HAUGESUND CLASS BULK CARRIERS

SCOTTISH SHIP MANAGEMENT LTD.
MANAGERS FOR
LYLE SHIPPING CO. LTD. & H. HOGARTH AND SONS LTD.
GLASGOW

CABLES: MANAGEMENT GLASGOW, SCOTTISH, SYDNEY.
TELEX: 778133 (GLASGOW) AA 27398 (SYDNEY)
230 996522 (NEW YORK)

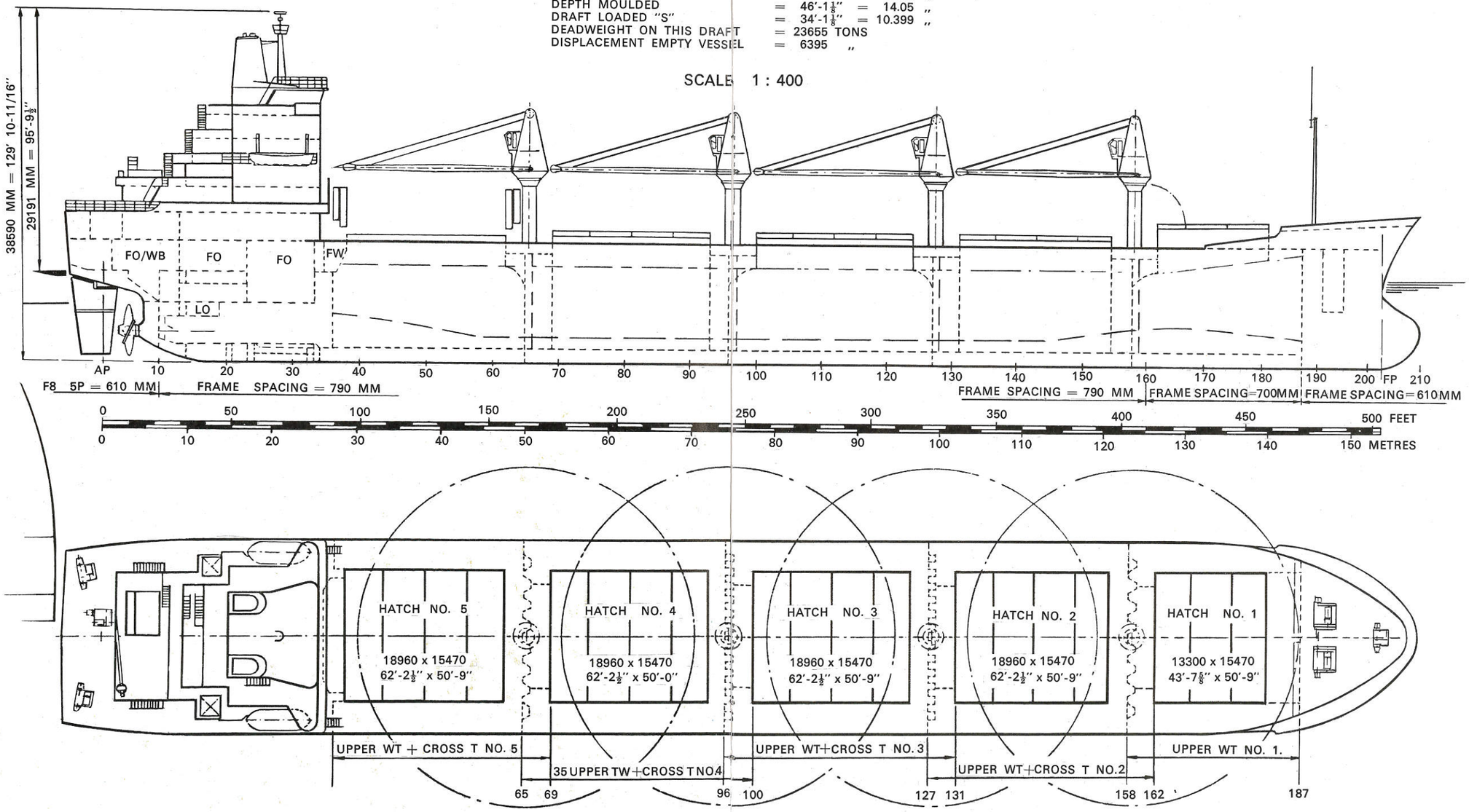
GENERAL PARTICULARS

CAPE GRENVILLE•CAPE GRAFTON•CAPE HORN•BARON WEMYSS•BARON ARDROSSAN

DIMENSIONS:

