DESIGNING SALT SPRAY CHAMBER CORROSION TEST AND APPLICATIONS CORROSION RATE MEASUREMENT OF AUTOMOBILES BODY PLATE PRODUCTION FROM EUROPE AND JAPAN ON MEDIA NaCl WITH CONCENTRATE VARIATION

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Abstract

In the era of globalization, the use of metal plays a very important role in the development of technology and industry today, especially in the automotive industry. The problem that arises is related to the use of metal corrosion. Salt spray test is one of the test to measure corrosion rate using corrosive solution in a closed room, so that the specimen will suffer corrosion in a shorter time.

A method of this design using study of literature. Prior to salt spray chamber design first made design tool salt spray corrosion test chamber. To test the performance of the tool used salt spray chamber plate body automobiles made in Japan and Europe with the specified size with a length of 6 cm, 4 cm wide, and 0.1 cm thick. Testing was carried out for 48 hours after 48 hours of testing done weighing heavily on the NaCl concentration of 3%, 4%, and 5% as corrosive media, pressure compressor spray on 43.5 psi and the temperature was kept at 35°C.
The results of the design tool salt spray test chamber can work well in accordance with the objectives. This is evident with the functioning of the device as a tool capable of mengkorosikan plate body automobiles with the test results obtained for the average corrosion rate of plate japanese car body production at 2.3539 mm / yr. In subsequent testing found the average corrosion rate for the production of European plate body for 2.1161 mm / yr. Thus it was concluded that Japanese-made automobiles plate body more susceptible to corrosion compared with the production of automobiles plate body plate production europe europe because there are a lot more chrome elements.

Keywords : corrosion, plate body automobiles, salt spray chamber test