DEEP KNOWLEDGE

ODIM FRDS TECHNOLOGY

UNOLS 2009

ODIM

ODIM FRDS™ SYSTEM CONCEPT

HPU AND/OR ELECTRIC AC-DRIVE

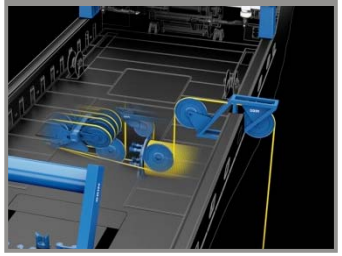
BASIC ODIM CTCU™

COMPACT ODIM CTCU™

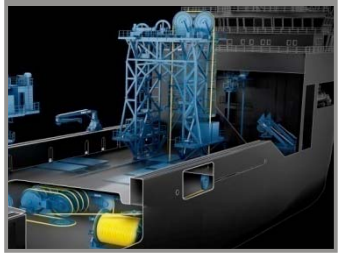
CONTROL SYSTEM

OPERATOR INTERF.

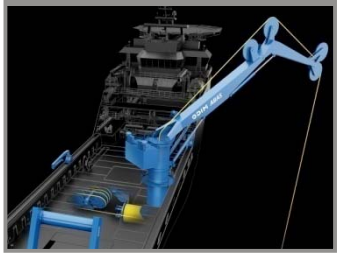
OVER SIDE



MOONPOOL



CRANE



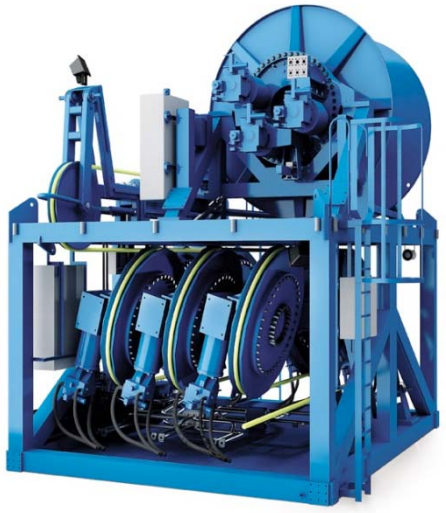
ODIM FRDS™

Based on ODIM CTCU™

30Te WLL | 50Te WLL | 75Te WLL | 125Te WLL | 250Te WLL

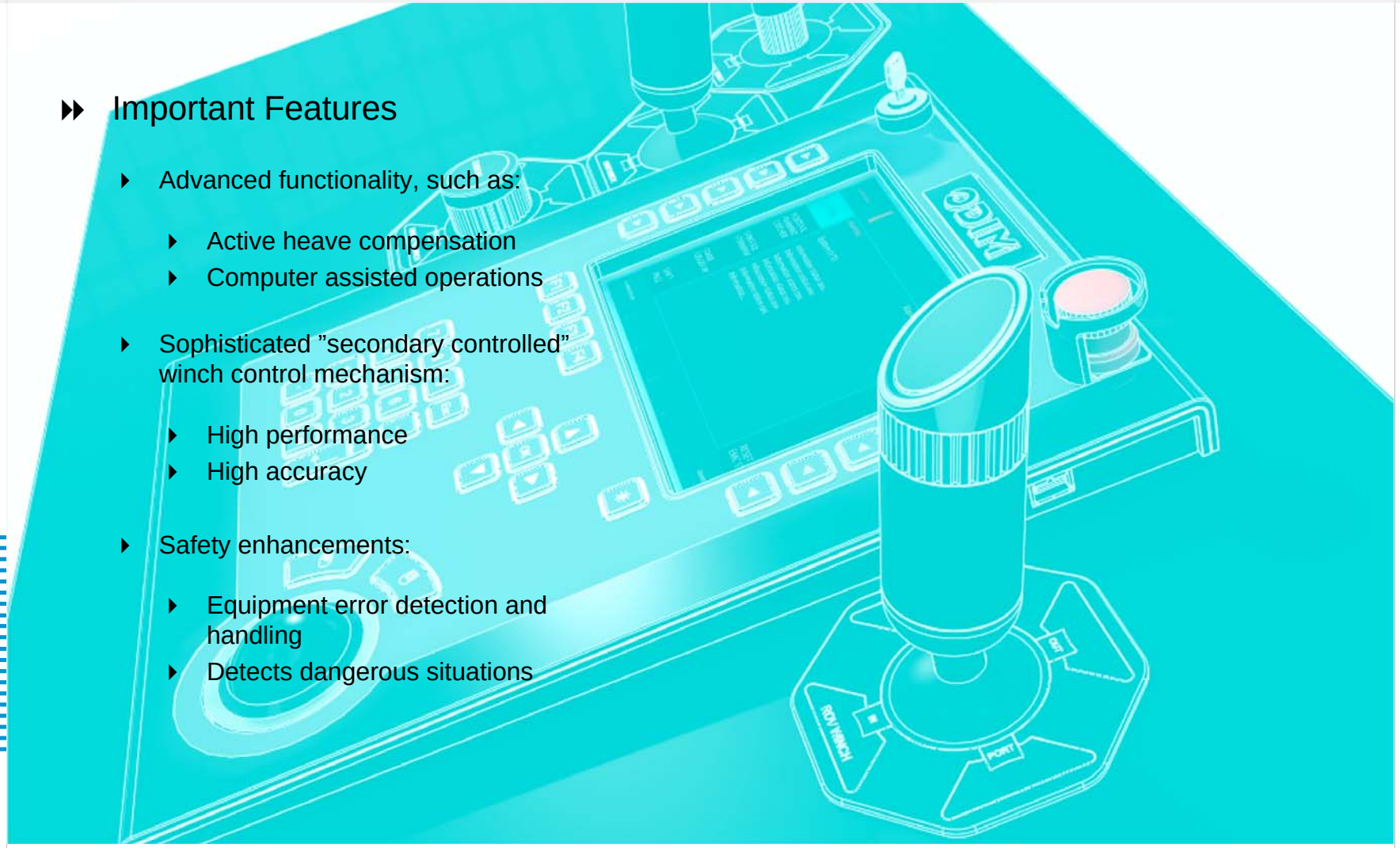
System Features

- Slip Control
- Anti-spin
- Pre-Conditioning of Rope
- Load Distribution
- Automatic Landing and Lift-off
- Pull Limit
- Emergency Brake Release
- Active Heave Compensation
- Constant Tension
- Rope Management System
- Splice Handling
- Sheave-Coatings



ODIM FRDS™ SYSTEM CONCEPT

Control System



- Important Features
  - Advanced functionality, such as:
    - Active heave compensation
    - Computer assisted operations
  - Sophisticated ”secondary controlled” winch control mechanism:
    - High performance
    - High accuracy
  - Safety enhancements:
    - Equipment error detection and handling
    - Detects dangerous situations

