

REPORT ON MACHINERY.

No. 8302.

Received at London Office

WED. 4 MAY. 1921

When handed in at Local Office May 3 1921 Port of DUNDEE
Date, First Survey 7 Oct. 1920 Last Survey 27 April 1921
(Number of Visits 23)

held at Dundee
Built at Lumbarton By whom built A. McMillan & Son Ltd. When built 1902
By whom made Cooper & Greig Ltd. when made
By whom made when made

Power Owners Port belonging to
as per Section 28 322 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

Description of Engines Twin screw, triple expansion No. of Cylinders 6 No. of Cranks 6
16" 26 1/2" 43" Length of Stroke 30" Revs. per minute Dia. of Screw shaft 9.06" Material of screw shaft Steel
as fitted 9.8"

fitted with a continuous liner the whole length of the stern tube no Is the after end of the liner made water tight
boss yes If the liner is in more than one length are the joints burned no If the liner does not fit tightly at the part
ings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive no If two

is the shaft lapped or protected between the liners To be finished at Rotterdam Length of stern bush 3'-5"
as per rule 8.06" Dia. of Crank shaft journals 8.46" as per rule 8 1/2" Dia. of Crank pin 8 1/2" Size of Crank webs 16" x 5 1/2" Dia. of thrust shaft under
as fitted 8 1/2"

Dia. of screw 9'-6" Pitch of Screw 11'-6" No. of Blades 4 State whether moveable No Total surface 36.8 sq. ft.
os 2 Diameter of ditto 2 3/4" Stroke 15" Can one be overhauled while the other is at work no
os 2 Diameter of ditto 2 3/4" Stroke 15" Can one be overhauled while the other is at work no

Engines Sizes of Pumps No. and size of Suctions connected to both Bilge and Donkey pumps
In Holds, &c.

ons sizes Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine room & size
tion pipes fitted with roses Are the roses in Engine room always accessible Are the sluices on Engine room bulkheads always accessible
s with the sea direct on the skin of the ship Are they Valves or Cocks

ciently high on the ship's side to be seen without lifting the stokehold plates Are the Discharge Pipes above or below the deep water line
l 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
carried through the bunkers How are they protected

cks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times
ction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges
ft Tunnel watertight Is it fitted with a watertight door worked from

C.—(Letter for record) Manufacturers of Steel

Surface of Boilers 5112 sq. ft. Is Forced Draft fitted Yes No. and Description of Boilers
ure 180 Lb. sq. in. Tested by hydraulic pressure to Date of test No. of Certificate
be worked separately Area of fire grate in each boiler No. and Description of Safety Valves to

Area of each valve Pressure to which they are adjusted Are they fitted with easing gear
between boilers or uptakes and bunkers or woodwork Mean dia. of boilers Length Material of shell plates
Range of tensile strength Are the shell plates welded or flanged Description of riveting: cir. seams
Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps

Strength of longitudinal joint rivets Working pressure of shell by rules Size of manhole in shell
ring No. and Description of Furnaces in each boiler Material Outside diameter
part top Thickness of plates crown Description of longitudinal joint No. of strengthening rings
bottom Thickness of plates bottom

of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom
ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules

Area at smallest part Area supported by each stay Working pressure by rules End plates in steam space:
Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays

st part Area supported by each stay Working pressure by rules Material of Front plates at bottom
Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules

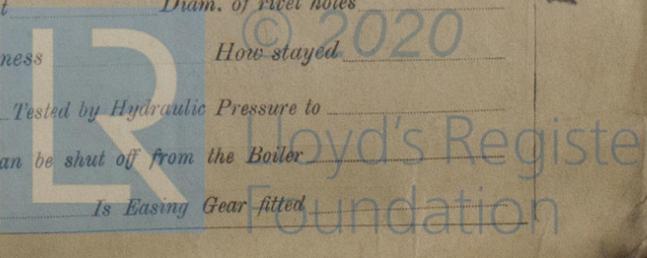
Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays
wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and
der at centre Length as per rule Distance apart Number and pitch of stays in each

re by rules Steam dome: description of joint to shell % of strength of joint
Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes
Working pressure of shell by rules Crown plates Thickness How stayed

TER. Type Date of Approval of Plan Tested by Hydraulic Pressure to
Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler
Safety Valve Pressure to which each is adjusted Is Easing Gear fitted

Foundation

W601-0289



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied: *Two top end bolts. Two bottom end main bearing bolts. Set of coupling bolts. 6 Cylinder covers. 6 pump ring bolts. Spare valves for air, feed & bilge. Assorted bolts & nuts, & iron of various sizes*

The foregoing is a correct description,

John B. Cooper
FOR COOPER & BROS. LIMITED.

Manufacturer.

Dates of Survey while building { During progress of work in shops -- } ¹⁹²⁰ Oct. 4. 18. 19. Nov. 1. 15. 29. Dec. 9. 16. 30. ¹⁹²¹ Jan. 11. 20. Feb. 2. 10. 21. 24. Mar. 7. 14. 21. 28. Apr. 8. 21. 24. Total No. of visits

Is the approved plan of main boiler forwarded?

Dates of Examination of principal parts—Cylinders *9-3-21 Port. 8-4-21 STAR Slides 17-3-21* Covers *9-3-21 Port. 8-4-21 Hart? Pistons 17-3-21*
Connecting rods *1-3-21* Crank shaft *29-11-20* Thrust shaft *30-12-20* Tunnel shafts ✓ Screw shaft *20-1-21, rough turned only*
Stern tube *30-1-21* Steam pipes tested *Rotterdam* Engine and boiler seatings *Rotterdam* Engines holding down ✓
Completion of pumping arrangements *Rotterdam* Boilers fixed *Rotterdam* Engines tried under steam ✓
Completion of fitting sea connections *do* Stern tube *do* Screw shaft and propeller ✓
Main boiler safety valves adjusted *do* Thickness of adjusting washers ✓
Material of Crank shaft *Steel* Identification Mark on Do. *901 J.H.M.* Material of Thrust shaft *Steel* Identification Mark ✓
Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts *Steel* Identification Mark ✓
Material of Steam Pipes *Identified at Rotterdam* Test pressure ✓
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 Section 49 of the Rules been complied with. ✓
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.)

These engines have been built under special survey, and materials & workmanship have been found sound and the engines have been dispatched to Rotterdam, where they fitted on board the barge "Spudonia". The propeller shafts were examined when rough turned & completed at Rotterdam. The spare part will be completed at Rotterdam, & checked at that port.

The amount of Entry Fee ... £ 5 : 0 :
75 Special ... £ 29 : 6 : 5
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, 19...
When received, 1-7 June 1921
H 1-6-21

John Mackinlay
Engineer Surveyor to Lloyd's Register

Committee's Minute
Assigned



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