

OCEAN BOTTOM CABLE AND SENSOR UNIT

ABSTRACT

An underwater ocean bottom cable constructed of a series of axially aligned cable segments alternately arranged with sensor units. The sensor units include an outer housing with an interior cavity in which a sensor module is suspended by a cradle. Vanes on the sensor module protrude through axially elongated openings in the outer housing to dig into the seabed to provide good seismic coupling between the seabed and pressure sensors and motion sensors housed in the sensor module. The outer sensor housing is split into complementary portions that clamp firmly onto the ends of adjacent cable segments. Stress members, such as high modulus fiber ropes, extend out the ends of adjacent cable segments. Axial channels formed in the intervening outer sensor housing on opposite sides of the sensor module receive the stress members, which, along with the cradle, provide seismic isolation between the cable segments and the sensor modules.

Figure 8