

## REPORT ON OIL ENGINE MACHINERY.

No. 97503

MAY 27 1939

Date of writing Report 20/5/39 When handed in at Local Office 26/5/39 Port of

Received at London Office  
NEWCASTLE-ON-TYNE

No. in Survey held at Newcastle on Tyne

Date, First Survey 27/4/38

Last Survey 24/5/39

Reg. Book.

Number of Visits 95

Single  
on the Twin  
Triple  
Quadruplemotor  
Screw vessel

"SOBIESKI."

Tons Gross 11030  
Net 6351

Built at Newcastle

By whom built Swan, Hunter &amp; Wigham

Yard No. 1572 When built 1939-5

Engines made at Greenock

By whom made J.G. Kincaid &amp; Co. Ltd

Engine No. 113 When made 1939.

Donkey Boilers made at Renfrew

By whom made Babcock &amp; Wilcox &amp; Co. Ltd

Boiler No. 73/14669 When made 1939

Brake Horse Power 8700

Owners Gdynia - America Shipping Line

Port belonging to GDYNIA.

Nom. Horse Power as per Rule 1716

Is Refrigerating Machinery fitted for cargo purposes Yes

Is Electric Light fitted Yes

Trade for which vessel is intended Open sea.

L ENGINES, &amp;c.—Type of Engines Heavy Oil, Airless Injection 2 or 4 stroke cycle 2 Single or double acting double

Maximum pressure in cylinders 49 Kg/cm<sup>2</sup>

See also Greenock Rpt No 20711.

Mean Indicated Pressure 6.2

Diameter of cylinders 450 m.m. Length of stroke 1200 mm. No. of cylinders 16. No. of cranks 16.

Distance of bearings, adjacent to the Crank, measured from inner edge to inner edge 854 m.m.

Is there a bearing between each crank Yes

Revolutions per minute 125

Flywheel dia. 2400 mm. Means of ignition Compression Kind of fuel used Heavy oil.

Crank Shaft, dia. of journals as per Rule

Crank pin dia. as fitted

Crank Webs

Mid. length breadth

Thrust Shaft, diameter at collars as per Rule

Main Wheel

Intermediate Shafts, diameter as per Rule

as fitted 13.5

as fitted 13 1/2

Main Shaft, diameter as per Rule

Screw Shaft, diameter as per Rule

as fitted 14.77

Is the screw shaft fitted with a continuous liner Yes

Liner Liners, thickness in way of bushes as per Rule

as fitted 932

Thickness between bushes as per rule

as fitted 70

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 tight 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

If so, state type No Length of Bearing in Stern Bush next to and supporting propeller 5'-9 3/4"

Propeller, dia. 15'-3" Pitch 15'-1" No. of blades 4 Material Bronze whether Moveable No Total Developed Surface 83 sq. feet

Method of reversing Engines Direct Is a governor or other arrangement fitted to prevent racing of the engine when decelerated Yes Means of lubrication

Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with

conducting material Lagged If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine Led up

Sling Water Pumps, No. 2-11 S.W. 500 tons/hr Is the sea suction provided with an efficient strainer which can be cleared within the vessel F.W. for jackets

Pumps worked from the Main Engines, No. Diameter Stroke Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line No. and Size Ball. 150 tons/hr; Bilge 125 tons/hr; Bilge &amp; Fore 125 tons/hr; Emerg. Bilge 115 tons/hr

How driven all Elec. motor driven Gen. Serv. Fore 125 tons/hr

Is the cooling water led to the bilges No If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping

Arrangements Ballast 150 tons/hr

Last Pumps, No. and size 4-10" 2 Bilge 125" Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 4-10" of 225 tons/hr.

Are two independent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

Pumps, No. and size:—In Machinery Spaces 2 of 3 1/2" &amp; 3 of 3"; Tunnel well 1 of 2 1/2"; Fore pipe tunnel 2" drawn to cofferdam thro

Holds, &amp;c. No 1 Hold, 1 of 3"; No 2 Hold, 2 of 3 1/2"; No 3 Hold, 2 of 3"; No 4 Hold 3 of 3"; No 5 Hold, 2 of 3"

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 3 of 6" bare (2 on P &amp; 1 on S.)

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yes Are the Bilge Suctions in the Machinery Spaces

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 platform 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

Do all pipes pass through the bunkers None How are they protected

Do all pipes pass through the deep tanks None 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 Yes Is it fitted with a watertight door Yes worked from "D" Deck.

On wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

No Air Compressors, No. None (airless Injection)

Auxiliary Air Compressors, No. 2 No. of stages 2 each 212. cub. ft. per min. London Cert. D. 797.

All Auxiliary Air Compressors, No. 1 No. of stages 2 25 cub. ft. per min. London Cert. D. 798.

