

CONSTRUCTION OF THE BENDING MACHINE

Prepared by: Daniel Teh Chew Keong

ABSTRACT

My project is to design and construct a bar bending machine. This machine is used to bend flat bar steel into curve or other curvature shape. The size of the machine is very convenient for portable work. It is fully made by steel. Moreover it is easy to be carried and used at any time and any place. It works manually, so no electricity sources are needed.

To build this machine many equipment or machine is used. By using all this equipment, process for making the project is faster and easier. I had also learned a proper method for operating all this machine and equipment. Choosing component material is very important, because it will affect the overall cost of the machine and the product quality. With this consideration, I had design this machine with the maximum quality and low in cost.

The Bending Machine used 3 rollers to configure the bending process. Where the roller is shapes to accommodate the raw material that the use wants to bend. For example, if user wants to bend a pipe, this roller will be lathe to the pipes shape. In this machine the most important part is the roller. So the hardness of the roller is very important. After the turning process, this roller will be put in furnace for carburizing process or hardening process. This process will help to improve the bending process. The rollers are changeable, where user can change the roller anytime or when they need to bend different shape of material. The features and process of this machine will be discussed more detail in this project report.