

ABSTRACT

The development of increasingly advanced technology makes technology very modern, marked by the presence of LED TVs, Smartphones and other sophisticated electronic devices, even in the automotive world, today's vehicles are getting sophisticated, making companies compete to issue units. its newest. Behind the advancement of an automotive company, there must be a process that must exist in every company, namely welding. The types of welding used are also very many, from Shield Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), Tungsten Inert Gas (TIG), spot, projection, seam, and others. Metal Inert Gas (MIG) welding because in this welding it is very good for welding which has anti-rust material.

The tests carried out in this study include a destructive test to determine the strength of the weld and a penetrant test to determine the diameter of the weld melt. The research was conducted by making 6 broken test specimens, and 5 penetrant test specimens. Specimens were formed from trial, 3 specimens were formed from trial parameters, and 3 specimens were formed from trial wire. However, there was 1 specimen from the trial parameter that could not take the penetrant test because at the time of the broken test it did not meet the standard so that it could not continue to the penetrant test.

From testing and checking it can be concluded that wire strength is very important in Metal Inert Gas (MIG) welding because the electrodes are the wire itself, the heavier the wire is, the larger the amperage required if the amperage is not increased automatically the wire will not be pulled. so that when the wire is old/not pulled, there will be no electrodes, there will only be combustion, if left unchecked, a pinhole will occur, but if you increase the amperage without setting the amperage, a hole will occur due to the use of non-standard amperage.

Keywords: Wirestrength, ampere, MIG welding, destructive test, penetrant