

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Date of writing Report 10 When handed in at Local Office 15 Feb 1941 Port of Sunderland

No. in Survey held at Sunderland Date, First Survey 13 Sep 14 Last Survey 11 Feb 1941  
Reg. Book. on the S.S. "STANFORD" (Number of Visits 55)

Built at Sunderland By whom built W. Pickering & Son Ltd. Yard No. 243 Tons Gross 5969 Net 3584  
When built 1941

Engines made at Sunderland By whom made G. Clark (1938) Ltd. Engine No. 1230 When made 1941

Boilers made at Sunderland By whom made G. Clark (1938) Ltd. Boiler No. 1230 When made 1941

Registered Horse Power - Owners Stanhope S.S. Co Ltd. Port belonging to London

Nom. Horse Power as per Rule 398 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes

Trade for which Vessel is intended

**ENGINES, &c.**—Description of Engines Triple Expansion (Poppet valves on HP & M.P.) Revs. per minute 70  
Dia. of Cylinders 23 1/2" - 38" - 66" Length of Stroke 45" No. of Cylinders 3 No. of Cranks 3  
Crank shaft, dia. of journals as per Rule 13.3" as fitted 13 3/4" Crank pin dia. 13 3/4" Crank webs Mid. length breadth 24" as fitted 24" Thickness parallel to axis H.P. 1 1/2" M.P. 8 3/4"  
Intermediate Shafts, diameter as per Rule 12.64" as fitted 13" Thrust shaft, diameter at collars as per Rule 13.3" as fitted 13 3/4" Mid. length thickness M.P. 8 3/4" Thickness around eye-ho Pin 6 7/8" Journal 4 3/8"

Tube Shafts, diameter as per Rule as fitted Screw Shaft, diameter as per Rule 14.14" as fitted 14 3/4" Is the tube screw shaft fitted with a continuous liner Yes

Bronze Liners, thickness in way of bushes as per Rule as fitted 3/4" Thickness between bushes as per Rule 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 junctions made by fusion through the whole thickness of the liner one length

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  
If two liners are fitted, is the shaft lapped or protected between the liners Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft No. If so, state type Length of Bearing in Stern Bush next to and supporting propeller 4'-11"

Propeller, dia. 14'-3" Pitch 16'-4 1/2" No. of Blades 4 Material Bronze whether Moveable No. Total Developed Surface 110 sq. feet

Feed Pumps worked from the Main Engines, No. none Diameter Stroke Can one be overhauled while the other is at work Yes  
Bilge Pumps worked from the Main Engines, No. 2 Diameter 4" Stroke 24" Can one be overhauled while the other is at work Yes

Feed Pumps No. and size two 9 1/2" x 4" x 21" How driven steam Pumps connected to the Main Bilge Line No. and size 1 @ 9" x 11" x 10" 1 @ 4" x 5" x 8" How driven steam

Ballast Pumps, No. and size 1 @ 9" x 11" x 10" Lubricating Oil Pumps, including Spare Pump, No. and size  
Are two independent means arranged for circulating water through the Oil Cooler Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room 3 @ 3" in E.R. 1 @ 2 1/2" in Tunnel well In Pump Room No. 4. 3" phi. No. 2A. 2 1/2" phi. In Holds, &c. No. 1. 3" phi. No. 2. 3 1/2" phi. No. 3. 3" phi.

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 8" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 @ 5" 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 Sea Connections fitted direct on the skin of the ship Yes Are they fitted with Valves or Cocks Both

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Yes Are the Overboard Discharges above or below the deep water line Below  
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 pass through the bunkers For hold bilge suction How are they protected wood casing  
What pipes pass through the deep tanks no deep tank Have they been tested as per Rule Yes

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 Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from top of bilge in E. Room

**MAIN BOILERS, &c.** (Letter for record S.) Total Heating Surface of Boilers 5342 sq. ft. Is Forced Draft fitted Both No. and Description of Boilers 2 S.B. Working Pressure 220

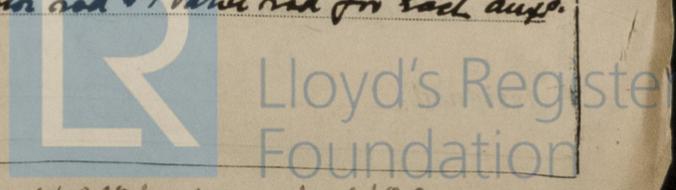
IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes  
IS A DONKEY BOILER FITTED? No. If so, is a report now forwarded?

