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Article

Parametric Analysis of Die Manufacturing Industry Using Cad-Cam Integration Approach

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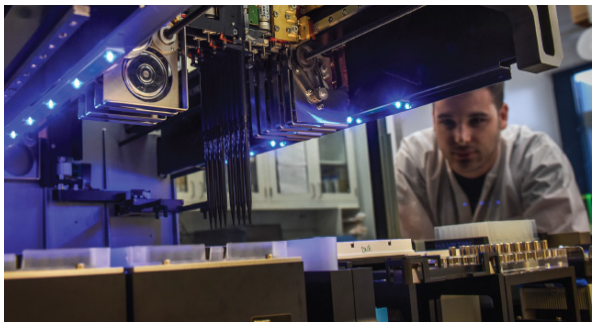
A B S T R A C T

It is well identified element that in complete product life cycle the most inefficient process is the industrial process i.e. the machining operations as per customer demand. The same rule is also appropriate for die making. The die comprises some complicated shapes and complicated profile on itself which is not possible to produce by using conventional machining process. Also, when conventional machining process are used, the time mandatory to industrial for die is too great alongside this it is very problematic to handle the quality issues arises in industrial product. This makes the considerate effect on the efficiency of the firm. So, it is indispensable to focus on machining operations for reducing lead time. The contemporary tool room cannot say updated unless there is CNC or VMC machine set up. But motionless the company may face the problematic of production delay and poor quality. This is since of lack of awareness towards proper process employment. This is since of lack of knowledge of CAD-CAM system. Also, the shop floor people cannot instrument the process plan as tutored because of the restraint of bottleneck. The over-all effect of soul behavior is intensification in production lead time, growth in the production time of individual element, poor quality management and imperfection of quality of end product.[1-4]

Keywords: Material handling System, Hydraulic Stacker

Introduction

The accomplishment of computer integration will depend on the expertise of managers in executing existing methods to take benefit of the potentials offered by new technologies.[2] For executing CIM it needs education and training for the employs[4] Although people go through some training, seminar and workshop but due to not getting exactly what they want to do they cannot use the system related CAD-CAM effectively.[2]



To overwhelmed this shortfall and to tool the CIM combination this project aids the organization to keep up-to-date record related to design, process grounding and industrial of the system and to place the obligatory info at one place so that while removing data it should be easy to extract as well as to upload. For this propose a simple user interface is industrialized in these projects which helps to gather the info with respect to time as well as delivers the information

in very short time when necessitates.[5] Also, this project is absorbed on the concept like con-current engineering implementation in small scale industry. First part of this paper contains current practices i.e. the system presently works in small scale manufacturing industry and the unwanted effect of system on production floor in sense of increase in production time, poor manufacturing quality, workers mentality etc., next part includes the proposed system i.e. eliminated loop holes in the current system using new techniques[6-10] which reduces the manufacturing time and improves the quality of end product, then the last part focused on comparison between the current system and proposed system in aspects of manufacturing time, quality of product and productivity.[11-14]

Problem Identification

Problem Statement

In small scale, Indian manufacturing industries, the productivity affects due to following reasons:

- deficiency of methodical line
- needless procedure employment
- employed in separation
- conservative machining
- communication gap
- Recognizing different types of error

Thus, in directive to advance efficiency, subsequent ways can be applied:

- It is vital to be indebted the activities in one thread so that it is easy to implement the systematic approach,
- elimination of feeling of isolation, quality can be improving by avoiding working of conventional machining.

The purposes of this research can be summarized as follows:

To design a low budget system for CAD-CAM integration for a small-scale die manufacturing industry so as:

- To lessen lead time by reducing machining time, programming time, assembly time, time required to trial etc.
- Error identification and elimination for improved quality of end product during production
- To enhance productivity by increasing the profit of firm.[15-17]

Proposed Research Approach

- The material used for this purpose is mild steel angler bar. Thickness 76.2 mm this is used because of the horizontal frame is responsible for the stability of the vertical frame. The Implementation of concept of concurrent engineering.
- Method study.
- Design of framework for integrating the CAD-CAM activities.
- Implementation of frame work.

Conceptual Framework

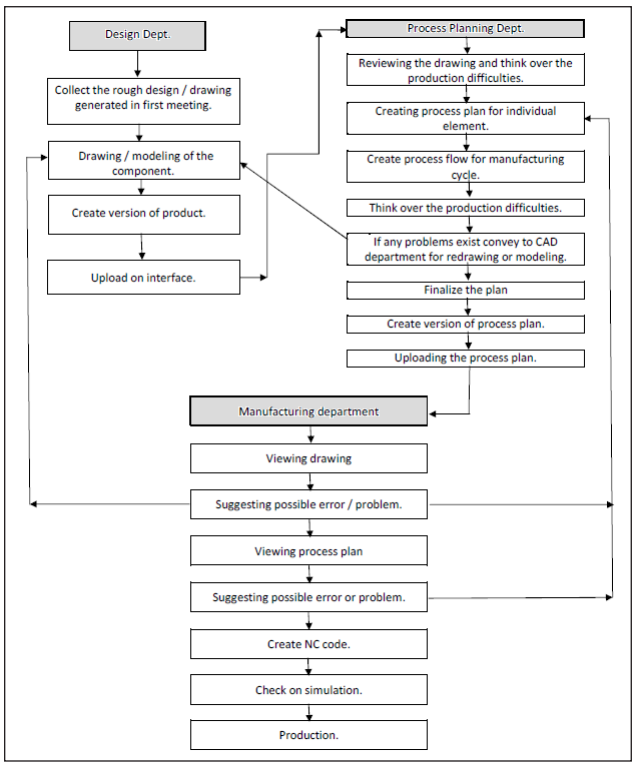


Figure 1.Work flow algorithm in proposed system

Conclusion

According to proposed system, the main purpose of this work is to improve the efficiency. This can be done by identifying different types of error, avoid use of old machines, and identifying various flaws in industry. This proposed system rectifies all the problems by introducing low budget CAD-CAM system.

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