

# **CNC Programming Training and Assistance using CAM Software for Improving Employee Skills of C-Maxi Alloy Cast Yogyakarta**

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## **ABSTRACT**

C-Maxi is a company operating in the Aluminum Casting sector with products for various medical, automotive, electrical and bicycle components. Along with the increase in orders, especially variations in product types, C-Maxi is facing new challenges, namely how to work on and complete orders with good quality and on time. The challenge is mainly on orders for new products that have never been done before and requests in large quantities. actually C-Maxi already has several CNC machines both turning and milling to support the smooth production process. The finishing process of casting results on C-Maxi is mostly done using CNC machining, especially for complicated products. However, production department human resources still lack experience regarding the use of MasterCAM X7 software to support preparation for the CNC machining process. On the other hand, C-Maxi receives many orders for products with complex levels of difficulty that need to be completed using CNC machining to obtain precise products. Therefore, in order to overcome this problem, the alternative solution proposed operationally is to carry out ongoing training and mentoring over a certain period of time by considering the production schedule at CV C-Maxi, especially the use of MasterCAM software for programming CNC machines, applications on complex product. The output target of this PkM activity is a Certificate/Letter of Statement from the partner regarding the implementation of the activity and a Cooperation/IA Text between FT UNY - Partners. In addition, activities will be published on the Mechanical Engineering Education Study Program website. The overall stages of training and mentoring activities will be carried out in the preparation, implementation and reporting stages where the total time is around 10 months. The implementation stage is carried out in the form of training which focuses more on the use of MasterCAM X7 software and then continues with assistance in the form of CNC program applications on machines.

*Kata Kunci: CNC machining, CAM programming, aluminum casting, C-Maxi alloy cast*