

ABSTRACT

RANGGA CAHYO PRAMUDIANTORO, 21420057

PRODUCTION PROCESS OF 60 FT UGL ROLLERS ON FLAT TOP (CFT) WAGON CONTAINER TYPE TRAINS AT PT. INDUSTRIAL TRAIN FIRE

PI. Mechanical Engineering. Industrial Technology Faculty. Gunadarma University. 2023 Keywords : Bogie, Bolster, Material EN10025-6 S690Q, EN10025-2 S355J2+N, BS EN 10305-1, Production Process.

(xiii+ 43 + Attachments)

A train is a form of rail transportation consisting of a series of vehicles pulled along a railroad track to transport cargo or passengers. There are different types of trains designed for specific purposes. A train may consist of a combination of one or more locomotives and attached railcars, or several self-propelled units (or sometimes a single or articulated powered coach, called a railcar). To move the train, a component called a bogie is needed. Bogies are generally used for wheels with more than 2 axles (As) in one train car. One of the bogie components found on a train is a bolster. The function of the bolster is to support the bogie against the train body. In making UGL 60 FT bolsters, it begins with material preparation. The materials used are S690Q steel with a tensile strength of 690 MPa, S355J2+N steel with a tensile strength of 355 MPa and E235 steel pipe with a tensile strength of 235 MPa. After that, it enters the cutting process, namely the process of cutting plate-shaped material using a plasma cutting machine and cutting steel pipes with a bandsaw machine, then the chamfering process, which is the process of cutting corners to form a chamfer with an angle of 0 - 90 degrees, after that the Bending process, namely the process of bending on one of the bolster components, then the assembly process, namely the process of connecting a single part of the bolster and continuing the welding process using a 350 ampere GMAW welding machine, and the last is the Quality Control (QC) process, namely the material testing process using the Non Destructive Test (NDT) method. in the form of Magnetic Test (MT) and Visual Test (VT) testing. Quality Control (QC) is carried out to check the feasibility of an object being produced. If there is a workpiece that is not good then the workpiece will be repaired again. And if the workpiece is said to be feasible, it will be brought to the assembly process in the assembly division.

Bibliography (2009 to 2023)