LENGTH OVER ALL	= 534′-4″	= 162.86 M
LENGTH BETWEEN PP	= 505′-0″	= 153.90 ,,
BREADTH MOULDED	= 75′-0″	= 22.85 ,,
DEPTH MOULDED	= 46′-1⅛″	= 14.05 ,,
DRAFT LOADED "S"	= 34′-1⅛″	= 10.399 ,,
DEADWEIGHT ON THIS DRAFT	= 23655 TONS	
DISPLACEMENT EMPTY VESSEL	= 6395 ,,	

SCALE 1 : 400



LOAD-LINE	FREEBOARD		DRAFT		DISPLACE-MENT	DEAD-WEIGHT
	METRES	FEET	METRES	FEET		
TF	3,257	10′-8¼″	10,842	35′-6⅞″	30750	24355
F	3,473	11′-4¾″	10,626	34′-10⅜″	30050	23655
T	3,484	11′-5-3/16″	10,615	34′-9-5/16″	30760	24365
S	3,700	12′-1-11/16″	10,399	34′-1⅛″	30050	23655
W	3,916	12′-10-3/16″	10,183	33′-4-15/16″	29350	22955
LIGHT SHIP			2.48	8′-1⅛″	6395	0

BUILDERS: HAUGESUND MEKANISKE VERKSTED A/S HAUGESUND NORWAY.

TYPE: FAST GEARED SINGLE DECK SELF TRIMMING BULK CARRIER.

CLASS: LLOYDS 100 A1 — U.M.S. strengthened and certified to carry heavy cargo such as ore in holds 1, 3, & 5 with holds 2 & 4 empty. No 3 hold floodable.

MACHINERY: Two Stork Werkspoor 12 T.M. 410 — 1200 B.H.P. driving one 4 bladed controllable pitch propellor via LOHMAN AND STOLTERFOHT reduction gearing.

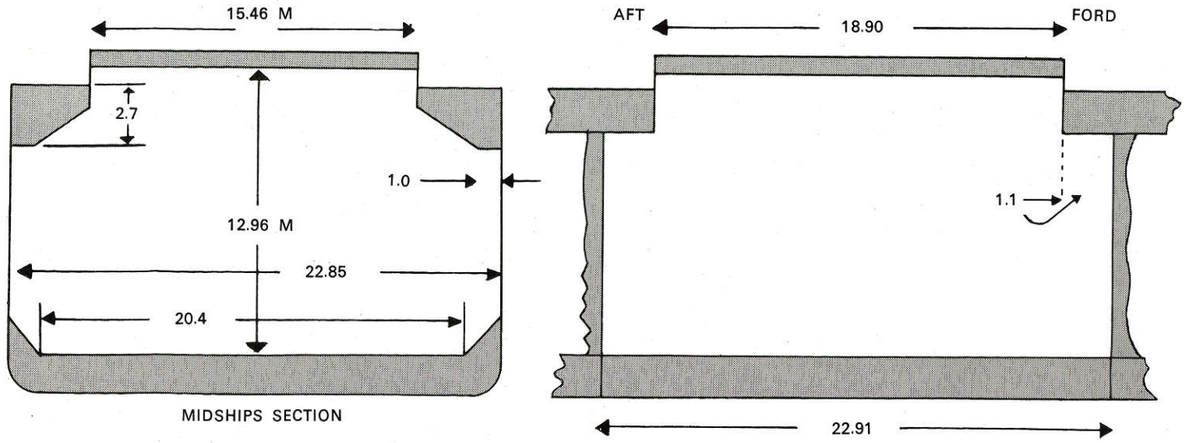
CONSUMPTION: 36 Tonnes + 2 Tonnes D.O. In Port. 2 Tonnes daily (Idle) 2.5 (Working).

