

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

OCT 27 1938

Date of writing Report 19 When handed in at Local Office 25/10/38 Port of **NEWCASTLE-ON-TYNE**

No. in Survey held at **Newcastle on Tyne** Date, First Survey **13 May** Last Survey **19/10/1938**
 Reg. Book. on the **S/S "LIDA"** (Number of Visits **57**) Tons ^{Gross} **1387** _{Net} **771**

Built at **Newcastle** By whom built **Swan, Hunter & Wigham Richardson Ltd** Yard No. **1602** When built **1938-**

Engines made at **ditto** By whom made **ditto** Engine No. **1602** when made **1938**

Boilers made at **ditto** By whom made **ditto** Boiler No. **1602** when made **1938**

Registered Horse Power Owners **Polish-British Steamship Co Ltd** Port belonging to **DANZIG**

Nom. Horse Power as per Rule **152 Combined with L.P. TURBINE.** Is Refrigerating Machinery fitted for cargo purposes **No** Is Electric Light fitted **Yes**

Trade for which Vessel is intended **Ocean going**

ENGINES, &c.—Description of Engines **2 Cyl. Comp. Recip Eng and 1st Stn Turbine with D.R. bearing & hydraulic coupling** Revs. per minute **110.**

Dia. of Cylinders **17" + 34"** Length of Stroke **28"** No. of Cylinders **Two** No. of Cranks **Two**

Crank shaft, dia. of journals as per Rule **8.84"** Crank pin dia. **8 7/8"** Crank webs Mid. length breadth **14 7/16"** Thickness parallel to axis **5 5/8"**
 as fitted **8 7/8"** Mid. length thickness **5 5/8"** shank Thickness around eye-hole **3 7/8"**

Intermediate Shafts, diameter as per Rule **8.42"** Thrust shaft, diameter at collars as per Rule **8.84"**
 as fitted **8 7/16"** as fitted **240 mm (9.45")**

Tube Shafts, diameter as per Rule **—** Screw Shaft, diameter as per Rule **9.88" for NAVY IN ICE.** Is the screw shaft fitted with a continuous liner **Yes**
 as fitted **—** as fitted **10"**

Bronze Liners, thickness in way of bushes as per Rule **.60** Thickness between bushes as fitted **9/16"** 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 **In one piece.**

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 **Light fit.**

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** Length of Bearing in Stern Bush next to and supporting propeller **3'5"**

Propeller, dia. **11'9"** Pitch **11'3"** No. of Blades **4** Working M. Ring Material **Spare Cast Steel** whether Moveable **No** Total Developed Surface **47** sq. feet

Feed Pumps worked from the Main Engines, No. **2** Diameter **2 5/8"** Stroke **16"** Can one be overhauled while the other is at work **Yes**

Bilge Pumps worked from the Main Engines, No. **2** Diameter **4"** Stroke **16"** Can one be overhauled while the other is at work **Yes**

Feed Pumps { No. and size **One 6" x 4 1/2" x 10" & one 6" x 4" x 6" Gen. Serv.** Pumps connected to the Main Bilge Line { No. and size **Two 4" dia x 16"** & **Ball Pump 7" x 7" x 8"**
 How driven **Steam** How driven **by Main Eng & Steam.**

Ballast Pumps, No. and size **one 7" x 7" x 8"** Lubricating Oil Pumps, including Spare Pump, No. and size **Two 7" x 6 1/2" x 15" Stroke**
 Pump: **Steam.**

Are two independent means arranged for circulating water through the Oil Cooler **Yes** Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room **3 of 3", 2 of 2 1/2" in ER Cofferdam, & one of 2 1/2" in Tunnel well**

In Holds, &c. **Two of 2 1/2" one in each hold, Nos 1, 2 & 3.**

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 of 6" on port side Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size **1 of 3 1/2" on starboard side** 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 **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 pass through the bunkers **None** How are they protected **—**

What pipes pass through the deep tanks **None** 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 **upper deck level.**

MAIN BOILERS, &c.—(Letter for record **5.**) Total Heating Surface of Boilers **1925 sq ft.**

Is Forced Draft fitted **Yes** No. and Description of Boilers **Two. Single Ended.** Working Pressure **210 lbs**

IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes

IS A DONKEY BOILER FITTED? No If so, is a report now forwarded? **—**

PLANS. Are approved plans forwarded herewith for Shafting **26/1/38** Main Boilers **10/11/38** Auxiliary Boilers **—** Donkey Boilers **—**
 (If not state date of approval) **21/3/38; in Machy Space, n.w.c. letter 29/6/38.**

