ABSTRACT

The new International Convention on Ship Recycling was adopted in 2009. This Convention aims to ensure that ships when they are being recycled, after reaching the end of their operational, recycle at ship recycling yard with safely and not cause risk to human safety and the environment around it. Indonesia, including the State concerned with this rule because of Indonesia including countries of the old ship enough.

Ship recycling yards and the process requires using a combination of several technologies such as Docking Systems, Cutting Systems, De-coating System and Containment System. Each technology has a number of alternatives so as to determine the necessary technologies and sub-criteria selection criteria. Use of the method Fuzzy Decision Making Multi Criteria to determine the ship recycling yards technology based on qualitative criteria of the preferences of expert decision makers in the field. Having determined the necessary technology economically analyzed to determine the feasibility was carried out before the industry.

From the results obtained the data processing technology chosen by the condition in Indonesia for the Docking System is the Pier, to Cutting System is the Oxy-acetylene, to De-coating System is Dry Ice Blasting and for Containment System is the Floating Barrier. In terms of economic development for ship recycling yards Indonesia with medium size will cost Rp. 44.785.840.000, With the economic analysis for this investment to get the Net Present Value (NPV) of Rp 21.512.893.788, Internal Rate of Return (IRR) of 32,03% with a Payback Period (PBP) for 4,52 years.

The development of ship recycling yards of medium size is still possible to be carried out in Indonesia by using the selected alternative technologies based on many criteria and sub-criteria. Development-oriented industries Safety, Worker Health and Environment is a necessary condition for this industry to survive (sustainable) given by the new rules on ship recycling.

Keywords: Ship Recycling Yard, Fuzzy MCDM, Qualitative Criteria