

AURIGA

OCEAN GOING TOWING/ ANCHOR HANDLING – TUG, 5000 BHP, BUILT 1998



Dimension

Length Overall	: 37.00 M
Length B.P	: 34.84 M
Breadth	: 11.20 M
Depth moulded	: 4.95 M
Max Draft	: 4.00 M
Dead weight	: 344.74MT
G R T	: 465.00MT
N R T	: 139.00MT

Machinery

Main Engine	: Yanmar 6N 280-EN
Rating	: 2x 2500 bhp each @ 720 rpm
Generators	: 3 x Detroit Diesel 8V-92TA
Ratings	: 3 x 300 KW (300V/3PH/50HZ)
Propellers	: 2 x FPP, 3000 MM Dia In Kort Nozzles
Bow Thruster	: Ulstein 45-TV, 250 KW 3.7 t Thrust

Capacities

Fuel oil	: 291 M ³ @ 100 %
Fresh Water	: 82 M ³ @ 100%
Ballast water	: Nil
Clear Deck area	: L 15M x W 10M; 150 M ²
Sewage Holding Tank	: 3.7 M ³
Sewage Treatment Plant	: Ecomar 8 (4000 litres / day) 15 persons

Navigation Equipment

Magnetic compass	: 2 x Saura(T-150 B)
Gyro compass	: 1 x Tokimec(ES-110)
Auto Pilot	: 1 x Furuno FAP 330
Radar (1)	: 1 x Furuno(1525mk2)
Radar(2)	: 1 x Furuno(1932 Mark-2)
SART	: 2 x ACR(Pathfinder 3)
AIS	: 1 x Samyung(SI-30)
Windspeed Ind.	: 1 x Young(Wind Tracker)
Echo Sounder	: 1 x Furuno(FCV-291)
GPS	: 2 x Furuno(GP-32)

Safety Fire Fighting

Fire Pump	: 1 x 25 M ³ /hr @ 4.5 bar
Life Rafts	: 2 units x 15 Person
Life buoys/Life Jacket	: As per solas / 24 PCS
Fireman Suit	: 2 nos
Fire Extinguisher	: 17 x Portable
Emergency Fire Pump	: 1 x 25 M ³ /hr @ 4.5 bar
Foam Monitor	: 2800L/min @ 8bar
Fire Monitor	: 1 x Water Jet Type, 1 x water/ 1 x Water/Foam Type
Capacity	: 2 fixed foam / water fire monitors of 3000 litres /min @ 120M head capacity Fire pump of 360 M ³ /hour.

Transfer rates

- Fuel	: 1 x 30 M ³ /hr@50 m Head
- Water	: 1 x 30 M ³ /hr@50 m Head

Registration

Year Built	: 1998
Builder	: Jiangsu Wuxi Shipyard Co Ltd
Port.of Registry / Flag	: Moroni / Union of Comoros
IMO No.	: 9205768
No. of Registry	: 1201061
Call sign	: D6FQ9
Class	: American Bureau Of Shipping
Owners	: PT David Marine INC
Operators	: Mubarak Marine LLC

Towing Equipment

Winch	: 1 x 75MT Line pull,BRATVAAG winch,140 MT Brake Capacity
Main Towing Wire	: 650M x 52mm
Spare Towing Wire	: 650M x 52mm
Bollard Pull	: 66.50 MT
Windlass	: 1X6T@12 m/min
Tugger winch	: 1xBRATVAAG 10 Tonnes line pull @14m/min
Anchors	: 2 x 680 kg, Stockless Anchor
Anchor Chain	: 270M each of Dia 36 mm
Towing Pins	: 2 x SWL 200 Tonnes, ULSTEIN
Shark Jaws	: 1 x SWL 200 Tonnes, ULSTEIN
Stern Roller	: SWL 525 Tonnes, L 2.89 M x D 1.5 M
Spare wire reels	: Hydraulic; 3 x 6 Ton line pull 12m/min for storage of spare wire, pennants, work wires and change over from Towing to Anchor Handling mode

Crane

Deck Crane	: 1 x Electro hydraulic,6T SWL @ 9 M radius
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Performance

Speed Max / Eco	: 12.00 knots / 10.00 knots
Fuel consumption	: 16000 Litres MGO per 24 hours @ full power, 9000 litres MGO per 24 hours @ economic cruising speed of 10 knots

Communication

GMDSS	: 1 x Furuno (RC 1500-IT)
Satellite phone	: 1 x Sailor FBB150
Satellite Email	: 1 x Sailor FBB150
Portable VHF (3)	: 3 x McMurdo(R2)
Watch Receiver	: 1 x Furuno
Navtex Receiver	: 1 x Furuno0(NX-500)
EPIRB	: 1 x ACR
Weather Fax	: 1 x Furuno(FAX-207)

Accommodation

Total	: 15 Person
Crew	: 2 x 1 man cabin = 2 men 2 x 2 men cabin = 4 men 1 x 4 men cabin = 4 men 1 x 5 man cabin = 5 men

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تقرير REPORT

WS No. DIV206

Report No. D.484/NDME/SRC

BOLLARD PULL TEST CERTIFICATE

“AURIGA”

This is to certify that this office, represented by the undersigned and acting on behalf of

AL MUBARAK OVERSEAS LLC

has attended a Bollard Pull Test of the subject vessel at DDW, Dubai U.A.E. and hereby certifies the continuous static bollard pull to be as stated below.

