Perencanaan Pemecah Gelombang (breakwater) di Pelabuhan Merak = Breakwater Planning at Merak Port

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Abstrak

[ABSTRAK
Pelabuhan Merak, Banten merupakan pelabuhan penyeberangan selat Sunda. Permasalahan yang kerap terjadi di pelabuhan Merak adalah dalam mobilitas
kapal yang sering terganggu dan menjadi lebih lama akibat kondisi perairan kurang tenang. Rasio v/c saat ini bahkan sudah mencapai 0,95. Oleh sebab itu
perlu dibangun pemecah gelombang yang dapat melindungi pelabuhan agar kondisi perairan menjadi lebih tenang. Tujuan dari penelitian ini adalah
merencanakan ulang tata letak dan desain pemecah gelombang di pelabuhan Merak. Pemecah gelombang yang direncanakan adalah tipe sisi miring dari
material batu pecah atau tetrapod dengan tiga alternatif kemiringan. Alternatif yang paling memungkinkan adalah alternatif II dengan volume yang tidak terlalu
besar dibanding alternatif III, yaitu 245,05 m3 per 1 meter panjangnya dan memiliki kelandaian yang dapat meredam gelombang lebih efektif dibanding
alternatif I. Dengan adanya breakwater ini, kapasitas pelabuhan dapat meningkat sehingga rasio v/c berkurang menjadi 0,57.
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Port of Merak, Banten is a port of Sunda Strait crossing. The problems that often
occur at the Merak port is the mobility of the ship which is often disturbed and
becomes longer due to less calm water conditions. Therefore it is necessary to
build a breakwater to protect the port so that the water conditions become calmer.
The purpose of this study is to plan the layout and redesign breakwater at the
Merak port. Planned breakwater is the sloping type made of broken stone or
tetrapod material with three alternatives, namely the slope of cot  = 1.5, cot  =
2, and cot  = 3. The most likely alternative is the alternative II with a volume that
is not too large compared to the alternative III, which is 245.05 m3 per 1 meter in
length and has a slope that can absorbs wave energy more effective than the
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