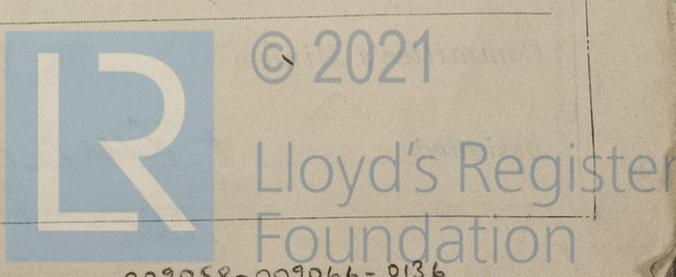
Superheaters **21/4/38** General Pumping Arrangements **2/6/38** Oil fuel Burning Piping Arrangements **—**

SPARE GEAR. State the articles supplied:— **As per Rule 1938.**

plus Principal additional Spare gear:— **one top end & one bottom end bearing.**
one set of HP & LP Piston Rings.
one set of wearing parts of U.S. Packing for Piston Rods & Valve Rods.
one set of Thrust Pads.
20 Condenser Tubes & Ferrules
one Screw Shaft - complete.

The foregoing is a correct description,
 FOR
SWAN, HUNTER, & WIGHAM RICHARDSON, LTD.

G. J. Shewry
 DIRECTOR. Manufacturer.



If not, state whether, and when, one will be sent?
 Is a Report also sent on the Hull of the Ship?
 Is a Report also sent on the Mast?
 NOTE.—The words which do not apply should be deleted.
 Im. 9.26. T.

1938
 May 13, 24. June 2, 8, 14, 29. July 1, 7, 11, 13, 14, 18, 19, 20, 21, 22, 25, 29, 30. Aug. 2, 3, 4, 5, 8.
 16, 18, 19, 22, 25, 29, 30, 31. Sep. 1, 5, 6, 7, 9, 13, 14, 15, 16, 19, 20, 21, 22, 23, 26, 28, 29, 30.
 Oct. 3, 6, 7, 14, 18, 19.
 During progress of work in shops - -
 During erection on board vessel - - -
 Total No. of visits 57.

Dates of Examination of principal parts—Cylinders 16/8/38 Slides 9/9/38 Covers 16/8/38
 Pistons 9/9/38 Piston Rods 9/9/38 Connecting rods 9/9/38
 Crank shaft 9/9/38 Combined main wheel and Thrust shaft. 13/9/38 Intermediate shafts 16/8/38
 Tube shaft Screw shaft 16/8/38 (working & spare) Propeller Working (Brass) 2/8/38 Spare (C. Steel) 1/8/38
 Stern tube 16th & 18th /8/38 Engine and boiler seatings 7/9/38 Engines holding down bolts 29/9/38
 Completion of fitting sea connections 22/8/38
 Completion of pumping arrangements 6/10/38 Boilers fixed 16/9/38 Engines tried under steam 7th & 18th Oct 1938
 Main boiler safety valves adjusted 6/10/38 Thickness of adjusting washers 3383 HB Port BLC 23/64 23/64 19/64 ST&P BLC 23/64 24/64 19/64
 Crank shaft material S.M. Forged Steel Identification Mark AN 9-9-38 Thrust shaft material F. Steel Identification Mark 3340 HB
 Intermediate shafts, material F. Steel Identification Marks 1482 HK; 1483 HK; 552 HS; 553 HS
 Screw shaft, material F. Steel Identification Mark working 551 HS Spare 550 HS Steam Pipes, material S.D. Steel Test pressure 630 lb. Date of Test 22nd & 28th Sept 1938
 Is an installation fitted for burning oil fuel ✓ Is the flash point of the oil to be used over 150° F. ✓
 Have the requirements of the Rules for carrying and burning oil fuel been complied with ✓
 Is this machinery duplicate of a previous case 4/0 If so, state name of vessel S/S PUCK.

General Remarks (State quality of workmanship, opinions as to class, &c.)
 The Machinery of this Vessel has been constructed under special survey in accordance with the Rules and approved plans, and the materials and workmanship are good.
 The Reciprocating Engine in conjunction with the Sub. Steam Turbine (Bauerbach) installation has been fitted on board and satisfactorily tested under working conditions.
 The Machinery of this Vessel is eligible in my opinion, for record + L.M.C. 10.38, and the notation "Strengthened for Navigation in Ice".

The amount of Entry Fee ... £ 3 : — :
 Special ... £ 38 : — :
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ : :
 When applied for, 26 OCT 1938
 When received, 1/11 1938

A Watt.
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE 1 NOV 1938
 Assigned + L.M.C. 10.38
 F.D. C.L.
 Sp.