Suctioning Air Pumps, No. Two on each Engine Diameter Burmeister &amp; Wain Rotary Type

Auxiliary Engines crank shafts, diameter as per Rule See London Rpt No 106387. No. 3-450 KW oil eng. Dynamo Set in Main Eng. Room

as fitted 9337. Position 1-46 KW oil eng. Dynamo Set for Emergency lighting abt. E.R. on D Deck



PILLARS, No. in F Centre Line Stiffeners and Plating, thick STRINGERS AT Uppermost Co Stringer Plate STRAKES. FLAT PLATE KEEL DELG. (if BOTTOM PLATING, of Strakes BILGE PLATING, No. Strakes SIDE PLATING, No. Strakes C or SHAPE Upper DECK, She strake in Wells. UPPER DECK, She strake in Bridge STRAKE BELOW She strake in Wells. STRAKE BELOW She strake in Bridge POOP SIDE PLATING BRIDGE SIDE PLATING FORECASTLE SIDE PLAT Total No. of W.T. Extending As per B MIDSHIP BULKH COLLISION AFTER PEAK STEEL Manufact Consol & Rains & Co Has the

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule Yes  
Can the internal surfaces of the receivers be examined and cleaned Yes Is a drain fitted at the lowest part of each receiver Yes  
High Pressure Air Receivers, No. Airless Inj. Cubic capacity of each — Internal diameter — thickness —  
Seamless, lap welded or riveted longitudinal joint — Material — Range of tensile strength — Working pressure by Rules — Actual —  
Starting Air Receivers, No. 2 Total cubic capacity 1240 cub. ft. Internal diameter 6-8 1/2 MAX. thickness 1 1/8 1 1/2  
Seamless, lap welded or riveted longitudinal joint OK Butt straps Material Steel Range of tensile strength 29-33 Working pressure by Rules 358 lb. Actual 356 lb.  
IS A DONKEY BOILER FITTED? Yes In ER casing on C Deck level? Yes If so, is a report now forwarded? Yes Gls Rpt 60385.  
Is the donkey boiler intended to be used for domestic purposes only for heating, evaporator & for Donk. Bdr feed pump.  
PLANS. Are approved plans forwarded herewith for Shifting Inter shafts 13/8/38 Receivers 8/2/38 Separate Fuel Tanks 28/5/38  
(If not, state date of approval) Screw 22/9/37 Pumping Arrangements in Machinery Space 23/12/37, 1/6/38  
Donkey Boilers General Pumping Arrangements 3/2/38 Pumping Arrangements in Machinery Space 18/3/38 also a plan No 13726A. Nov 24/5/39.  
Oil Fuel Burning Arrangements 1/6/38 SPARE GEAR.  
Has the spare gear required by the Rules been supplied Yes  
State the principal additional spare gear supplied See Greenock Rpt No 20711.  
The foregoing is a correct description. SWAN, HUNTER, & WIGHAM RICHARDSON, LTD. Manufacturer.  
Dates of Examination of principal parts—Cylinders  
Crank shaft 1/6/38 Flywheel shaft 1/6/38 Thrust shaft 27/28/7/38 Intermediate shafts 25/11/38 Engines holding down bolts 17/14/38  
Screw shafts 1/6/38 Propellers 1/6/38 Stern tube 27/28/7/38 Engine seatings 2/5/39 Engines tried under working conditions 15/11/38  
Completion of fitting sea connections 23/8/38 Completion of pumping arrangements 2/5/39  
Crank shaft, Material — Identification Mark — Flywheel shaft, Material 7 Steel Identification Mark 18/11/38  
Thrust shaft, Material — Identification Mark — Intermediate shafts, Material 7 Steel Identification Marks 5646-7-8-9, 5680-1-2, 5700-1  
Tube shaft, Material — Identification Mark — Screw shafts Material 7 Steel Identification Mark Part 5686 J.G. STAR 5703 J.G. SPARE 5710 J.G.  
Is the flash point of the oil to be used over 150° F. Yes  
Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with Yes  
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 —  
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 Machinery has been constructed under Special Survey in accordance with the Society's Rules and the materials and workmanship good. The machinery has been efficiently installed on board the vessel and tried under full working conditions and found satisfactory.  
The Vessel is eligible in my opinion for records + L.M.C. 5.39, T.S. u. D.B. 100 lbs. Oil Eng.  
The amount of Entry Fee £ 28 12 When applied for, 126 MAY 1939  
2 Air Receivers £ 8 8 When received, 2. 6  
Donkey Boiler £ 3 3  
Lat & Sundry £ 3 3  
Travelling Expenses (if any) £ 3 3  
Committee's Minute WED 31 MAY 1939  
Assigned 5.39  
D.B. - 100 lbs

Rpt. 9a. page 3  
Port of NEWCASTLE-ON-TYNE Continuation of Report No. 97503 dated 24/5/39 on the  
Machinery of the Tonn. Se. M.V. SOBIESKI.  
During the Mooring Trials of the machinery at Heptane Yard on 10<sup>th</sup> May 1939, one piston of the Port Auxy. Oil Engine, & one piston of the Starb<sup>t</sup> " " " — overheated, viz No 4 piston from forward (No 3 from aft) on Port Auxy Eng No 1 " " " (No 6 " " ) on Starb<sup>t</sup> " " .  
These cylinders were opened up and the cylin liners & pistons were found to be scored and torn. — and have now been renewed. The other 10 cylinders & pistons were examined and found in good order.  
Starb<sup>t</sup> Auxy. Engine No 1 Cylinder Water jacket was fractured on its Starb<sup>t</sup> side at the lower portion of the water space, as shown on Attached Blue print No 14356.  
As a temporary repair to the water jacket, the fracture was "VEED" out, studded and Electric welded, the repair was tested to 50 lbs per sq inch hydraulic test & found tight, and the engine was afterwards examined under light and full load running conditions and found satisfactory.  
This repair may, in my opinion, be considered a permanent repair should the Owners so desire.  
It is understood that a new Casting has been ordered and may be fitted at a later date. D Watt 25/9/39  
Please see page 3 (continuation) for note regarding the P.T.S. Auxiliary Oil Engine Engine.  
D Watt  
Engineer Surveyor to Lloyd's Register of Shipping.  
5m.11.37. (MADE IN ENGLAND.)