SPEED: 15 KTS.

CARGO GEAR: 4 BRATTVAAG 16 Tonnes Level luffing deck cranes with grabbing facility.

COMPLIES FULLY WITH CURRENT ST. LAWRENCE SEAWAY REGULATIONS.

HOLDS



HOLD CAPACITIES					
COMPARTMENT	FRAME NO.	GRAIN		BALE	
		CUB M	CUB FT	CUB M	CUB FT
HOLD NO. 1	158 – 187	4619	163120	4546	161639
—„— „ 2	127 – 158	6457	227932	6360	224506
—„— „ 3	96 – 127	6513	229909	6293	224140
—„— „ 4	65 – 96	6513	229909	6327	223340
—„— „ 5	36 – 65	6067	214165	5906	208479
TOTAL IN CARGO HOLDS		30169	1065035	29432	1040104

HEIGHT OF HATCH COAMINGS ABOVE B.L. AND SUMMER LOADLINE "S"				
HATCH NO.	H		h	
	METRES	FEET	METRES	FEET
1	16,562	54'-4"	6,173	20'-3"
2-3-4-5	14,972	49'-1½"	4,593	15'-0-13/16"

TANK TOP AREAS	SQ. M.
HOLD NO 1	320
HOLD NO 2	470
HOLD NO 3	490
HOLD NO 4	470
HOLD NO 5	390

Large hatchways and clear uncluttered holds make vessels of this class particularly suitable for grabbing operations and allow the easy use of bulldozers for fast trimming.

The short ends and minimal top tank overhang ensure that each hold is fully self trimming and that the very best stow is obtained with even the lightest of grains.

The large area of clear tank top lends itself to most economical stowage of pipes, steel products etc, and makes the cleaning operation between bulk cargoes fast and easy.

TANKTOPS AND BULKHEAD BOUNDARY AREAS ARE SPECIFICALLY STRENGTHENED IN ORDER TO PERMIT FULL DEADWEIGHT LOADING WITH ALTERNATE HOLDS EMPTY.

TANKS

CAPACITY OF BALLAST TANKS (SP GR OF SW = 1025)									
COMPARTMENT	FRAME NO.	CUB M				TONS A 1016 KG			
		PORT	CENTRE	ST B	TOTAL	PORT	CENTRE	ST B	TOTAL
FOREPEAK	187 – FE		865.0		865.0		872.7		872.7
DB TANK NO. 1	158 – 187	273.7		273.7	547.4	276.1		276.1	552.2
„ –„– „ 2	127 – 158	268.5	413.2	268.5	950.2	270.9	416.8	270.9	958.6
„ –„– „ 3	96 – 127	274.0	413.2	274.0	961.2	276.4	416.8	276.4	969.6
„ –„– „ 4	65 – 96	274.0	405.4	274.0	953.4	276.4	409.0	276.4	961.8
„ –„– „ 5	34 – 65	229.4	405.4	229.4	864.2	231.4	409.0	231.4	871.8
UPPER WT + CROSS TANK NO. 3	96 – 131	238.5		238.5	477.0	240.6		240.6	481.2
„ „ „ „ „ 4	65 – 100	238.5		238.5	477.0	240.6		240.6	481.2
„ „ „ „ „ 5	35 – 69	227.6		227.6	455.2	229.6		229.6	459.2
F.O. & W.B. TANK AFT	1 – 13		● 347.0		● 347.0		● 350.0		● 350.0
TOTAL WATER BALLAST WITH WB IN COMBINED TANKS					6897.6				6958.3

CAPACITY OF FUEL OIL TANKS (SP GR OF FO = 09)									
COMPARTMENT	FRAME NO.	CUB M				TONS A 1016 KG			
		PORT	CENTRE	ST B	TOTAL	PORT	CENTRE	ST B	TOTAL
FO WING TANK NO. 1	23 – 33	330.0		330.0	660.0	292.0		292.0	584.0
„ –„– –„– „ 2	13 – 23	255.0		123.0	378.0	225.9		109.0	334.9
DO –„– –„– , 3	1 – 13			112.0	112.0			99.2	99.2
FO –„– –,– „ 3	1 – 13	133.0			133.0	117.8			117.8
FO/WB TANK AFT	1 – 13		● 347.0		● 347.0		● 307.5		● 307.5
UPPER WT NO. 1	158 – 187	118.5		118.5	237.0	105.0		105.0	210.0
UPPER WT + CROSS TANK NO. 2	127 – 162	238.5		238.5	477.0	211.3		211.3	422.6
TOTAL FUEL OIL WITH F.O. IN COMBINED TANKS					2344.0				2076.0

