



The extreme wave interaction with the constructions of the breakwaters including the damping chamber that was filled up with the stones and concrete units

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The eight types of the breakwaters constructions including the damping chamber were experimentally studied. The damping chamber has the infilling with the stones, with the concrete units, or with the combinations of the stones and units. The back wall of the damping chamber was impermeable. The construction varies by the volume and by the type of the infilling. The experiments to specify the pressure at the internal walls of the damping chamber, the reflected wave height, and the wave height at the front wall were performed at the hydro flume. This flume has the following dimensions: 43 m length, 0.7 m width, and 1.2 m height. The periodic waves were produced by the shield-type wavemaker. We vary in this research the periods of the waves over the range 0.8 s to 1.64 s, and the wave height over the range 10 cm to 24 cm.

The analysis revealed the most improved structure possessing the good wave-protective features.