

# EN AVANT 20

TECHNICAL INFORMATION



**70**

mt  
Bollard Pull  
Harbour and Seagoing tug

**Muller.**

# EN AVANT 20

## HARBOUR AND SEAGOING TUG

### General Information

|                             |  |
|-----------------------------|--|
| <b>Year of construction</b> | December 2006  |
| <b>Builder</b>              | Lindenau GmbH Schiffswerft, Kiel, Germany ASD                  |
| <b>Build type</b>           | Seagoing & Harbour tug   |
| <b>Class</b>                | Bureau Veritas (BV Nr: 319001C)                                |
| <b>Classification</b>       | HULL ✱100 A5 M E1 with freeboard 1.009m Tug<br>MACH ✱MC E1 AUT |
| <b>Class register nr</b>    | GL-112608  |
| <b>Flag</b>                 | Netherlands  |
| <b>Call sign</b>            | PCUZ   |
| <b>IMO</b>                  | 9408645  |
| <b>Port of registry</b>     | Dordrecht  |

### Main Particulars

|                           |   |
|---------------------------|---|
| <b>Length o.a.</b>        | 32.50 m                                 |
| <b>Breadth o.a.</b>       | 11.64 m                                 |
| <b>Maximum draught</b>    | 5.00 m                                  |
| <b>Air draught</b>        | 23.76 m                                 |
| <b>Gross/Nett tonnage</b> | 448 T (Suez 540 T) / 134 T (Suez 340 T) |
| <b>Deadweight tonnage</b> | 254.74 T                                |
| <b>Displacement</b>       | 834.22 T                                |

### Performances

|                           |            |   |
|---------------------------|------------|---|
| <b>Bollard Pull max.</b>  | 69.2       | T |
| <b>Bollard Pull cont.</b> | 66.7       | T |
| <b>Speed</b>              | 12.7 knots |   |

### Propulsion system

|                          |                                       |
|--------------------------|---------------------------------------|
| <b>Main Engines</b>      | 2 x ABC Type ABC 8 MDZC               |
| <b>Total power</b>       | 5,100 hp (3,744 kW) at 1000 rpm       |
| <b>Transmission</b>      | Clutch type Kendrion Airflex 24VC1000 |
| <b>Azimuth Thrusters</b> | 2 x Schottel SRP1515 FP               |
| <b>Propellers</b>        | 2 x 2600 mm fixed pitch               |
| <b>Nozzles</b>           | Schottel RP, pressurised              |

### Auxiliary Equipment

|                               |   |
|-------------------------------|---|
| <b>Generator Engine sets</b>  | 2 x Cummins genset                                  |
| <b>Generator sets</b>         | 2 x Caterpillar SR4                                 |
| <b>Capacity</b>               | 150 kVA each 50Hz, 230/400 V                        |
| <b>General transfer pumps</b> | 2 x Iron Man DHBB 50-50/200 25m <sup>3</sup> /hr    |
| <b>Fuel separator</b>         | GEA Westfalia OTC2-02                               |
| <b>Luboil separator</b>       | GEA Westfalia OTC2-02                               |
| <b>Watermaker (FW)</b>        | 5m <sup>3</sup> /day freshwater generation capacity |

### Deck Lay-out

|                          |  |
|--------------------------|--|
| <b>Anchor</b>            | 2 x 570 kg Stockless anchor  |
| <b>Chain</b>             | 22mm - 137.5 m short link  |
| <b>Deck crane</b>        | Palfinger PK32080M BS1.2 remote controlled<br>1.6 ton at 13.80 m   |
| <b>Escort fore-winch</b> | Brusselle, double drum, hydraulic, 44.9T pull,<br>2 x 100m, 52mm dyneema winchline   |
| <b>Towing aft-winch</b>  | 1 x split drum, Brussele type SLH 180.45/1S-1  |
| <b>Power/speed</b>       | hydraulic powered<br>Nom. pull: 350kN @ 0-6m/min over 68kN<br>@ 0-26.4m/min upto about 48kN at 0-30m/min<br>Stall pull: 400kN, brake holding force 1800kN (wet)<br>2x remote controlled band-brakes, friction clutch |
| <b>Towing wire</b>       | A) 850m - ø52mm - MBL 1893 kN - 193 T<br>B) 650m - ø52mm - MBL 1893 kN - 193 T<br>Steel wire: galvanised 6x36WS IWRC RHOL 1960N/mm   |
| <b>Capstan</b>           | 11T pull, 25T braking. Brusselle, type HK10 hydraulic, vertical head   |