CAPACITY OF LUB OIL TANKS (SP GR OF LO = 0.9)									
COMPARTMENT	FRAME NO.	CUB M				TONS A 1016 KG			
		PORT	CENTRE	ST B	TOTAL	PORT	CENTRE	ST B	TOTAL
LO STORAGE TANK DB	24 – 33		20.5		20.5		18.2		18.2
LO SYSTEM –„– „	24 – 33	9.0		9.0	18.0	8.0		8.0	16.0
LO STORAGE –„–	14 – 19	16.0		16.0	32.0	14.2		14.2	28.4
TOTAL LUBRICATING OIL					70.5				62.6

CAPACITY OF FRESH WATER TANKS (SP GR OF FW = 1.0)									
COMPARTMENT	FRAME NO.	CUB M				TONS A 1016 KG			
		PORT	CENTRE	ST B	TOTAL	PORT	CENTRE	ST B	TOTAL
FW CROSSTANK (Drinking water)	34 – 38	65.1		38.9	104.0	64.1		38.3	102.4
FW TANK DB	24 – 32	16.5		17.0	33.5	16.2		16.7	32.9
TOTAL FRESH WATER					137.5				135.3

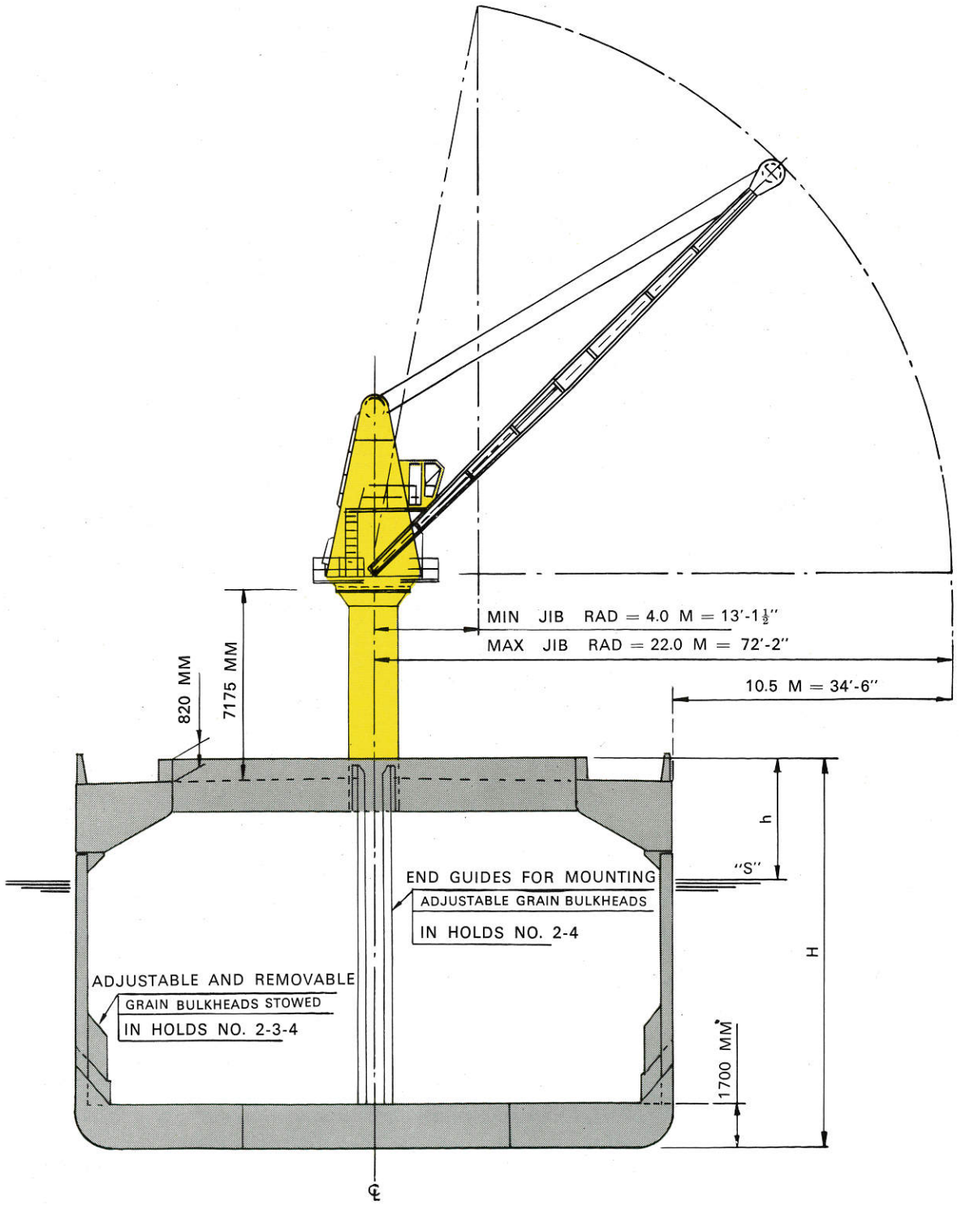
CAPACITY OF SERVICE TANKS (SP GR OF OIL = 0.9)									
COMPARTMENT	FRAME NO.	CUB M				TONS A 1016 KG			
		PORT	CENTRE	ST B	TOTAL	PORT	CENTRE	ST B	TOTAL
FO SETTLING TANK	18 – 23			64.4	64.4			57.0	57.0
FO DAILY SERVICE TANK	13 – 18			55.2	55.2			48.9	48.9
DO –„– –„– –„–	11 – 13			21.3	21.3			18.9	18.9

