REVIEW DESIGN OF FLOATING DOCK FOR FACILITY LOADING UNLOADING CATAMARAN DREDGER

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ABSTRACT

To support the existence of development of catamaran dredger and followed by plan development of floating dock as a means of catamaran dredger loading and unloading, needing several things which must be well-designed. Floating dock which have designed have many constraint if operated in area river of Surabaya, that is floating dock have empty draft which too big, so if when ebb river, floating dock less optimal to be operated. Besides, floating dock catamaran have value of displacement small, so at the time of loading and unloading of displacement additional which yielded enough few. Therefore need planning floating dock which compatible with the condition of river inarea in Surabaya. Planning of floating dock to be relied on the condition of river and also dimension of container.

Calculation and planning of floating dock use some method, among others planning of principal dimension floating dock, that is using approach method with a few consideration. Then calculation of floating dock construction by using Lloyd method of Register (LR). Calculation of weight, volume, and trim of floating dock use technique mechanics method, while calculation of floating dock stability using Hidromax software.

Based of planning of floating dock, got floating dock in the form of ponton with principal dimension L = 7,2 m, B = 3,6 m, H = 2,4 m, cb = 0,554. From result of calculations got maximal draft which required container to be can pulled to floating dock is 1,7 m, and volume ballast water which required of floating dock to reach maximal draft 1,7 m is 20,8 ton. Based of calculation with Hidromax software, can know that floating dock stability the fulfill conditions which have been determined pursuant to criterion determined by IMO.

Keywords : Displacement, floating dock, Ballast, and stability