

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY

Received at London Office 28 JAN 1948

Date of writing Report 1-11-1947 When handed in at Local Office 19 Port of **NEWCASTLE, N.S.W.**  
 No. in Reg. Book Survey held at **Newcastle, N.S.W.** Date: First Survey **27-10-45** Last Survey **28-10-1947**  
 (Number of Visits **113**)  
 on the **Single Screw Steamer "DELINGRA"** Tons Gross **2533** Net **1161**  
 Built at **Newcastle, NSW.** By whom built **State Dockyard** Yard No. **26** When built **1947**  
 Engines made at **Newcastle, N.S.W.** By whom made **State Dockyard** Engine No. **26** When made **1947**  
 Boilers made at **Sydney, N.S.W.** By whom made **Cookatoo Docks & Eng.** Boiler No. **✓** When made **1946**  
 Registered Horse Power **✓** Owners **Commonwealth of Australia Dept. of Supply & Shipping.** Port belonging to **Newcastle, N.S.W.**  
 Nom. Horse Power as per Rule **375 = MN.** Is Refrigerating Machinery fitted for cargo purposes **Yes** Is Electric Light fitted **Yes**

**ENGINES, &c.** Description of Engines **"Lentz", Double Compound, Enclosed, Forced Lubrication.**  
 Dia. of Cylinders **2 @ 18 1/2"** Length of Stroke **40"** Revs. per minute **110** No. of Cylinders **4** No. of Cranks **4**  
 Dia. of Crank shaft journals as per rule **13 1/2"** as fitted **13 1/2"** Dia. of Crank pin **13 1/2"** Crank webs Mid. length breadth **20 1/2"** Thickness parallel to axis **8 3/8"**  
 Diameter of Thrust shaft under collars as per rule **13 1/2"** as fitted **13 1/2"** Diameter of Tunnel shaft as per rule **12 5/8"** as fitted **12 5/8"** Diameter of Screw shaft as per rule **13 3/4"** as fitted **13 3/4"** Is the Screw shaft fitted with a continuous liner the whole length of the stern tube **Yes** Is the after end of the liner made watertight in the propeller boss **Yes**  
 If the liner is in more than one length, are the joints burned **Yes, through whole thickness of liner (3/4")** If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive **Tight fit.**

If two liners are fitted, is the shaft lapped or protected between the liners **✓** Is an approved appliance fitted at the after end of the shaft to permit of it being efficiently lubricated **No** Length of Stern Bush **4'-8 1/2"** Diameter of Propeller **12'-6"**  
 Pitch of Propeller **12'-9"-15'-2"** No. of Blades **4, Bronze.** State whether Moveable **No** Total Surface **52** square feet.  
 No. of Feed Pumps fitted to the Main Engines **None** Diameter of ditto **✓** Stroke **✓** Can one be overhauled while the other is at work **✓**  
 No. of Bilge Pumps fitted to the Main Engines **Two** Diameter of ditto **5"** Stroke **10"** Can one be overhauled while the other is at work **Partly**  
 Total number and size of power driven Feed and Bilge Auxiliary Pumps **2 Main Feed, 1 Aux. feed, 1 Fire & bilge. All 9" x 6" x 18".**  
 No. and size of Pumps connected to the Main Bilge Line **2 M.E. bilge pumps, 1 fire & bilge, 1 ballast. Sizes: -As above & hereunder.**  
 No. and size of Ballast Pumps **One, 9" & 10" x 24"** No. and size of Lubricating Oil Pumps, including Spare Pump **1 Aux. pump 3 1/2" & 4" x 9".** Gear pump off main engine.  
 Are two independent means arranged for circulating water through the Oil Cooler **Yes** No. and size of suction connected to both Main Bilge Pumps and Auxiliary Bilge Pumps: -In Engine and Boiler Room **2 @ 2 1/2" & 1 @ 4" in Eng. Room** and in Holds, &c. **2 @ 2 1/2" in all holds.**  
**1 @ 2 1/2" in Tunnel Well, 2 @ 2 1/2" in Boiler Room** **2 @ 2" in cross bunker.**

**No. 2 Hold lengthened, No. 2 bilge suction increased to 2 3/4" and main line in B.R. to 4", Dr. No. 2300/4 attached.**  
 No. and size of Main Water Circulating Pump Bilge Suctions **One - 7" bilge injection.** No. and size of Donkey Pump Direct Suctions to the Engine Room Bilges **One @ 4"** Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes **Yes**  
 Are the Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges **Yes**  
 Are all connections with the sea direct on the skin of the ship **Yes, or on fabricated steel** Are they Valves or Cocks **Valves, except Evap. & Blr. B. D. cocks.**  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates **Yes** Are the Discharge Pipes above or below the deep water line **Both.**  
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel **Yes** Are the Blow Off Cocks fitted with a spigot and brass covering plate **Yes.**  
 What Pipes are carried through the bunkers **None, except bilge pipes.** How are they protected **Under bilge limbers.**  
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times **Yes**  
 Is the arrangement of Valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one compartment to another **Yes** Is the Screw Shaft Tunnel watertight **Yes** Is it fitted with a watertight door **Yes** worked from **E.R. at Upr. Dk.**

