ABSTRACT

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The Process of Making a Body Tank for Water Trucks 16 KL at PT. BMT (Burangkeng Maju Tehnik)
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Body Tank Water Truck is a tank truck that is designed to transport liquid loads to support the work of opening and maintaining roads at the mine / plantation site. One type of body tank that is widely used is the roll type and bending type. The body tank is also equipped with Water Cannon, Spray Head Valve and Hose ReelI. The purpose of this study was to determine the process of making a body tank with dimensions of the plate, the material, and the machines used. Descriptive research was conducted on the supervisor or operator at PT. BMT (Burangkeng Maju Tehnik) in January 2019. To find out the stages of the body tank manufacturing process, which is started by selecting SS400 material, then designing 2D with the company's engineering software that is solidworks complete with body tank dimensions that include the main components namely shell plate, cover plate, top plate, bottom plate, and baffle plate. Continuing the formation of material into separate components which is done by Shearing (Cutting) using a Shearing machine type QC11Y-12x6000 cut dimensions and quantity according to working drawings, Bending (bending) using two Baykal bending machines APHS 4116x440 with a mass pressure of 440 tons carried out with bend the steel plate with a predetermined angle, and Gas Cutting (Cutting) using the Gas Cutting Machine IK-54D is done cutting on the cover plate, top plate and baffle plate components, then checking with Quality Control components to ensure that the components meet the criteria and quality well. Furthermore, assembling the components to become a body tank through the welding process is carried out by connecting and assembling the components to be made into a product using Las GMAW with a protective gas in the form of CO2 and an additional material in the form of a steel wire coil with a diameter of 1 mm. If there is a crust resulting from the welding process is done smoothing using a grinder, then testing the leakage of the tank body to produce a good product, after that painting the body tank and finishing process with paint drying, and installation of other supporting components of the Water Truck and carefully checked before being delivered to consumers. The results of all processes carried out in accordance with applicable SOP and it can be seen that the body tank with the bending process can reduce the value of the cost because it does not require much welding process compared to those using the roll process.