STUDY TO DETERMINE DANGEROUS AREA AT TANJUNG PERAK PORT SURABAYA BASED ON AIS DATA

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Abstract
Tanjung Perak Port Surabaya is one of the biggest and very busy ports in Indonesia. There are 10 (ten) ship terminals, Navy base and many private port such as belong to PT. Semen Gresik, PT. Bogasari, and PT. Petro Kimia. More than hundreds of ships sail around Tanjung Perak Port with many destinations, these made the density of the sea traffic is very high and also many crossing happen. Beside the traffic situation, the port condition such as sea depth, currents, and narrow channel caused of ships accidents.

The purpose of this study is to improve ships safety by determining dangerous area. The variables to determine dangerous area are port conditions, crossing route and also density of the ships traffic. Using AIS data which are described the density of sea traffics and also the pattern of ships movement during some periods and considering the port condition, the dangerous area can be decided.

Hopefully by determining dangerous area the ship accident can be decreasing and the ships are more carefully if passing the dangerous area.
Keywords: density, AIS, dangerous area