### Tank capacities

|                       |                       |
|-----------------------|-----------------------|
| <b>Fuel Oil (MGO)</b> | 232.00 m <sup>3</sup> |
| <b>Fresh Water</b>    | 24.00 m <sup>3</sup>  |
| <b>Lub Oil</b>        | 10.50 m <sup>3</sup>  |
| <b>Dirty oil</b>      | 9.50 m <sup>3</sup>   |
| <b>Sewage</b>         | 7.00 m <sup>3</sup>   |
| <b>Water Ballast</b>  | 61.00 m <sup>3</sup>  |

### Accommodation

Heated and air-conditioned living spaces for 10 persons, consisting of a galley and mess room, captain's cabin, C.E. cabin and a 1st officer cabin, officers sanitary facilities on the main deck, four double crew cabins, and crew's sanitary facilities below deck.

### Nautical & communication equipment

|                                 |                                     |
|---------------------------------|-------------------------------------|
| <b>GMDSS area</b>               | A3 (A1 A2 A3 equipped)              |
| <b>Searchlights</b>             | 2 x Seematz 1000W                   |
| <b>Compass</b>                  | 1 x Kotter type / 1 x gyro compass  |
| <b>Radar system A</b>           | Raython NSC 25 TFT                  |
| <b>Radar system B</b>           | Raython NSC 25 TFT                  |
| <b>Radar river system</b>       | ElNa-4007/9TFT                      |
| <b>GPS</b>                      | Raython NSC 18                      |
| <b>Autopilot</b>                | Raython Pilot Star D AP02-S01       |
| <b>Echo sounder</b>             | Raython GDS101                      |
| <b>Speedlog</b>                 | Skipper EMC24                       |
| <b>VHF Radio Telephone</b>      | 2 x Sailor RT 5022 + DSC, 25 Watt   |
| <b>VHF Handheld</b>             | 2 x Jotron TR20 GMDSS               |
| <b>Navtex</b>                   | JRC NCR 333                         |
| <b>AIS</b>                      | SAAB R4 AIS GPS                     |
| <b>SART</b>                     | McMurdo S4                          |
| <b>Communication</b>            | VSAT - Iridium - SSB - Phones       |
| <b>ECDIS system</b>             | 2 x Transas Navi-Sailor 4000 system |
| <b>Weather system</b>           | Meteogroup SPOS onboard             |
| <b>Weather station</b>          | Lambrech realtime monitoring        |
| <b>Navigation lights</b>        | Norselight NLC8/40                  |
| <b>Bridge nav. watch system</b> | Janssen WGA-33                      |
| <b>Inmarsat C system</b>        | Furuno Felcom 18                    |
| <b>VSAT system</b>              | Intellian by Radio-Holland          |
| <b>Maintenance system</b>       | MARAD 4.43 system onboard & office  |

### Contact Details

|                      |  |
|----------------------|--|
| <b>E-mail, VSAT</b>  | ea20@muller-dordrecht.nl   |
| <b>E-mail Office</b> | operations@muller-dordrecht.nl                                     |
| <b>Sat-C Bridge</b>  | 424480816@c12.stratosmobile.net<br>424480817@c12.stratosmobile.net |

|                          |                     |
|--------------------------|---------------------|
| <b>Telephone Bridge</b>  | +31 (0) 651 614 581 |
| <b>VSAT Telephone</b>    | +31 (0) 854 013 855 |
| <b>Iridium Telephone</b> | +881 623 427 115    |
| <b>Telephone Office</b>  | +31 (0) 786 392 000 |

## Muller Dordrecht

T +31 (0) 78 639 2000 (24/7) | E sales@muller-dordrecht.nl | muller-dordrecht.nl

in   

