A Method of Computer-aided Modular Fixture Design, Part 2: Designing the Fixture under NC Manufacturing System

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This paper presents a new computer-aided method for modular-fixture design, in which the key point is building the fixture on the concept of NC Manufacturing System (NMS). In this paper, an approach of creation for a NMS is proposed, first to extract or setup the feature model of worktable of NC machine tool in any CAD system. Base on the worktable, the algorithm of computer-aided modular fixture design (CMFD) is then presented; the Post-NC verification to check the performance of modular fixture in NC machining is introduced at the last section of the paper. This method could help engineers to develop and employ an error-free modular fixture during the complex NC-manufacturing production.

Keywords: NMS, Bridge Joint (BJ), Worktable-based Design of Modular Fixture, Post-NC Verification

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