

RovADCP US Patent ¹

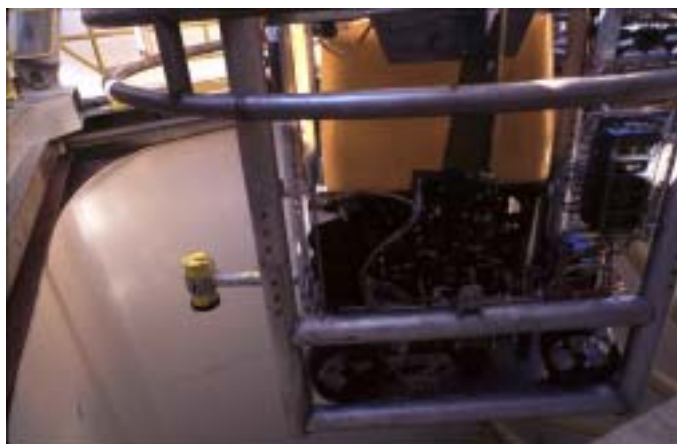
RovADCP - full ocean-depth current profiles for subsea operations:

- **utilizes existing rig infrastructure,**
- **minimal installation engineering or deck space required, and**
- **cost effective.**

Extreme currents can lead to costly delays in deepwater and ultra deepwater oil and gas operations. On-the-spot current information can pay for itself by providing a basis for operational planning and enhancing operational efficiency and safety.

RovADCP is an innovative approach to the accurate measurement of ocean currents in deepwater areas. It is an integrated hardware and software package that measures current profiles as a Remotely Operated Vehicle (ROV) cage is lowered through the water column. It can:

- measure current profiles over the full ocean depth, down to 6000m (over 18000 feet);
- provide real-time current information to support exploration, development and production operations.



ADCP attached to ROV cage

RovADCP Hardware

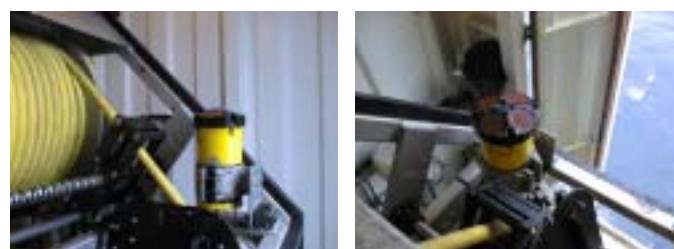
A 6000m-rated, Acoustic Doppler Current Profiler (ADCP) is custom-mounted on the outside of a ROV cage. Data from the ADCP, including its depth and heading, are transferred through the ROV's umbilical onto a PC in the ROV shack. The information is then processed and displayed by the user-friendly RovADCP software.



300KHz Sentinel Workhorse

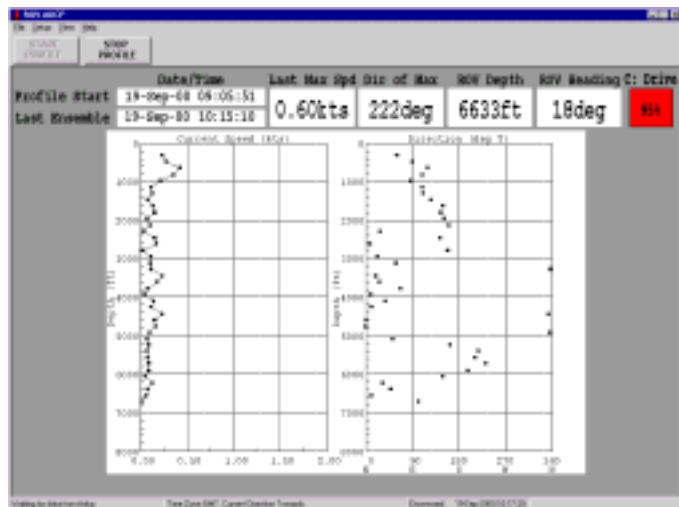
RovADCP operation

The profiling range of the ADCP is between 80 and 100m (260 and 330 feet). As the ROV cage descends from the surface to the seabed individual profiles, and the instrument's depth and heading, are transmitted to the PC. The RovADCP software uses this to build-up a composite profile covering the entire water column.



Alternative ADCP mounting direct to ROV cage

¹US Patent No. 6,820,008 B1



RovADCP screen display

How long this takes will depend on the time for the ROV to be lowered. During this period the RovADCP software updates the display constantly to build the composite profile in near real-time.

System Features

- User-friendly software and clear displays.
- Compact ADCP unit for easy handling, storage and attachment to ROV cage.
- Uses existing ROV telemetry system to transmit data.
- Low maintenance.
- Operator requirement is to simply press "Start Profile" or "Stop Profile" button.

Software Features

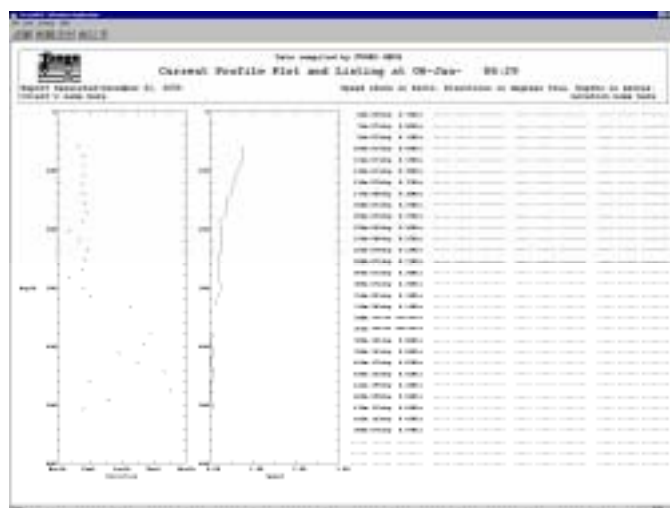
- Profile updates (typically) every 2 seconds.
- All data are logged to the PC's hard disk.
- Summary data are easily transferable to Fugro GEOS' offices for review and archiving.
- "RigPres" application provided to view historic profiles.
- Option to print profile automatically when application is finished.
- Option to export data to ASCII file for reading in Microsoft Word or Excel.

Requirements

- RD Instruments 300kHz Sentinel WH ADCP.
- Mounting bracket on ROV cage.
- 24VDC power supply to ADCP.
- Output of ADCP serial data from ROV umbilical in ROV shack.
- PC running "RovADCP" application.

Note:

- Data can only be collected when the ROV cage is deployed;
- Data is for operational support and is not suitable for the definition of design extremes or operating criteria;
- Continuous, real-time current profiles can be provided by Fugro RigADCP systems.



RigPres display

Fugro is the world's largest and most experienced provider of offshore oceanographic data and services. We have a range of ADCP-based systems to provide high-quality current data for offshore exploration activities. For further information, please contact us at one of our offices below.

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