Hawser Winch
Render/Recover Line Controls

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PRESENTATION OVER VIEW

- INTRODUCTION
- RESEARCH WINCHES
- HAWSER WINCH
  - Application
  - Evolution
  - Form
- FUTURE TRENDS
RESEARCH FLEET MACHINERY

Deep Sea Research Drum
Winches

- DESH
- DUSH
- CUBE

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RESEARCH FLEET MACHINERY

COMPACT LINE

- COM-4
- COM-5
- COM-7 *(electric or hydraulic)*
- COM-10
- COM-15
- DEBT-3 *(Bathy-Thermograph)*
RESEARCH FLEET MACHINERY

- DUTW-48 & DUSR-9 & 11
  Traction
  Winch System
“FORM EVER FOLLOWS FUNCTION”
- LOUIS SULLIVAN
HAWSER WINCH FUNCTION

- Application
  - Ship Assist
  - Escort Services
- Commercial Harbor Tugs
Type DESS-52 250HP Electric Constant-Tension Winch

**Winch Capabilities**

- Constant-tension winch line-pulls to 440,000 lbs.
- Automatic inhaul and payout up to speeds of 700 ft/min.
- Water-cooled “slip-brakes” capable of continuously dissipating up to 1600 HP
- Full “Render/Recover” hands-free controls up to 3-times the bollard-pull
- Dual all-electric 250 HP AC-Variable Frequency drive
- Active line-tension monitoring during all winch operations
- User-controlled 30 HP electric fairleader to automatically spool line, with manual override
HAWSER WINCH CLASSES

- Higher Capacity
  - Bitts
  - Class I-Static Brake
  - Class II-Render / Recover
  - Class III-Asymmetric R/R
ESCORT AND SHIP ASSIST WINCHES

DEPC models are single-drum electric hawser winches (hydraulic versions available) designed for escort and ship assist vessels. Features include automatic tension-selectable render-recover mode, high braking capacities, and fast line speeds.

- DEPC-32
- DEPC-42 / DEPCF-42
- DEPGF-42
- DEPC-48 / DEPCF-48
- DEPC-52 / DEPCF-52
- DYSF-42 (hydraulic)
- DYSF-52 (hydraulic)
Escort & Ship Assist Winches

The high-performance **DESS-52** (250HP) and **DESF-48** (100HP) are state-of-the-art single-drum electric asymmetric render-recover hawser winches with constant-tension operation and automatic inhaul/payout features that permit full hands-free control, so escort and ship-assist operators can focus on tug maneuvers while the winch handles the line.

- **DESS-52** (250HP)
- **DESF-48** (100HP and 250HP versions available)
- **DESD-48WF** (250HP)
- **DESDF-48WF** (760HP)
STANDARD WHEELHOUSE

CONTROLS

Winch Controls (right)
Line-Tension & Drive Display (left)
DESF-48 WINCH SYSTEM OVERVIEW
HAWSER WINCH TRENDS

- Dynamic Operating Environments
  - More Powerful
  - Safer Operations

- “Green” Hawser Winch Models
HAWSER WINCH TRENDS

- Improved System Management
  - Log Data
  - Software Tools
  - Interconnectivity
    - Internet-based Diagnostics and Service
MORE INFORMATION

- Markey, M.J.; Science Duty Traction Winches; Sea Technology Magazine; July, 1996
- Griffin, B.A., Nishimura, G.J, How to Design a Big New Winch; Pacific Maritime Magazine; July 2007
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