

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 26 APR 1948

Date of writing Report 21<sup>st</sup> March 1948 When handed in at Local Office 19 Port of Amsterdam  
 No. in Survey held at Amsterdam Date, First Survey 21-8-47 Last Survey 10<sup>th</sup> March 1948  
 Reg. Book (Number of Visits 23)  
 on the steam tugboat ice-breaker "SWAROZYC" Tons { Gross 712.02  
 Net 1948  
 Built at Amsterdam By whom built Amsterdamsche Droogdok Mij. Yard No. 83 When built 1948  
 Engines made at Amsterdam By whom made do Engine No. 52 When made 1948  
 Boilers made at Flushing By whom made Kon. Mij. "De Schelde" Boiler No. 1113 When made 1947  
 Registered Horse Power 1550 Owners POLIMAC Port belonging to SZCZECIN  
 Nom. Horse Power as per Rule 260 330 = MN. Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes  
 Trade for which vessel is intended 1<sup>st</sup> Ocean Trade (Strengthened for Navigation in Ice)  
 16 1/4 x 35 1/8 = 37 8/8

ALL DIMENSIONS IN mm  
 ENGINES, &c.—Description of Engines double compound — type Christiansen & Meyer Revs. per minute 110  
 Dia. of Cylinders 2 HP: 425 2 LP: 900 Length of Stroke 950 No. of Cylinders 4 No. of Cranks 4  
 Crank shaft, dia. of journals as per Rule approved Crank pin dia. 310 Crank webs Mid. length breadth 195  
 as fitted 310 Mid. length thickness 136  
 Intermediate Shafts, diameter as per Rule approved Thrust shaft, diameter at collars as per Rule approved  
 as fitted 280 as fitted 280  
 Tube Shafts, diameter as per Rule approved Screw Shaft, diameter as per Rule approved  
 as fitted 310 in body Is the tube screw shaft fitted with a continuous liner no  
 as fitted 290 at Fore and  
 Bronze Liners, thickness in way of bushes as per Rule approved Thickness between bushes as per Rule approved  
 as fitted Is the after end of the liner made watertight in the  
 propeller boss If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner  
 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  
 at no If so, state type ordinary (stern by hollow cutting) Length of Bearing in Stern Bush next to and supporting propeller 1270  
 Propeller, dia. 3960 Pitch 4180 No. of Blades 4 Material cast steel whether Moveable solid Total Developed Surface 6.25 m<sup>2</sup> sq. feet  
 Feed Pumps worked from the Main Engines, No. one 135 T/h Diameter 80 Stroke 475 Can one be overhauled while the other is at work  
 Bilge Pumps worked from the Main Engines, No. one 135 T/h Diameter 80 Stroke 475 Can one be overhauled while the other is at work  
 Feed { No. and size 1 - DUPLEX - 16 T/h Pumps connected to the { No. and size 1 ME driven Bilge pump - 13.5 T/h  
 Pumps { How driven 1 - FEED INJECTOR - 8.4 T/h Main Bilge Line { How driven 1 Bilge pump - DUPLEX - 11 T/h  
 1 Ballast pump - DUPLEX - 100 T/h  
 1 Salvage pump - DUPLEX - 300 T/h  
 Ballast Pumps, No. and size 1 (see above) Lubricating Oil Pumps, including Spare Pump, No. and size  
 Are two independent means arranged for circulating water through the Oil Cooler Suctions, connected both to Main Bilge Pumps and Auxiliary  
 Bilge Pumps: — In Engine and Boiler Room Eroom: 1 (φ 2 1/2") — Broom: 1 (φ 2") — Bunker (P.S.): 2 (φ 2")  
 In Pump Room In Holds, &c. Cargo hold: 1 (φ 2")  
 In Forward chain tank: 1 (φ 2")  
 Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 (φ 8") Independent Power Pump Direct Suctions to the Engine and/or Boiler Room Bilges,  
 No. and size on Ballast pump: 1 (φ 3") Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes yes  
 on Bilge pump: 1 (φ 2 1/2") 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 strum-boxes  
 Are all Sea Connections fitted direct on the skin of the ship steel in list chest Are they fitted with Valves or Cocks yes  
 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 above  
 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 Have they been tested as per Rule  
 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 no tunnel Is it fitted with a watertight door worked from

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 370 m<sup>2</sup>; superheaters: 140 m<sup>2</sup>  
 Which Boilers are fitted with Forced Draft both Which Boilers are fitted with Superheaters both  
 No. and Description of Boilers Working Pressure 15 Kg/cm<sup>2</sup>

IS A REPORT ON MAIN BOILERS NOW FORWARDED? yes

IS A DONKEY BOILER FITTED? no

If so, is a report now forwarded?