CARGO GEAR

Haugesund class vessels are fitted with four Brattvaag level luffing deck cranes, each of which has a maximum S.W.L. of 16 tonnes and is capable of continuous loading or discharge operations using either hook or grab. All the vessel's cargo handling machinery complies with the safety standards of the Australian Department of Navigation the Nation Cargo Bureau of the United States and the British Department of Trade.

The generous outreach from the ships side makes these units equally suitable for working either into or from lighters or hoppers or directly into railway wagons or lorries.

MAXIMUM RADIUS	22.0 m	72′ 02″
MINIMUM RADIUS	4.0 m	13′ 01″
LOW GEAR HOIST, MAX S.W.L.		30 m per minute.
360 DEGREE SLEW SPEED		0– 1.2 R.P.M.
LUFFING TIME FROM MAX TO MIN JIB RADIUS		42 secs.



PRINCIPAL SECTION IN HOLDS

SCALE 1 : 200

BULKHANDLING

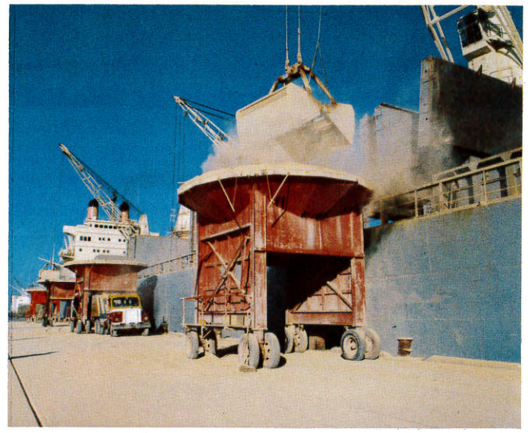
Haugesund class vessels are all fully equipped for self loading and discharging operations and by carrying their own grabs are effectively independent of shore installations and equipment.

