ABSTRAKSI

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Proses Produksi *Inner Ring Bearing* Tipe 6007 dan Analisa *Solidworks Simulations* di PT. SKF Indonesia

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(xi + 50 + *Attachment*)

Bearing is a machine element that resembles a loaded shaft, so that the rotation or alternating motion can take place smoothly, safely and long life. Bearings must be sturdy and resilient to allow the shaft and other engine elements to work properly. For this reason, the material of bearings which are high carbon steel must be ductility and tough. To get the desired metal properties the Heat Treatment process is carried out, especially in the inner ring. Hardness testing on the inner ring of the bearing is carried out after the Heat Treatment process. Hardness testing using Digital Rockwell Hardness Tester, the value of the hardness can be directly read on the scale of the tool. The Inner Ring Heat Treatment Process of Type 6007 bearings can produce the desired mechanical properties, namely the hardness number of Rockwell 59-64 HRC. From the analysis using solidworks software, the maximum stress value is 1,582 x 108 N/m^2 and the minimum safety factor is 1,089. If the results of the hardness testing are in accordance with factory standards, the inner ring meets the factory quality requirements.

References (th : 1978 s/d th : 1999)