This research aims to understand the factors that relate to things that inhibit the exhaust valve engine and to understand what can support the exhaust valve engine maintenance that make a trouble on the vessel. By understanding the factors of main engine operational can be normal and accordance with the procedure.

This research did at MV, Andhika Kalyani for about a year from 25 November 2014 until 07 January 2016. The source data what obtained is the primary data that obtained directly from research’s place with observation and interview with crew of MV, Andhika Kalyanto get comprehension about maintenance on the exhaust valve, and the literature that related to the minithesis’s title. The method that used in this minithesis is USG (Urgency, Seriously, Growth) which the priority of the problem, the specific problem as the factors that cause unoptimal working of exhaust valve on main engine MV, Andhika Kalyani.

The results obtained after the analysis showed that the damage to the exhaust valve due to lack of maintenance and the occurrence of damage to the exhaust valve caused by the material that experienced a collision between spindle and seating continuously, the problem is reinforced with a cooled gas valve cooling system so that the cooling process of the exhaust valve is not maximal and excessive heat generated results in the hardness value of the material is low. Efforts made for the exhaust valve is by grinding or conditioning of damaged damages in accordance with the instruction manual book and treatment of cooling water exhaust valve because it is very influential on the resistance of materials in the spindle and seating.

Key words: maintenance, exhaust valve.