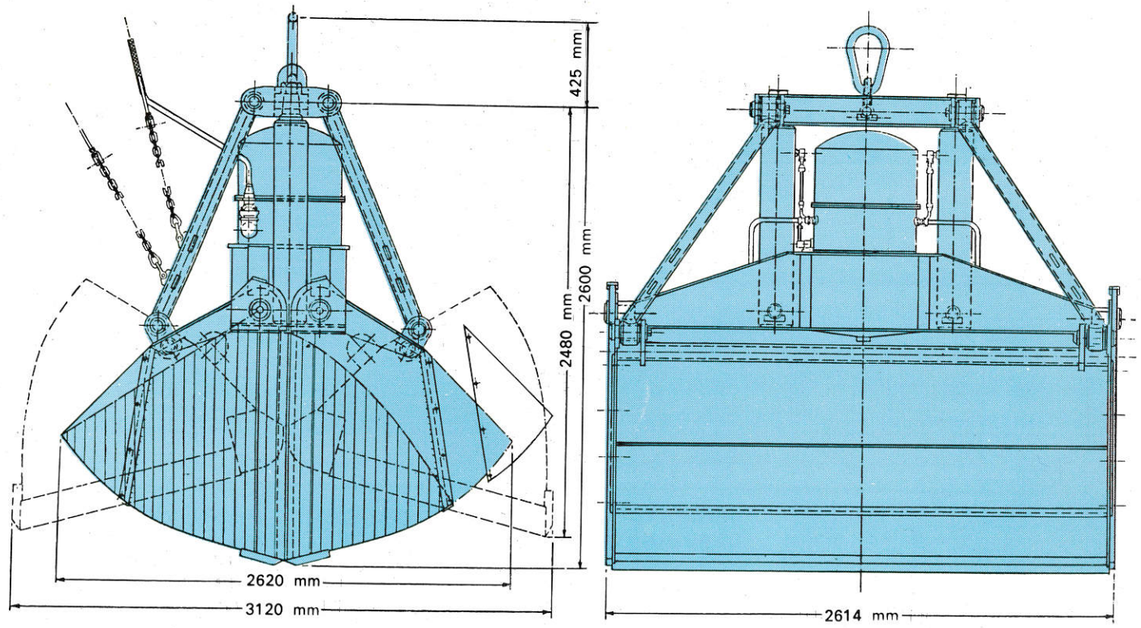
Each of the vessels Peiner motorgrabs has a capacity of 6.3 cu.m, or 4.0 cu.m. with spill plates lifted, which facility enables the grab to handle full loads of any bulk cargo whose stowage factor falls between .310 and 1.6 tonnes per cu.m.

Peiner motorgrabs have been successfully used on this class of vessel for a large range of cargoes from the lightest of grain to mineral ores and concentrates, and can be modified to suit particular requirements, such as the discharge of cargos where the minimum of dust is to be allowed to escape during the grab opening cycle.

The operation of connecting and disconnecting the grabs is fast and easy, which means that the very minimum of time elapses between the vessels arrival and the commencement of loading or discharging. Similarly the time taken to secure the gear and leave the berth is cut. Rapid interchange between grab and hook means that the rig is quickly adapted for the loading and shifting of bulldozers or trimming equipment once again cutting the time lost to the very minimum.

