ABSTRACT

Steel industry is a strategic industry that is used as an important raw material for industries as a whole, for infrastructure, production of capital goods, transportation, automotive, and weaponry. According to the World Steel Association, in 2014 per capita steel consumption of Indonesia reached 62.2 kg / capita, but the figure is still relatively low. The Indonesian government is now aware of this and plans to increase national steel consumption. One way to reduce the losses that occur is to increase the RAM *(Reliability Availability Maintainability) of the* CCM 3*. In* RAM *calculations used modeling* RBD (*Reliability Block Diagram*) *to facilitate understanding of the system. The cost of the* RAM *problem can be determined by using the* COUR *(Cost of Unreliability) method. Results of data processing using* RAM *with* RBD *modeling obtained the value of system reliability of* 28.44% *at t =* 936 *and the value of machine maintainability reached* 100% *at least takes* 13 *hours. With inherent availability value of* 99.47% *and operational availability of* 99.44%*. Based on the evaluation that has been done using the company policy and Key Performance Indicator* IVARA*, the availability indicator has reached the target indicator given. From the calculation result using* RAM *got* COUR *value is* Rp 5.086.109.491,00 *based on downtime or corrective time.*

Keywords : *Availability, Cost of Unreliability, Key Performance Indicator, Maintainability, Reliability, Reliability Block Diagram*