

Approval Date: 20 May 1998

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Version: 1

Purpose

The bathymetric system will be used to collect data on depth and bottom topology of reservoirs and rivers. Primary application is reservoir sedimentation surveying.

The bathymetric system shall comprise the following components:

1. echo-sounder (See 10.014)
 2. sound velocity calibrator (See 10.015)
 3. differential global positioning system (See 10.016)
 4. data collection computer (see 10.017)
 5. surveying software for data acquisition, storage and processing (see 10.018)
- A small portable generator will be required to charge the batteries used for the survey instruments. The generator is not included in the delivery (see 10.019).
 - The system will be installed on a boat with a length of about 8 m; the boat is not included in the delivery (see 10.033, 10.034 and 10.035).
 - The proper functioning of the bathymetric system shall be demonstrated prior to final procurement.

Conditions & Requirements

- Primary requirement is that echo-sounder, DGPS, data acquisition computer and software match with each other. Therefore, the bathymetry software shall have device drivers to facilitate interfacing of a wide range of echosounders and DGPS to the data acquisition computer.
- Data exchange between data acquisition computer, echo-sounder and DGPS shall be efficient and error free.
- The system shall be portable.
- The system shall be rugged and easy to install.
- The system shall be easy to operate.
- Preferably, power supply is from car-batteries.
- While sailing pre-defined lines, the computer shall acquire data from the positioning system and the echo-sounder. All data relevant for production of charts and depth data shall be stored on the data acquisition computer.
- The helmsman shall receive steering data via a separate display. Preferably, this is a left right indicator, alternatively it may be a standard computer display.
- The data collection software shall be adequate for the application.
- The supplier shall provide training at his workshop and on site.

Remarks

- Drawings and fittings for installation of the equipment can only be provided when the boat and/or a drawing of the boat is available.
- The equipment might be purchased separately and be installed by a local workshop under supervision of a survey expert.
- As all instruments are portable, they might be mounted in a transport box (e.g. an instrument flight case) with a front and a rear lid. The front lid gives access to the instruments, the rear lid gives access to connections for data-exchange, power, antenna

- If only a laptop PC is used for data acquisition and a dedicated left-right indicator for the helmsman, then on board no AC power would be needed. In that case, the system can very conveniently be powered from car-batteries. A battery charger should be part of the system. For operation in remote areas, lacking AC supply, a generator is required to charge the batteries.

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