



PDS2000

Bucket Dredger Application



PDS2000-Bucket dredger

- **Direct interface with sensors, no other software required!**
- **Restricted areas function**
- **Spud position computation**
- **Vessel placement support**
- **Support real-time 3D design models**
- **Integrates seamlessly with other PDS2000 applications**
- **Free network option to allow multiple Pc's in one group**

PDS2000 is a software package for hydrographic survey and dredging operations developed by RESON. PDS2000 is available for different applications tailored to specific operations such as Single and Multibeam Hydrographic survey, Stonedumping and Dredge applications. The PDS2000 dredging applications cover a full range of dredging equipment such as Cutter Dredgers, Hopper Dredgers, Clamp Shell, Bucket dredgers and Excavators. Each application is specially designed to meet your requirements.

RESON supplies integrated Bucket Dredger Monitoring Package which includes a range of cable length counters, inclinometers, ruggedised PC systems, positioning systems, motion sensors, tide gauges draft sensors and our PDS2000 software.

PDS2000 provides the functionality especially designed for the dredge operator to carry out his job more efficiently. PDS2000 supports positioning of the buckets by ready-to-use relative XYZ position but also using depth and horizontal distance, depth only or ladder inclination. A spud position computation is showing the spud position on your map and gridmodel. A vessel placement feature guides the dredger to return to its former position and heading. The operator has an instant overview of the buckets with the top and side views displaying the vessel outline, buckets and spud pole. The flexible screen layout allows operators to adjust their screens to their needs. Multiple monitors with independent layouts are a standard feature of PDS2000. A grid-model is updated real-time, registering the progress of the dredging work. The use of 3D-Design models allows definition of highly complex designs. The position of the dredge-head relative to the design is constantly monitored and displayed. It is immediately visible in the top and side views.



On several projects RESON has proven that PDS2000 Bucket dredger is a real aid to cope with projects demanding the most of your dredger.



PDS2000

Bucket Dredger Application

GENERAL

- User friendly
- Modular set up
- High Screen update rate, updates as sensor values arrives
- Easy to adapt to your project
- Complete software suite for acquisitions, processing, charting and dredge guidance
- What you See is What You Dredge

PROJECT SET UP

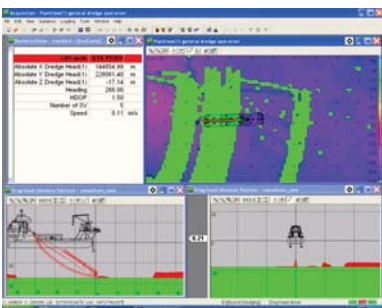
- Wizard guides you through the setup
- Configuration of all equipment and lay-out of the vessel
- Import of DXF file from Vessel shape

PLANNING

- Import different types of DTM's directly from the PDS2000 office or survey vessel
- Edit and/or interpolate DTM's
- Import dredge design from a 3D-DXF file (AutoCad)
- Use another DTM as design
- Create design from profiles and polygons
- Restricted areas
- Vessel placement to return work area

INTERFACING

- All common positioning and tidal systems
- Flexible interface with sensors such as:
 - Inclinometers
 - Potmeters
 - Motion sensors
 - Draft sensor
 - Relative X/Y/Z positioning



DREDGE OPERATION

- Show DTM with absolute depths or depths
- Acquisition, time stamping and logging of all selected sensors in a single file
- Show historical dredge tracks
- Load various types of background charts while dredging
- Electronic Navigation chart
 - C-MAP (optional)
 - DXF files
- A special 'Bucket dredge' guidance function is available that allows for the selection of a work route and the definition of swing limits.
- Dredge layer shows the bucket dredge guidance settings
- Profile layer shows the profile lines from the active profile views and in case of a Dredge design profile also the Profile view for realtime design profile
- Update or fill DTM in real-time with depth information from ladder
- Presentation of scaled vessel shape and cutterhead in one or more side views (left, right, back and top).
- Show real-time profile of DTM and design in the side view(s).
- Online correction for:
 - Roll and pitch of vessel
 - Offsets
 - RTK height or tidal information
 - Mounting angles of sensors

REPORTING

- Entire dredge operation can be reviewed through a replay of the data set
- Quick profile plots can be made using the offline plot module (option)

PROCESSING

- Full DTM editor functions as part of bucket dredger package
- For more processing info see our data processing documentation



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