

## **ABSTRACT**

### **Making Biogas Digester Mixing Machine Framework**

By :

**Panji Winarno**  
**09508131013**

The objective of the last project compiling, entitled The Process Of Making Biogas Digester Mixing Machine Framework are to identify the required materials, equipment used, the process is carried out, and performance test of the framework. All these steps taken to obtain the result product in accordance with the desired product in a time efficient.

The method used in the manufacture of biogas digester mixing machine framework include: (1). Determine the materials to be used. (2). Selecting equipment to be used. (3). Steps process of making framework. (4). Conducting test of biogas digester mixing machine framework.

Materials needed to make a biogas digester mixing machine framework is angled plate size 40 x 40 x 4 mm. This material was chosen because it has a specification that is strong enough to the machine framework. Tools and machines used are painting tools, steel ruller, roll ruller, punch, scriber, hammers, grindstone cut, saws, grindstone hands, files, abrasive, vise, steel brushes, electric welding machine, drilling machine, and a paint brush. The process of making biogas digester mixing machine framework started with the process of making plans of cutting (cutting plan) in the material. Cutting materials using saws grinders and hand cut. Subsequently the framework of the assembly process started from making the top and bottom framework. Switching process is done by welding. Welding is done using SMAW welding (shielded metal arc welding) using AWS E 6013 elektroda Ø 3.2 mm. The finishing process with sanding and painting process. Performance test conducted to determine the performance of the machine framework produced biogas digester mixer. From the results of performance tests conducted, the resulting framework capable of supporting the other components of the machine and be able to withstand the vibrations generated by the motor when operating on the main shaft that drives the rotation of 20 rpm.

Keywords: Frame machine, mixer, digester, biogas