

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

23 JUL 1930

Date of writing Report

19

When handed in at Local Office

22 JULY 1930

Port of

SUNDERLAND

No. in Survey held at

SUNDERLAND.

Date, First Survey

6<sup>th</sup> Dec '29

Last Survey

18 July 1930

Reg. Book.

on the S.S. "SONJA"

(Number of Visits)

Built at ANTWERP.

By whom built ANTWERP ENG. CO. LD.

Yard No. 114

Tons } Gross  
Net

When built 1930.

Engines made at SUNDERLAND.

By whom made N.E. MARINE ENG. CO. LD.

Engine No. 2740

when made 1930.

Boilers made at SUNDERLAND.

By whom made N.E. MARINE ENG. CO. LD.

Boiler No. 2740.

when made 1930.

Registered Horse Power

Owners

Port belonging to

Nom. Horse Power as per Rule

242

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

Trade for which Vessel is intended

## ENGINES, &amp;c.—Description of Engines TRIPLE EXPANSION STEAM.

Revs. per minute

76

Dia. of Cylinders  $2\frac{1}{2} \times 35 \times 57$ "

Length of Stroke 39"

No. of Cylinders 3

No. of Cranks 3

Crank shaft, dia. of journals as per Rule 11.08"

as fitted 11 $\frac{1}{4}$ "Crank pin dia. 11 $\frac{1}{4}$ "

Crank webs

Mid. length breadth

shrink

Thickness parallel to axis

7"

Intermediate Shafts, diameter as per Rule 10.56"

as fitted 10 $\frac{3}{4}$ "

Thrust shaft, diameter at collars as per Rule 11.08"

as fitted 11 $\frac{1}{4}$ "

Tube Shafts, diameter as per Rule

as fitted

Screw Shaft, diameter as per Rule 11.85"

as fitted 12 $\frac{1}{4}$ "

Is the { screw } shaft fitted with a continuous liner { Yes.

Bronze Liners, thickness in way of bushes as per Rule 0.66"

as fitted  $\frac{1}{16}$ "

Thickness between bushes as per Rule 0.495"

as fitted  $\frac{5}{8}$ "

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 shaft

Length of Bearing in Stern Bush next to and supporting propeller

4'-1 $\frac{1}{4}$ "

Propeller, dia. 15'-6"

Pitch 14'-9"

No. of Blades 4

Material C.I.

whether Moveable No.

Total Developed Surface

75 sq. feet

Feed Pumps worked from the Main Engines, No. 2

Diameter 3"

Stroke 21"

Can one be overhauled while the other is at work Yes

Bilge Pumps worked from the Main Engines, No. 2

Diameter 3 $\frac{1}{2}$ "

Stroke 21"

Can one be overhauled while the other is at work Yes

Feed Pumps { No. and size One 6" x 4" x 6"

How driven STEAM.

Pumps connected to the { No. and size  
Main Bilge Line { How driven

Ballast Pumps, No. and size One 8" x 9" x 8"

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

In Holds, &amp;c.

Main Water Circulating Pump Direct Bilge Suctions, No. and size

Independent Power Pump Direct Suctions to the Engine Room Bilges,

No. and size

Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes

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

Are all Sea Connections fitted direct on the skin of the ship

Are they fitted with Valves or Cocks

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates

Are the Overboard Discharges above or below the deep water line

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel

Are the Blow Off Cocks fitted with a spigot and brass covering plate

What Pipes pass through the bunkers

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

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

Is the Shaft Tunnel watertight

Is it fitted with a watertight door

worked from

## MAIN BOILERS, &amp;c.—(Letter for record (S.) )

Total Heating Surface of Boilers

4044

Is Forced Draft fitted No.

No. and Description of Boilers 2 CYL. MULTITUBULAR MARINE

Working Pressure

180 lbs.

IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes.

TYPE 25B

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

PLANS. Are approved plans forwarded herewith for Shafting

Main Boilers Yes.

Auxiliary Boilers

Donkey Boilers

(If not state date of approval)

Superheaters STANDARD APPROVED

General Pumping Arrangements

Oil fuel Burning Piping Arrangements

## SPARE GEAR.

State the articles supplied:— 1. C.I. Propeller, — 1. Screw Shaft — 2 each Top end, Bottom end, &amp; Main

bearing Bolts &amp; nuts — 6 Coupling Bolts &amp; nuts — 2 each Feed &amp; Bilge Pump valves — 2 Safety Valve springs —

1 pair Bottom end brasses — 2 cwt. iron plate — 1 cwt. iron bar — 50 assorted bolts &amp; nuts —

Superheat Spares. 20% jointing rings for elements — 10% steel plugs — 5% studs &amp; nuts — 2% clamps — 2

special spanners for clamp nuts &amp; 2 top pins — 50% blowers &amp; drain valve lids &amp; seats — Grinding tools

for blowers &amp; drain valves.

The foregoing is a correct description,

FOR THE NORTH EASTERN MARINE ENGINEERING CO. LD.

John Neill

Manufacturer.

GENERAL MANAGER



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Lloyd's Register  
Foundation

002883-002890-0176



1929. Dec. 6. 16. 23. 24. 27. 30. 1930. Jan. 3. 6. 7. 9. 15. 16. 17. Feb. 24. Mar. 24. 25. Apr. 4. May. 13. 16. 19. 20. 21. 23. 29. 30. June. 11. 13. 16. 18. 19. 23. 30. July. 3. 4. 7. 8. 9. 14. 15. 17. 18. = 44

Dates of Survey while building

During progress of work in shops - - -

During erection on board vessel - - -

Total No. of visits

Dates of Examination of principal parts—Cylinders 13.6.30 17.1.30 13.5.30 Slides 23.5.30 Covers 29.5.30

Pistons 30.5.30 Piston Rods 30.5.30 Connecting rods 24.2.30

Crank shaft 13.6.30 Thrust shaft 13.6.30 Intermediate shafts 23.6.30

Tube shaft ✓ Screw shaft 15.7.30 Propeller 30.5.30

Stern tube 13.6.30 Engine and boiler seatings Engines holding down bolts

Completion of fitting sea connections

Completion of pumping arrangements

Boilers fixed

Engines tried under steam

Main boiler safety valves adjusted

Thickness of adjusting washers

Crank shaft material STEEL Identification Mark 3040 T.D.S. Thrust shaft material STEEL Identification Mark 3016 T.D.S.

Intermediate shafts, material STEEL Identification Marks 3152 T.D.S. Tube shaft, material Identification Mark

Screw shaft, material STEEL Identification Marks 3241 T.D.S. Steam Pipes, material STEEL Test pressure 540 lb / Date of Test 17-7-30

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 No. 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 & the materials & workmanship are good. On completion, the Boilers were subjected to a hydraulic test & found satisfactory. It is stated the machinery is to be fitted in the S.S. "SONJA" building by the Antwerp Engineering Co. Ltd. of Antwerp. The machinery is in a good & efficient condition and, in my opinion, is eligible for the notation + L.M.C. (with date) when satisfactorily fitted in the vessel.

SUNDERLAND.

Certificate to be sent to

The Surveyors are requested not to write on or below the space for Committee's Minute(s).

The amount of Entry Fee ... £ 4 : 0 : 0 When applied for,  
Special 4/5 24. ... £ 48 : 8 : 0 22 JULY 1930  
Donkey Boiler Fee ... £ : : : When received,  
Travelling Expenses (if any) £ : : : 27-8-1930

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 3 OCT 1930

Assigned

See F. E. Rpt.



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