



Seascope developed an PLC software positioning system to position a vessel or pontoon with a 4 point mooring system.

This in combination with a multibeam echosounder system to monitor the pre-, actual and post dredging slope.

The PLC software receives GPS information through DGPS survey software. The Vessels DGPS system is configured with 3 antenna's for accurate position and heading calculations.

In the DGPS software the operator can draw tracklines. By selecting a trackline the PLC software will follow this (track) runline. The PLC software controls automatically the position of the pontoon, by maintaining the reference point on the selected runline. The value of deviation compared to the active runline is called the cross track error (XTE). Parallel to the runlines, lines are placed at a specified distance starboard and portside as a guide line.

The 4 point mooring system consist of four anchors which are connected to special designed constant tension control winches. The coordinates are shown in the DGPS software. Two deck winches are synchronized to have a lateral movement control and two deck winches are synchronized for lateral movement control of the vessel or pontoon.

Standard the reference point follows the runline, but if the operator wants he can easily override the control for forward and sideward movements with a joystick.

The multibeam echosounder is based on a 120 degrees swath beam with an update rate of 12Hz and a 0,02% slant range accuracy. The multibeam echosounder systems includes a data acquisition and navigation software for real time dredging monitoring and post processing dredging results.

Specifications

- Positioning accuracy: x-y= 2-3 cm , Z= 5 cm.
- Automated positioning, with easy manual override;
- Easy controlling software with joystick;
- AutoBCKstep: 0,1 to 2 m;
- AutoPitch: Amax 5-20 degrees, Amin 0-10 degrees;
- GPS antennas dual frequency;
- DW2000CT winch: WLL 2500kg; speed 16 m/min;
- PC for data acquisition;
- Cables and brackets;
- Multibeam support, incl. calibration module;
- Multi sensor, Multi object, Survey planning, Real-time Data acquisition, Data Cleaning and Data Validation;
- Multibeam Echo Sounder with integrated DMS-25 Motion Sensor Portable shallow water (60m depth range 120° swath).