Can the donkey boiler be used for other than domestic purposes

PLANS. Are approved plans forwarded herewith for Shafting { 22-11-46 Main Boilers 22-11-46 Auxiliary Boilers Donkey Boilers  
 (If not state date of approval) { 19-2-47

Superheaters 17-2-48 General Pumping Arrangements 2-12-46 Oil fuel Burning Piping Arrangements

## SPARE GEAR.

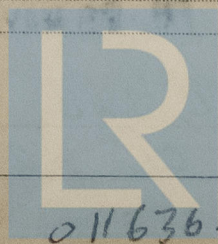
Has the spare gear required by the Rules been supplied yes

State the principal additional spare gear supplied spare tail shaft

The foregoing is a correct description.

Amsterdamsche Droogdok Mij.

Manufacturer.



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Dates of Survey while building  
 During progress of work in shops - - { 1947: 21/8 - 3/9 - 29/9 - 6/10 - 7/10 - 16/10 - 24/10 - 1/12 - 4/12 - 10/12  
 During erection on board vessel - - { 1947: 24/12 - 29/12  
 1948: 5/1 - 14/1 - 19/1 - 28/1 - 30/1 - 2/2 - 20/2 - 25/2 - 27/2 - 4/3 - 10/3  
 Total No. of visits 23

Dates of Examination of principal parts—Cylinders *Hydr. tested 21-8-47* Slides *3-9-47* Covers *3-9-47*  
 Pistons *29-9-47* Piston Rods *found marked: LLOYDS. N<sup>o</sup> 10005/8 HPB. 30-12-43* Connecting rods *found marked: LLOYDS. N<sup>o</sup> 1000 HPB. 30-12-43*  
 Crank shaft *3-9-47* Thrust shaft *3-9-47* Intermediate shafts *3-9-47*  
 Tube shaft *✓* Screw shaft *24-10-47* Propeller *24-10-47*  
*HYDR. TESTED AND DRAWN IN*  
 Stern tube *By GERM. LLOYD IN 1943* Engine and boiler seatings *5-1-48* Engines holding down bolts *14-1-48*  
 Completion of fitting sea connections *1-12-47*  
 Completion of pumping arrangements *14-1-48* Boilers fixed *29-9-47* Engines tried under steam *1948: 27/2 & 10/3*  
 Main boiler safety valves adjusted *10-3-48* Thickness of adjusting washers *STARB: Boiler: (S) 12,1 mm - (P) 13,3 mm; Superht: 19,9*  
 Crank shaft material *SM steel* Identification Mark *LLOYDS. N<sup>o</sup> 10004 HPB. 30-12-43* Thrust shaft material *SM steel* Identification Mark *EL 2357 R-4*  
 Intermediate shafts, material *SM steel* Identification Marks *EL 1422 AD* Tube shaft, material *✓* Identification Mark *✓*  
 Screw shaft, material *SM steel* Identification Mark *EL 1443 AD* Steam Pipes, material *solid drawn steel* Test pressure *60 kg/cm<sup>2</sup>* Date of Test *16-10-47*  
 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 *yes*  
 Is this machinery duplicate of a previous case *no* If so, state name of vessel *✓*

General Remarks (State quality of workmanship, opinions as to class, &c.

The design and construction of this machinery, originally commenced under Germ. Lloyd Special Survey, has been continued and completed under our supervision in accordance with the approved plans, Rule requirements and Secretary's letters.  
 Found workmanship satisfactory.

The machinery has been tried under full charge for several hours during towing- and running trials and found working satisfactorily.

I am of opinion that this vessel is eligible to be recorded in the Register Book with record of LMC.3,48 "strengthened for navigation in ice"

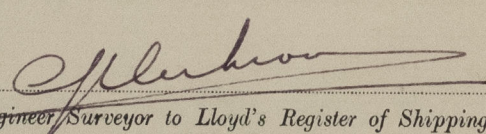
The amount of Entry Fee ... £ *£ 800.-* When applied for, *22-4-1948*  
 Special ... .. £ : :  
 Donkey Boiler Fee ... .. £ : :  
 Travelling Expenses (if any) £ *£ 25,50* When received, *19*

Date *FRI. 28 MAY 1948*

(The Committee's Minute

*LMC 3,48*

*F.D. CL. 2SB 213/6 Spl.*

  
 Engineer Surveyor to Lloyd's Register of Shipping.



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