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Rehabilitation of Yzerfontein breakwater by Dolos armour units

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ABSTRACT:

The Yzerfontein breakwater was constructed in 1950 and has since been subjected to extensive deterioration. In order to extend the lifespan of the breakwater a maintenance program was to be carried out. Various options are described in the maintenance reports by Entech Consultants of which one option was to reshape the existing structure and place a layer of concrete armour for the repair of the deteriorated breakwater. The physical model focused on this model. It was proposed that a layer of 20 ton Dolos be placed to protect the breakwater from further excessive damage. In circumstances such as this, physical model tests are needed to evaluate the maintenance options available and to improve structural stability by testing the armour stability against wave attack. This report gives details of the physical model study for the rehabilitation of the Yzerfontein breakwater. Entech Consultants provided the design information proposed for the repair of the breakwater.