Determining Feasibility of Local Content Elbow Pipe Material as Replacement of GE N879 Elbow Pipe Material on Locomotive CC204 at PT. Industri Kereta Api (Persero)

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Abstract
At this research has been determined feasibility of local content elbow pipe material as replacement of GE N879 elbow pipe material that appropriate with ASTM A234-51T standard. To reach that objective, so has been done some tests included metallography test to know micro structure of material, XRD test to find out composition of material, and hardness test by Rockwell method. And also, has been done some heat treatment processes to both of sample to find model of hardness value of them. The difference of hardness value of GE N879 elbow pipe material before and after heat treatment process is about 22.5-23.2 HRB. In the other hand, the difference of hardness value of local content elbow pipe material is about 19.5-29.5 HRB. Based on the result, so local content material comply as replacement of GE N879 elbow pipe material.

Key words : Feasibility, local content material, heat treatment process, metallography test, Rockwell hardness test, XRD test