Proceedings of the 8th Annual World Conference
of the Society for Industrial and Systems Engineering,
Baltimore, MD, USA
October 17-18, 2019

Development of Computer Aided Machining (CAM) from Computer Aided Design (CAD)

S. Dominguez-Rueda, K. Escamilla-Salazar, and I. Escamilla-Salazar

Facultad de Ingeniería Mecánica y Eléctrica
Universidad Autónoma de Nuevo León,
Nuevo León, Mexico

Corresponding author's Email: silveriorueda@outlook.com

Abstract: The machine tools have played a fundamental role in the technological development of the world, until they reach the point of saying that they directly intervene in industrial development.

Computer-aided manufacturing offers important advantages compared to traditional methods. Generally, CAM equipment eliminates human error during processes and the reduction of labor costs. However, the constant precision and optimal use of the equipment represents even greater advantages. CAM equipment is based on a series of numerical codes, stored in computer files, to control manufacturing tasks.

Computer Numerical Control (CNC) is obtained by describing the operations of the machine in terms of the special codes and the geometry of shapes of the components, creating specialized computer files or part programs. The creation of these parts programs are a task that, to a large extent, is carried out today by special computer software that creates the link between CAD and CAM systems.

The characteristics of CAD/CAM systems are used by designers, engineers and manufacturers to adapt them to the specific needs of their situations. Computer Integrated Manufacturing (CIM) takes full advantage of the potential of this technology by combining a wide range of computer-aided activities, which can include inventory control, material cost calculation and total control of each production process. This offers greater flexibility to the manufacturer, allowing the company to respond with greater agility to market demands and the development of new products

Keywords: CAD, CAM, Design