



EFEK MEDIA PENDINGIN KADAR AIR GARAM TERHADAP UJI IMPAK, KEKERASAN DAN STRUKTUR MIKRO PADA BAJA STAINLESS STEEL AISI 304 HASIL PENGELOMAN SMAW

EFFECT OF COOLING MEDIA SALT WATER CONTENT ON IMPACT TESTS, HARDNESS AND MICRO STRUCTURE IN AISI 304 STAINLESS STEEL SMAW WELDING RESULTS

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ARTICLE INFO

ABSTRACT

SMAW welding (Shielded Metal Arc Welding) is an electric arc welding method which is also known as shielded electrode welding. It is one of the most common welding methods used in various industries, construction, repair, and many other applications. Cooling media is also an important factor that influences welding results. This research aims to determine the nature of impact toughness and also investigate the effect of the cooling media on the brine content of SMAW welding results from AISI 304 stainless steel with variations in the cooling media on the brine content after going through the quenching process.

For the use of salt levels that will be used are 45 gr, 90 gr and 130 gr. In this study additional distilled water is used, where distilled water has undergone a distillation or deionization process to produce pure water that is free from substances that can contaminate or contaminate the water.

The results of research carried out for 1 month, it is known that the results of welding using a cooling medium with a salt water content produce. The higher the salt water content in the cooling medium, the greater the welding impact strength, with a cooling medium with a salt water content of 130 gr, the impact strength is greater than salt water content 45 gr and sea water. The average hardness value increases with increasing salt



Dinamika Teknik Mesin

Jurnal Keilmuan dan Terapan Teknik Mesin
<http://dinamika.unram.ac.id/index.php/DTM/index>



Article History:

Received

Accepted

Available online

content, such as in sea water cooling media (58 HRB), 45 gr of salt (60 HRB), 90 gr of salt (63.7 HRB), and 130 gr of salt (66.7 HRB) . Hardness test results data were obtained after data collection.

Keywords:

Welding

SMAW

Cooling media

Brine content

quenching