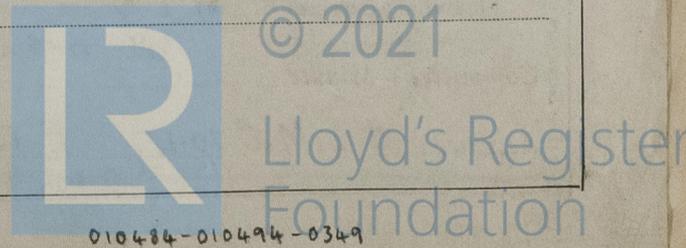
**MAIN BOILERS, &c.** (Letter for record) Total Heating Surface of Boilers **4980** {50% Economisers **320 c.ft.** Superheater **490 cub. feet.** = **5790 c.f.**  
 Is Forced Draft fitted **Yes** No. and Description of Boilers **Two, 2 Drum W.T.** Working Pressure **240 lbs.**  
**IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes**  
**IS A DONKEY BOILER FITTED? No.** If so, is a report now forwarded?  
 See Secretary's Letters E;-  
**PLANS.** Are approved plans forwarded herewith for Shafting **9-8-44** Main Boilers **1-5-44** Auxiliary Boilers **✓** Donkey Boilers **✓**  
 (If not, state date of approval)  
 General Pumping Arrangements **E. 22-2-45, 21-3-45, 3-5-45.** Oil fuel Burning Piping Arrangements **Not fitted.**  
**SPARE GEAR.** State the articles supplied: **As per Rules, see attached list also Secretary's letter E. 9-10-45.**

If not, state whether, and when, one will be sent? Yes

The foregoing is a correct description,

*Hutchinson* for

STATE DOCKYARD,  
N.S.W. Govt. Engineering and  
Shipbuilding Undertaking - Manufacturer.



1945: - Oct. 27, Dec. 19, 20, 21. 1946: - Jan. 3, 11, 14, 25, 30. Feb. 1, 5, 9, 15, 28. Mar. 6, 11, 15, 21, 26, 28. Apr. 2, 9, 13, 17, 27. May 8, 10, 16, 23, 24, 25, 27, 28, 29. June 4, 5, 7, 11, 13, 22, 28. July 15, 29. Aug. 8, 22, 28. Sep. 5, 17, 30. Oct. 22, 28. Nov. 8, 26, 29. Dec. 11, 13, 20. 1947: - Jan. 8, 13, 28. Feb. 12, 13, 17, 19, 22. Mar. 4, 7, 12, 17, 26, 28. Apr. 3, 8, 21, 29, 30. May 8, 19, 26, 28. Aug. 5.

1947: - Apr. 11, 14. June 3, 12, 18, 20. July 4, 10, 11, 15, 25, 28. Aug. 12, 19, 21, 25, 28, 29. Sep. 1, 3, 10, 15, 22, 24, 30. Oct. 2, 8, 15, 17, 20, 22, 28.

Total No. of visits **113** Fwd. to Aft.

Dates of Examination of principal parts—Cylinders	L.P. 22-8-46.	H.P. 28-10-46.	H.P. 12-2-47.	L.P. 8-1-47.	Valves 13-2-47.
Covers	19-12-45. 15-7-46. 5-9-46.	Pistons 17-9-46	Rods 21-12-45.	22-2-47.	
Connecting rods	20-12-45	Crank shaft 18-6-47.	20-6-47	Thrust shaft 12-3-47	
Tunnel shafts	20-12-45. 21-12-45	Screw shaft 27-10-45.	20-12-45.	Propeller 8-4-47	
Stern tube	17-2-47	Engine and boiler seatings 3-6-47.	18-6-47	Engines holding down bolts 12-8-47	
Completion of pumping arrangements	3-9-47	Boilers fixed 19-8-47	Engines tried under steam 15-10-47.	22-10-47.	
Completion of fitting sea connections	11-4-47	Stern tube 14-4-47	Screw shaft and propeller 21-4-47		
Main boiler safety valves adjusted	15-10-47	Thickness of adjusting washers P.B. F.V., .605" S.H., .610. S.B. A.V., .457" F.V., .470			
Material of Crank shaft	Mild Steel	Identification Mark on Do. Lloyds No. 26 F & A. EMH. 29-8-47.			
Material of Thrust shaft	Mild Steel	Identification Mark on Do. Lloyds No. 552. WCE. 22-10-46.			
Material of Tunnel shafts	Mild Steel	Identification Marks on Do. Lloyds No. 5532/2. EMH. 20-12-45			
Material of Screw shafts	Mild Steel	Identification Marks on Do. Lloyds No. 6515. EMH. 21-12-45			
Material of Steam Pipes	Mild Steel	Test Pressure 720 lbs. per sq. in. Date of Test 19-2-47 to 5-8-47			
Is an installation fitted for burning oil fuel	No <input checked="" type="checkbox"/>	Is the flash point of the oil to be used over 150°F			<input checked="" type="checkbox"/>
Have the requirements of the Rules for carrying and burning oil fuel been complied with	Not fitted.				
Is this machinery duplicate of a previous case	Yes <input checked="" type="checkbox"/>	If so, state name of vessel "DORRIGO", "DELEMERE", "DANDENONG", "DAYLESFORD", "DUBBO", "DALBY".			

**General Remarks** (State quality of workmanship, opinions as to class, &c.)  
 The Machinery of this vessel has been built under Special Survey in conformity with the Rules, approved plans and Secretary's letters. The materials and workmanship are of good quality and to our satisfaction. The machinery has been properly installed in the vessel, tested under working conditions and found satisfactory and, in our opinion, is now eligible to be classed in the Society's Register Book with the following records and notations:-

+LMC, 10.47. T.S. (C.L.) 2 W.T. Boilers 240 lbs. (Spt. 220 lbs.). F.D.

Certificate to be sent to the Surveyors are requested not to write on or below the space for Committee's Minute.

The amount of Entry Fee	£ 10 : 0 :	When applied for,
Special	£ 243 : 15 :	6/11/1947
Donkey Boiler Fee	£ :	When received,
Travelling Expenses (if any)	£ 50 : 0 :	19

[Signature] Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute  
 Assigned + L.M.C 10.47 F.D. C.L. 2 W.T.B. 240 lb. Spl. 220 lb.



If not, state what, and when, one will be sent? Yes