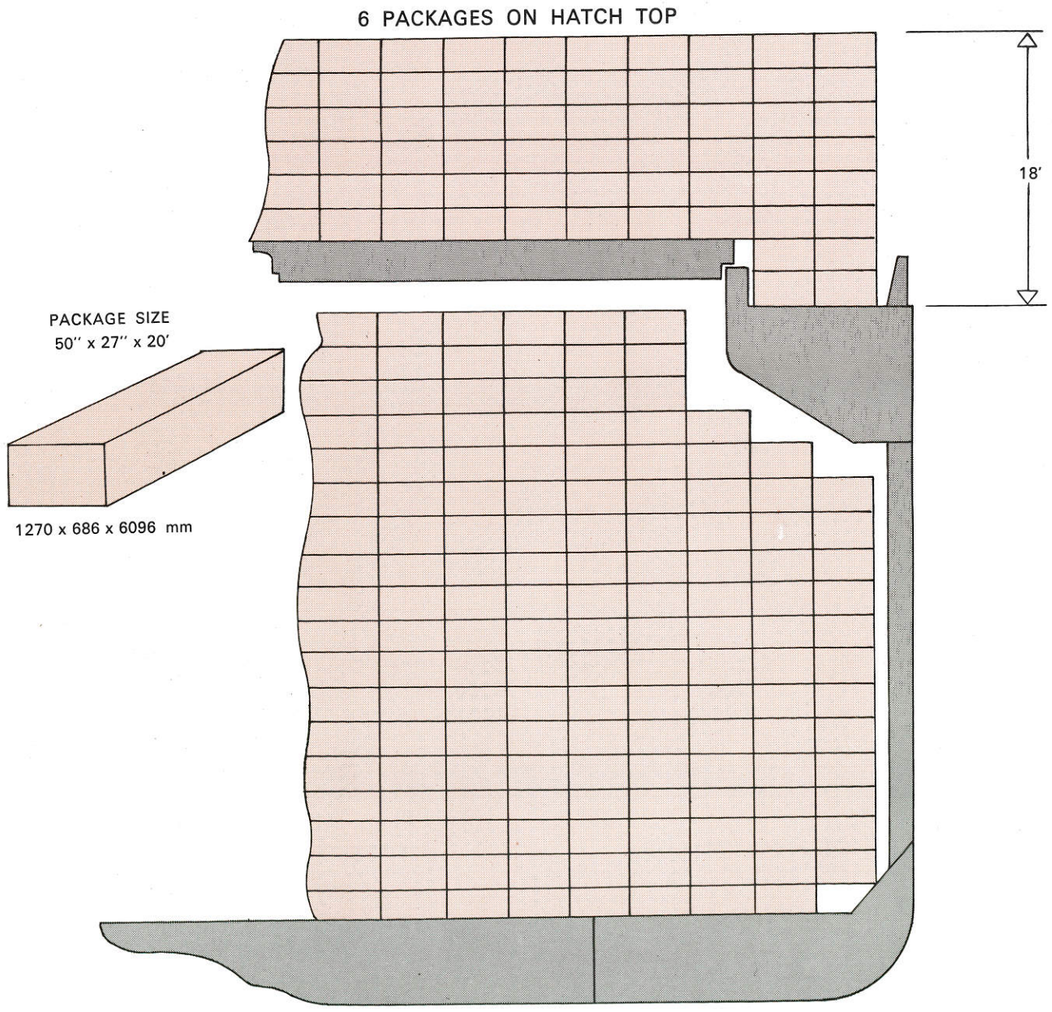
In order to cope with varying discharge situations grabs on this class of vessel can be turned through 90 degrees in order to lie in either the athwartships or the fore and aft line.





