ABSTRACT

Raxca Bayu Aji, 2017, NIT : 50135006.T, " *identication damage of piston and piston ring cylinder no. 2 main engine in MV. HANJIN GDYNIA with methode USG*", minithesis of technical programs, Diploma IV programs, merchant marine polytechnic semarang, *Supervising professor* I: H. Sumarno P.S., M.M., M.Mar.E. *supervising professor* II: Adi Oktavianto, S`T., M.M.

Main engine is a machine installation consisting of supposed system and have function to make a thrust to the vessel so this vessel can moving forward and backward, main engine which have type Doosan Sulzer7RT-Flex have seven cylinder. Thereare problems at the piston and piston ring cylinder no. 2 can inhibited the vessel operation system, Therefore of need maintenance to solve problems.

Remember main engine is very important at the vessel, and then needed appropriate methods to solve problem damage piston and piston ring with USG (Urgent, Seriousness, Growth) methods that is with method to make a problems of tree to looking for cause of the problem, and added to observation, interview to looking for factor of causes, impact, and the effort should be done.

From the result of the material can be conclusion that is factor causes of piston and piston ring cylinder no. 2 is the increase temperature on the piston cooling which discharge L.O is 37 40°C, maintenance to piston and piston ring as not consist with running hours, lubrication oil viscosity is not reach 12,9. So that have impact to compression pressure inside of combustion chamber decrease from 60 until 40 bar, combustion inside of cylinder is not perfect, and the effort should we do is doing routine maintenance for cooler, Recycle of lubrication oil if viscocity decrease from 12,9, doing checking as like running hours.

Keywords : Main engine, piston, piston ring, USG methods