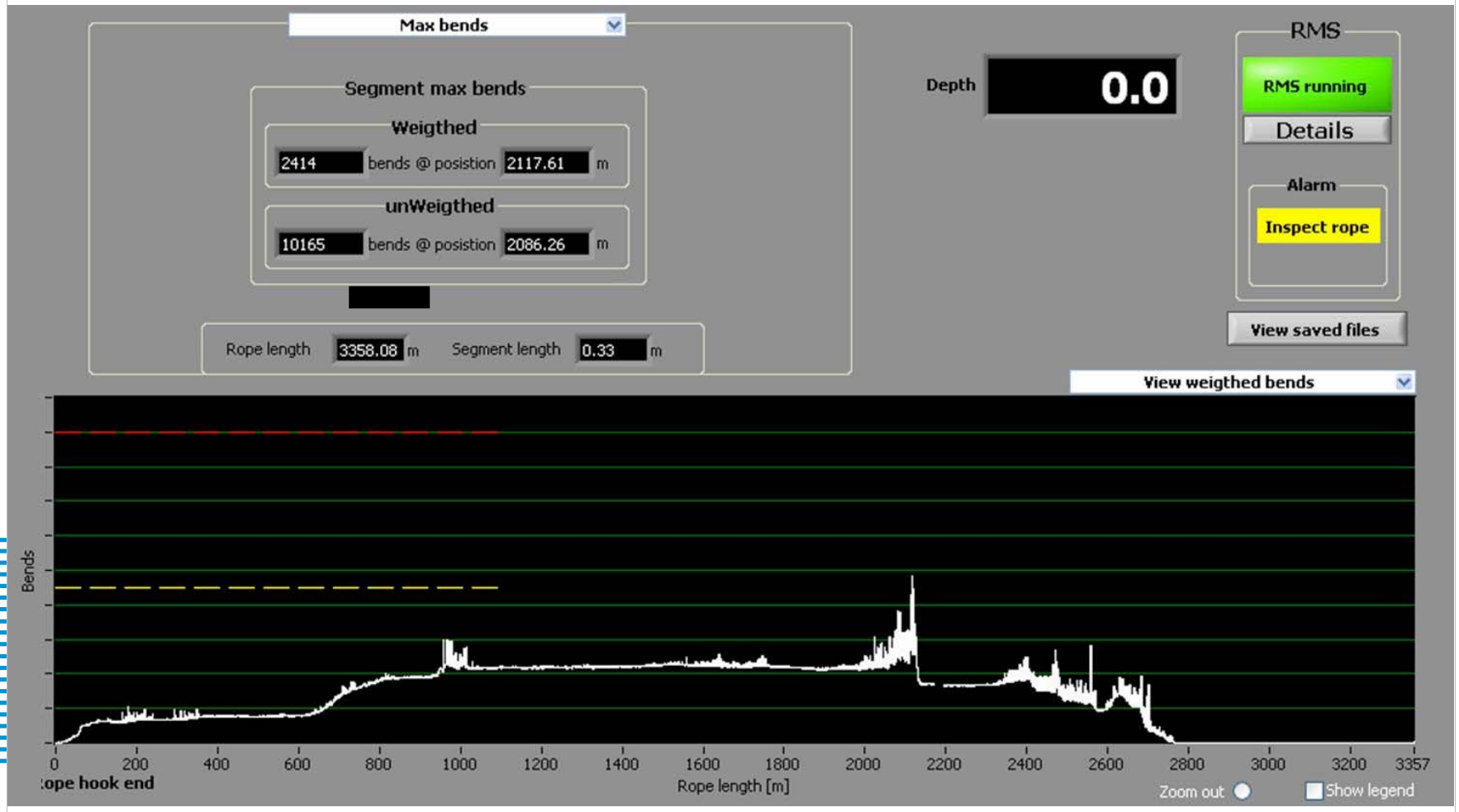
ODIM FRDS™ SYSTEM CONCEPT

Operator Interface

- Important Features
  - Graphical user interface
    - Detailed system status information
    - Rope Management System
    - Monitoring
    - Trending
    - Alarm Handling
  - Main control panels
    - Operator station in the control room
    - Radio remote for operation on deck
  - Emergency operation panels
    - All equipment can be operated locally, even if the main control system is unavailable

