

ABSTRACT

The invention relates to the field of construction, namely to formworks, and represents a permanent beam-and-node formwork for casting reinforced concrete, including under water and in the tidal zone, in order to manufacture concrete enclosing wall structures, such as retaining walls, as well as bank-protection hydraulic engineering structures. The technical result achieved by the claimed system consists in the possibility of constructing wall structures of complex shape for coastal (tidal-zone) and/or underwater structures while ensuring strength and rigidity of the entire structure and stability of the walls in the vertical position. The stated technical result is achieved by a permanent formwork system for forming concrete enclosing wall structures under water and in the tidal zone, including a bundle of horizontally laid pipes held together by elements of a frame. A part or all of the pipes of the bundle are connected to a manifold being a pipe segment with pipe sockets arranged in a row with a fixed pitch for connection of the pipes of the bundle, and the frame comprises column-pipes and nodal connecting elements. The nodal connecting elements are made as hollow volumetric bodies with pipe sockets oriented at angles to each other, some of which are plugged and others having the pipes installed therein.

Figure 1.