand inflated costs for sole-source parts, (c) technical data packages initially created by Original Manufacturer are inadequate, or propriety and unavailable, (d) it is advantageous to update obsolete materials or antiquated manufacturing processes with more current, less expensive technologies. Reverse engineering allows for the competitive procurement of such parts. Reverse engineering of mechanical parts using automatically acquired three-dimensional position data has used rather unsophisticated geometric models. Often, a digitizer is moved along parallel scanning paths and NC code generated to move a cutter along the same 3-D path. While reverse engineering automobile parts, process planning becomes difficult; especially in case of cold forged parts. This paper describes the reverse virtual prototyping of several components developed at the University of Engineering and Technology Lahore.

کلمات کلیدی:

Virtual Prototyping, Reverse Engineering, Solid Modeling, Manufacturing

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