

Abstract

A fishing vessel entered one of Irving Shipbuilding, Inc's yards, Halifax Shipyard in April 2007 and left as a completed and functioning 3-D seismic vessel in June of 2008. The physical dimensions of the vessels on entry were 53.95m LOA and 11.2m breadth with a 4.8m draft. On leaving the vessel was 66.8m LOA, 14.2m broad with a draft of 5.2m. In the interim the vessel was cut in two and a 12.8m insert has been added at frame 45, as well as port and starboard tanks added to provide more stability and fuel capability for longer missions. Conventional pre build insert experience could not be used due to weight and balance problems in re-floating, therefore technical ingenuity was employed to complete the work. Only two compartments remained uninterrupted at delivery and the vessel had new and uniquely configured compressors mounted on resilient mounts to prevent noise and vibration. The vessel was set up with five high pressure compressors in one compartment and four low pressure compressors in another, six streamers and guns for 3-D seismic with capability of firing 3,000lbs/sq.inch (207bars) every 10 seconds. Two streamer winches were added on deck 2, along with streamer storage winches and an assortment of spooling devices, winches booms etc all to ensure spooling out and retrieval of the strings via the aft end slipway. The instrument room receiving the signals was protected by 80Kva uninterruptible power source. The original switchboard was powered by three new diesel generators, one remaining from the original vessel and the original switchboard remained but was added too due to more electrical capacity being required with the equipment added. The vessel has accommodation for 43 persons this being a combination of new and renovated cabins. The main engine is a Man B&W Alpha L6-27/38 with a straight shaft going through the stern tube to a fixed propeller five blade propeller. In the bow there is a small thruster tunnel for port and starboard maneuvering and assistant in docking etc. The vessel is fitted with a Helicopter deck. Difficulty was encountered with an immature design and engineering package which caused problems with progressing the work.