The test has been conducted under the conditions specified overleaf and generally in accordance with Noble Denton Guidelines for Bollard Pull Tests. It should be noted that different test conditions may achieve results above or below those stated due to any variation in test conditions from those recommended.

Continuous Static Bollard Pull : 66.5 S/Tonnes

Maximum Bollard Pull : 70.5 S/Tonnes

Any alterations in the surveyed items or procedures after issue of the Certificate may render the Certificate invalid unless approved by this office.

This Certificate is intended for the sole use of the person or organisation to whom it is addressed and no liability, of any nature whatsoever, shall be assumed to any other party in respect of its contents. As to the addressee, neither the Company nor the undersigned shall (save as provided in the Company's Conditions of Business dated 9th February 2011), be liable for any loss or damage whatsoever suffered by virtue of any act, omission or default (whether arising by negligence or otherwise) by the undersigned, the Company or any of its servants.

NOBLE DENTON MIDDLE EAST (Dubai)



Stephen Craig - Surveyor



Dated/Time : 16th August 2012 / 0930 hrs
Place : Dubai Drydocks, U.A.E.

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16th August 2012

FAO: AL MUBARAK OVERSEAS LLC

I was the GLND Surveyor for the bollard pull test on the tug "AURIGA" at Dubai Dry Dock, Dubai on the 15th August 2012.

The trial site has a significant impact on the results of a bollard pull trial. A good site should allow the use of a long enough towing line, be sheltered from wind and waves, have very deep water and neither tide nor current.

Water depth is of utmost importance that there is enough depth of water beneath the keel of the tug during trials, as an insufficient water depth will have a strong effect on the obtainable maximum bollard pull.

GL Noble Denton Criteria, states the water depth at the test location shall be at least 20 meters within a radius of 100 meter of the vessel. At the test location at the Dubai Dry Docks on the 15th August 2012, when the bollard pull test was carried out on the Tug "AURIGA", the water depth was only 12 meters.

It must be pointed out to you as owners of the Tug "AURIGA" that due to the reduced water depth which was experienced at the test area, this may have adversely affected the test results of the bollard pull.

We would anticipate that the Tug "AURIGA" would have achieved better test results if the water depth within the test area had met with GL Noble Denton Criteria.

If you have any questions regards this letter, please do not hesitate in contacting myself or the office.

Best Regards



Captain Stephen Craig
Senior Surveyor
GL Noble Denton



BOLLARD PULL TEST REPORT

W.S. No.

DIV206

VESSEL DATA		LOCATION DATA	GUIDELINE	TEST DATA
Name:	AURIGA	Test Location	DDW, DUBAI	F Key dolphin
Registry:	1998 COMORS	Tug Stern to Shore	300m	300m
Power:	2 X 2500 BHP @ 720 RPM	Clear Radius	300m	300m
Length:	37.00M	Water Depth	20m	12.0 m
Beam:	11.20M	Max. Wind Speed	5.0m/s	5.0 m/s
Draft (F):	3.3 M	Max. Current	0.5m/s	0.5 m/s
Draft (A):	4.70 M	SeaWaves	Nil	Slight
Trim:	1.40 M by stern	Swell Waves	Nil	Nil
Towline Dia:	52mm	Towline Angle	Horizontal	Horizontal

LOADCELL TYPE	DATE LAST CALIBRATED
AJT ACCUWAY TM	Dated 11/06/2012 By Dorset Repair and Calibration
TEST DATA	100% (10min) 100% (10min) 110% (5 min)

Start:	15/08/2012 09:20		
RPM /Fixed (P):	720 rpm		
RPM /Fixed (S):	720 rpm		
Exhaust Temp. (Port Outer)	440 Deg.C		
Exhaust Temp. (Stbd Outer)	450 Deg.C		

TIME	S/Tons		
00:00	64.50		
00:30	65.60		
01:00	66.50		
01:30	67.60		
02:00	61.90		
02:30	68.90		
03:00	63.60		
03:30	64.00		
04:00	64.50		
04:30	65.60		
05:00	66.20		
05:30	67.00		
06:00	68.00		
06:30	68.90		
07:00	70.50		
07:30	67.90		
08:00	66.70		
08:30	68.70		
09:00	66.70		
09:30	66.20		
10:00	66.10		
Mean	66.46		
Maximum	70.50		

Mean Bollard Pull **66.46** S/tons
 Maximum Bollard Pull **70.50** S/Tons

Surveyor
Date

Stephen Craig
15.08.2012



GL Noble Denton







