DESIGN OF A PUBLIC PIER STRUCTURE IN MAKASAR – SOUTH SULAWESI

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Abstract

Makasar public pier planned in Bira district, subdistrict Tamalarea, Makasar in South Sulawesi. Makasar public pier structure is designed as a passenger pier to meet the needs of passenger flows in the future. Road access to the dock is connected to the trestle. Pier structures designed for the type of passenger ships the size of 3000 DWT.

In the end of the pier project is planned to include planning the dimensions and the reinforcement plate and beam structural elements, structural design and mooring dock (fenders and boulder) and the foundation. The structure of the pier (floor plate, beam and pile cap) used a local cast reinforced concrete with characteristic strength of concrete = 35 MPa. The structure under the pier using steel piling. The position of pile installation is planned to be able to withstand vertical and horizontal forces. In planning the structure of this pier, the system structure were analyzed using the program SAP 2000 with three-dimensional model. Reinforcement structure and stability of the structure (of the crack and to the effects of deflection) is controlled under the rules of BMS (1992).

From the results obtained planning pier dimensions 98 m x 15 m and dimensions of trestle 103 m x 9 m. Transverse and longitudinal beam dimensions dock is 50 cm x 70 cm diameter pile was 914.4 mm with a thickness of 17 mm. Poer Dimensions 2800 mm x 1500 mm x 1250 mm for double pole and 1500 mm x 1500 mm x 1250 mm for a single pole. On the structure of the
dock fender type used is Bridgestone SA300H and mooring structures shall be such as to withstand loads up to 350 KN mooring.

Keywords: Public Pier Makasar, piers