ODIM FRDS™ SYSTEM CONCEPT

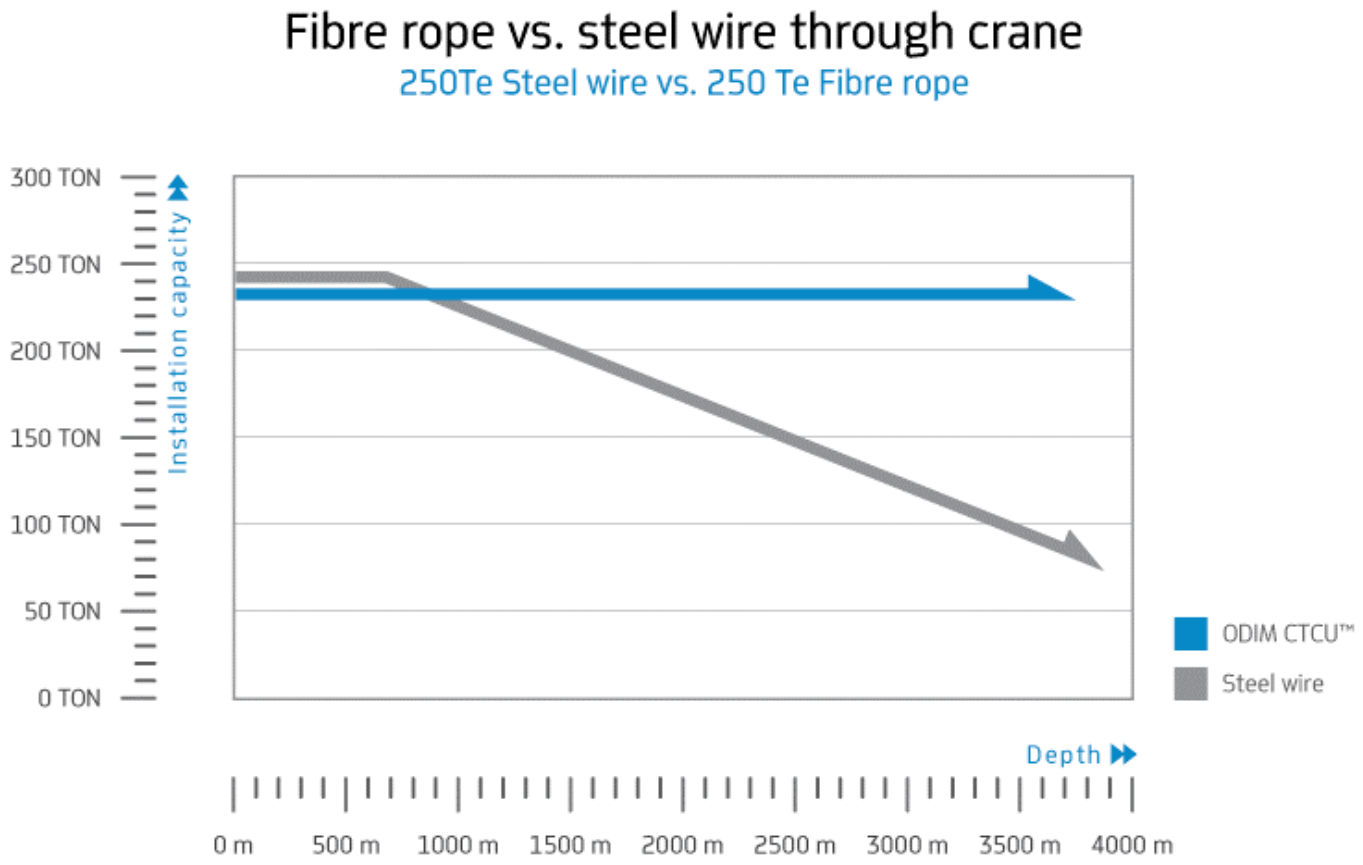
Rope Management



Real time - Integrated in ODIM CTCU™ control system

ODIM FRDS™

Installation Capacity vs. Depth



ODIM FRDS™

Comparison 110Te SWL @ 3000M wd.

	Fibre Rope	Steel Wire Rope
System	110 Te CTCU Crane	250 Te Steel Wire Crane
Winch SWL	125 Te ODIM CTCU (single fall)	270 Te Steel Wire winch
Rope safety factor vs. winch SWL used in Calculations	4.5	3.5
Installation capacity	110 Te	110 Te
AHC speed	1.5 m/s	1.5 m/s
Diameter rope	88 mm	108 mm
Rope weight in air	6.5 kg/m 3000 m = 19.5 Te 500 m spare= 3.3 Te	54 kg/m 3500 m = 189 Te 3500 m spare = 189
System weight	343 Te + Spare rope 3.3 Te	Approx. 700 Te + Spare rope 189 Te
Power supplied to rope (AHC)	1.8 MW	4.1 MW
Typical power supply from vessel to Crane including main winch	1.6 MW	4.0 MW ?

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