

ABSTRACT

A floating buoy turnover hydraulic power output device, comprising a buoy (1), an outer frame support (2), support stands (35, 36), a power turnover mechanism (27), and a hydraulic actuator (41). The upper end and lower end of the buoy (1) are respectively provided with an upper connecting rod (5) and a lower connecting rod (6) respectively connected with pistons (7, 8) of two hydraulic cylinders (3, 4) on the upper part and lower part of the outer frame support (2). Oil inlets and outlets of the hydraulic cylinders (3, 4) are respectively installed with one-way valves (13, 14, 15, 16). The one-way valves (13, 14, 15, 16) are respectively connected to a hydraulic oil tank (40) and a high pressure accumulator (42) via high pressure oil pipes (17, 18). The outer frame support (2) has a pass-through structure. Rotary shafts (23, 24) are installed in the middle of the outer frame support (2), and are slidably connected to the outer frame support (2). The power turnover mechanism (27) is connected to the rotary shafts (23, 24). The device can continuously and circularly rotate around the rotary shafts (23, 24) under little external force, and can release the buoy (1) during the rotation to convert buoyancy potential energy into hydraulic energy. Combined use of a set of the devices can continuously force hydraulic oil into the high pressure accumulator (42) for direct use.

Fig.1