STUDY DESIGN OF MONITORING AND CONTROL OF SHIPS IN TANJUNG PERAK PORT-BASED FUZZY LOGIC

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Abstract
Port of Tanjung Perak Surabaya is one of the largest port in Indonesia, where dozens or even hundreds of ships operating in this port. With the high density of marine traffic required vessel monitoring and control system to improve safety factor. The aim of this study is developing marine traffic control system based on Fuzzy logic. The developed system could monitor and control ships operated in Tanjung Perak Surabaya, where variables are used as inputs are position and speed of ships. The waterway is divided into several zone which are also based on the speed and the position and as the reference for monitoring and controlling system. If there are a ship that violate the rules which have been determined, then the developed system will be sent a
warning that the ship has violated the rules and should come back into compliance with the standard.

Key words: fuzzy logic, monitoring, tanjung perak port