Is the donkey boiler intended to be used for domestic purposes only  
PLANS. Are approved plans forwarded herewith for Shafting Yes Main Boilers Yes Auxiliary Boilers Donkey Boilers  
(If not state date of approval)  
Superheaters General Pumping Arrangements Oil fuel Burning Piping Arrangements

**SPARE GEAR.**  
Has the spare gear required by the Rules been supplied Yes

State the principal additional spare gear supplied one C.I. propeller, one propeller shaft, 2 half bottom end bearings built bolts complete, 4 half top end bearings built into complete, 2 main bearing bolts & nuts, one set coupling bolts & nuts, 1 set air pump valves, 2 bilge pump valves & seats, 1 complete set of packing rings for M.P. pistons, 1 set wearing parts for 1 piston rod gland packing, 1 set pads for Mitchell block (ahead gear).  
Poppet Valve gear: 2 valves (1 for HP, 1 for MP) 2 seats & cages. 2 rollers with pins, 2 roller bearings 2 main springs (1 HP 1 MP) 2 spindles & bushes for valve  
Cage Covers (1 HP, 1 MP) 2 spindle bushes for spring ends (1 HP, 1 MP)  
one set of pump valves & seats for feed pump, general service & ballast pumps.  
one impeller shaft for cargo pump, 1 set crane packing for 1 piston rod & 1 valve rod for each aux.

The foregoing is a correct description,  
Archd J. Berry Manufacturer.



003706-003711-0102

Dates of Survey while building

During progress of work in shops - - - 1940. Sep. 13, 20, 27. Oct. 1, 8, 11, 15, 17, 18, 22, 23, 24, 25, 29, 31. Nov. 1, 5, 7, 8, 10, 15, 18, 19, 20, 22, 25, 26, 29.

During erection on board vessel - - - Dec. 3, 5, 6, 10, 11, 13, 17, 18, 20, 26, 27, 30, 31. 1941. Jan. 2, 6, 7, 9, 10, 14, 16, 21, 24, 28, 29, 31. Feb. 3, 7, 11.

Total No. of visits 55.

Dates of Examination of principal parts -

Cylinders H.P. 3/12/40 M.P. 7/11/40 L.P. 29/10/40 Slides Report valves 18/12/40 L.P. 14/12/40 Covers 14/9/40.

Pistons 6/12/40. Piston Rods 6/12/40. Connecting rods 13/12/40.

Crank shaft 3/12/40 Thrust shaft 3/12/40 Intermediate shafts 30/12/40 & 2/1/41

Tube shaft ✓ Screw shaft 5/12/40 26/12/40 Propeller 30/12/40.

Stern tube 31/10/40 Engine and boiler seatings 24/1/41. Engines holding down bolts 24/1/41.

Completion of fitting sea connections 1/10/40.

Completion of pumping arrangements 3/2/41. Boilers fixed 24/1/41. Engines tried under steam 3/2/41.

Main boiler safety valves adjusted 3/2/41. Thickness of adjusting washers Port Bl. 5. 5/16" St. Bl. 5. 3/8"

Crank shaft material Ingot Steel Identification Mark No 3991/5/6 WHF 30/12/40 Thrust shaft material Ingot Steel Identification Mark No 3990 WHF 3/12/40.

Intermediate shafts, material Ingot Steel Identification Marks No 3992/3/4 WHF 2/1/41 Tube shaft, material ✓ Identification Mark ✓

Screw shaft, material Ingot Steel Identification Mark No 4006 LRH 2/1/41 Steam Pipes, material S.P. Steel Test pressure 660 lb/sq. Date of Test 25/1/41

Is an installation fitted for burning oil fuel No. Is the flash point of the oil to be used over 150° F. ✓

Have the requirements of the Rules for the use of oil as fuel been complied with ✓

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo No. If so, have the requirements of the Rules been complied with ✓

If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with Not desired.

Is this machinery duplicate of a previous case If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.) This machinery has been built under Special Survey in accordance with the approved plans & the rules of the Society. The materials & workmanship are good. It has been securely fitted on board the vessel & tried under working conditions alongside quay with satisfactory results. It is eligible in my opinion to have notation PA L MC. 2 HI., 2 SB, FD. 220 lbs/sq., T.S. (CL.).

The amount of Entry Fee ... £ 5 : : When applied for,

Special ... £ 84 : 14. : 9 FEB 1941

Donkey Boiler Fee ... £ : : When received,

Travelling Expenses (if any) £ : : 26 FEB 1941

*J. H. Row*  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute 14 MAR 1941

Assigned *J. H. Row*

