

## ABSTRACT

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### **PROCESS OF MAKING U BOLT CLAMP USING S45C MATERIAL**

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**Key Word :** U Bolt Clamp, Manufacturing Process, Material S45C

(xii+29+Attachment)

*Piping systems, in general, pipes describe means of conveying air, gas and concentrated liquids without any specific specifications, so usually without the help of other tools such as pumps. In general, piping describes a means of conveying air, gas and concentrated liquids assisted by other devices such as pumps because of high pressure, large flow rates and high temperature increases or the presence of hazardous materials. The piping system consists of several components, including Pipes, Fittings, Valves, Flanges, Gaskets, Expansion Joints, Strainers, Gauges, and Pipe Clamps. A pipe clamp or commonly known as a U Bolt Clamp is a type of U-shaped bolt, which is commonly used to tie a cylindrical pipe or pole to a support. One of the important components of the piping system is the pipe clamp or U Bolt Clamp which functions as a support for the pipe fasteners, so that the pipe can be stationary or not crusty freely. The material used to make the U Bolt Clamp is made from S45C steel, this material was chosen because it has a strong material composition. In manufacturing the U Bolt Clamp goes through several stages including cutting, turning, and roll bending processes. Calculation of time during the turning process can be found to be 358.28 rpm. And finally, Quality Control is carried out to check whether or not an item is produced.*

*Bibliography (2013 s/d 2022)*