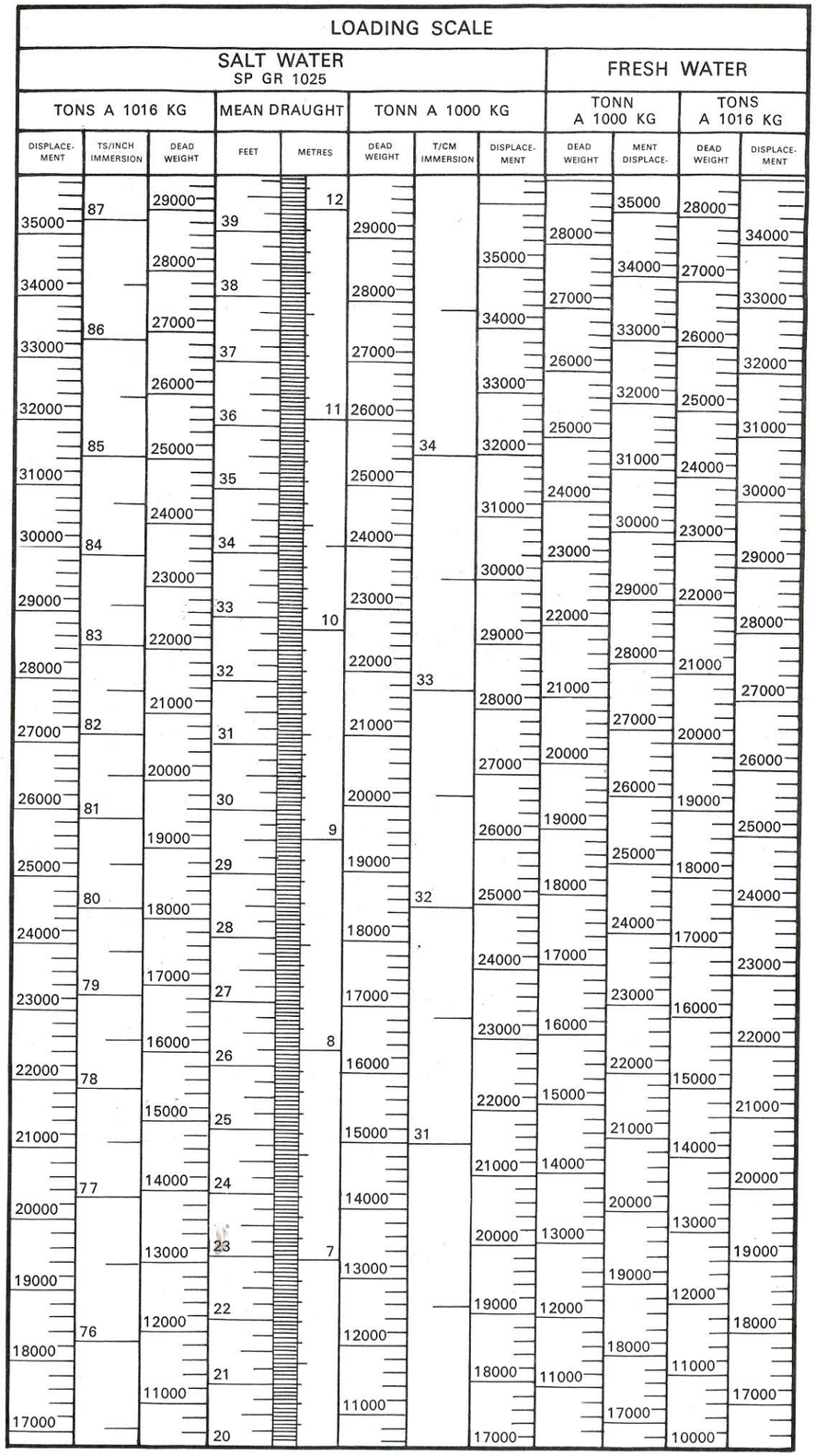
PACKAGED LUMBER

STEEL SOCKETS FOR UPRIGHTS AND PAD EYES FOR CHAIN LASHINGS ARE FITTED ON MAIN DECK,



DEADWEIGHT

light ship 6435 constant 250/300



EQUIPMENT

NAVIGATIONAL

RADAR (Main)	DECCA	R.M. 1226
(Aux)	DECCA	r.m. 926 C
R.D.F.	PLATH VISUAL	S.F.P. 705 L.N.G.
ECHO SOUNDER	SIMRAD	E.S.2
GYRO COMPASS	S.G. BROWN	
AUTO PILOT	S.F. BROWN.	
COMMUNICATIONS	MAIN STATION	I.M.R.
	V.H.F.	I.M.R.

HATCH COVERS — A.S.C.A. Hydraulically operated steel covers able to withstand surface loading of up to 2.8 Tonnes/M2.

HOLD and CRANE ACCESS LADDERS Comply fully with Australian and other International requirements.

AUXILIARY MACHINERY — Two 6 cylinder, 4-stroke, turbo charged, single acting diesel engines, Ruston type A.P.2 Z, each producing 755 B.H.P. at 720 R.P.M., directly coupled to two NEBB generators, type WAB 995/10 F. each of 656 K.V.A. 450 V. 60 cycles.

In addition one Nebb generator type WAB 995/8 H, 920 K.V.A. 450 V 60 cycle coupled directly to main engines, and enabling power to be generated under way without consumption of D.O.

BALLAST PUMPS — 2 WEIR Vertical Single stage ballast pumps rated 2770 gallons/Minute.

FRESH WATER GENERATOR. — One WEIR Distiller rated at 20 Tonnes per day.

C.O.2 — Total C.O.2 Flooding system, consisting of 50 x 45 K.G. Bottles.