

**MODIFICATION OF PIPE CUTTING TOOLS USING OXY-
ACETELYNE WELDING (OAW) FOR MECHANICAL
ENGINEERING DEPARTMENT OF BENGKALIS STATE
POLYTECHNIC**

Name : *Riky Alfani*
Nim : *2103181079*
supervisor : *Razali, ST., MT*

ABSTRACT

Metal cutting using an oxy-acetylene welding flame or carbide welding is a metal separation process with a chemical reaction, namely the reaction between metal and oxygen. This reaction occurs at high temperatures, this high temperature comes from the carbide welding flame. When a metal reaches a high temperature or temperature then pure oxygen is given it will cause a rapid temperature increase until it can melt the metal. In pipe cutting using pipe tools using oxy-acetylene, it requires a slow cutting speed of 0.7 to 0.5 rpm so that the surface results on flat and precise cuts. When cutting metal, one must know the cutting point by looking at the oxy-acetylene gas discharge, the alignment of the pipe at the time of cutting must be precise. If the straightness of the pipe is not precise, then when cutting the pipe, the pipe is not cut and must continue to do the boiling point at the beginning again when cutting the pipe. From this modification of the pipe cutting tool, the weight of the pipe that can be cut is 50 kg, the length is 100 cm and the diameter is under 9 inches.

Keywords: Modification, oxy-acetylene, cutting speed, metal cutting