

REPORT ON MACHINERY.

No. 176731
WED. JUL. 7 1920

Received at London Office

4.

Writing Report 24th Jan 1920 When handed in at Local Office 29th Jan 1920 Port of Greenock

Survey held at Greenock & Ardrossan Date, First Survey 26th Aug. 1919 Last Survey 27th Jan 1920
(Number of Visits 72)

Book. on the Steel Steamer Poljana Tons { Gross Not

Built at Ardrossan By whom built Ardrossan & Co. Ltd When built 1920

Machinery made at Greenock By whom made John S Kincaid & Co. Ltd when made 1920

Engines made at Greenock By whom made John S Kincaid & Co. Ltd when made 1920

Registered Horse Power _____ Owners _____ Port belonging to _____

Horse Power as per Section 28 188 Is Refrigerating Machinery fitted for cargo purposes _____ Is Electric Light fitted _____

ENGINES, &c.—Description of Engines Triple Compound No. of Cylinders Three No. of Cranks Three

of Cylinders 25" 41" 69" Length of Stroke 48" Revs. per minute 70 Dia. of Screw shaft 1 1/2" Material of screw shaft Steel

Is the after end of the liner made water tight _____ If the liner does not fit tightly at the part _____

Is the propeller boss _____ If the liner is in more than one length are the joints burned _____

Is the space charged with a plastic material insoluble in water and non-corrosive _____ If two _____

Length of stern bush 58"

Is the shaft lapped or protected between the liners _____

of Tunnel shaft 12 1/2" Dia. of Crank shaft journals 15 1/2" Dia. of Crank pin 15 1/2" Size of Crank webs 21" 8 1/2" Dia. of thrust shaft under _____

of Feed pumps Two Diameter of ditto 4" Stroke 27" Can one be overhauled while the other is at work Yes

of Bilge pumps Two Diameter of ditto 4" Stroke 27" Can one be overhauled while the other is at work Yes

of Donkey Engines Three Sizes of Pumps 1 1/2" 10" 6" 4" No. and size of Suctions connected to both Bilge and Donkey pumps _____

Engine Room From 3 1/2" In Holds, &c. 10" 1 1/2" Tunnel 8"

Circulating Pump Separate Engine

of Bilge Injections Two Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size 2 1/2"

Are the roses in Engine room always accessible Yes Are the sluices on Engine room bulkheads always accessible _____

Are they Valves or Cocks Both

Are the Discharge Pipes above or below the deep water line Below

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

How are they protected _____

Are the pipes carried through the bunkers _____

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges Yes

Is it fitted with a watertight door Yes worked from Top Platform

VALVES, &c.—(Letter for record S) Manufacturers of Steel Scott's Patent Steel Co. Glasgow

Boilers Heating Surface of Boilers 6408 sq ft Is Forced Draft fitted Yes No. and Description of Boilers Two single ended (S)

Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 24 May 1920 No. of Certificate 1456

Is each boiler worked separately Yes Area of fire grate in each boiler 68.2 sq ft No. and Description of Safety Valves to _____

Area of each valve 7.07 sq ft Pressure to which they are adjusted 185 lbs Are they fitted with easing gear Yes

Mean dia. of boilers 15' 0" Length 10' 6" Material of shell plates Steel

Are the shell plates welded or flanged Yes Descrip. of riveting: seams all on 45°

Range of tensile strength 28-32 Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 8 1/4" Lap of plates or width of butt straps 18 1/2"

Working pressure of shell by rules 182 lbs Size of manhole in shell 16" 12"

No. and Description of Furnaces in each boiler Single ended Material Steel Outside diameter 48 1/2"

Thickness of plates 9/16" Description of longitudinal joint Welded No. of strengthening rings None

Working pressure of furnace by the rules 182 lbs Combustion chamber plates: Material Steel Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 1 1/4"

Working pressure by rules 181 lbs

Working pressure of stays to ditto: Sides 8" 7 1/2" Back 8" 7 1/2" Top 8" 7 1/2" If stays are fitted with nuts or riveted heads Yes

Working pressure by rules 200 lbs End plates in steam space: _____

Material of stays Steel Area at smallest part 1.5 sq ft Area supported by each stay 60 sq ft Working pressure by rules 180 lbs Material of stays Steel

Thickness 1 1/2" Pitch of stays 19 1/4" How are stays secured all nuts

Working pressure of plate by rules 181 lbs

Material of Lower back plate Steel Thickness 2 3/4" Greatest pitch of stays 13"

Working pressure of plate by rules 181 lbs

Material of tube plates Steel Thickness: Front 1" Back 2 1/2" Mean pitch of stays 15" 8 1/4"

Working pressures by rules 182 lbs Girders to Chamber tops: Material Steel Depth and _____

Working pressure by rules 182 lbs Number and pitch of stays in each Three 7 1/2"

Working pressure by rules 182 lbs Steam dome: description of joint to shell _____

Working pressure by rules 182 lbs Diam. of rivet holes _____

Working pressure of shell by rules _____ Crown plates _____ Thickness _____ How stayed _____

Working pressure of shell by rules _____ Tested by Hydraulic Pressure to _____

SUPERHEATER. Type _____ Date of Approval of Plan _____

Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler _____

Working pressure by rules 182 lbs Is Easing Gear fitted _____

Pressure to which each is adjusted _____

015183-015181-040112

IS A DONKEY BOILER FITTED? *Yes*

If so, is a report now forwarded? *Yes*

SPARE GEAR. State the articles supplied:— *Two top end bolts. Two bottom end bolts. Two main bearing bolts. One set coupling bolts. One set feed pump valves. One set ridge pump valves. One escape valve each side. One safety valve opening both ends. 10. 10. 10. 10. 10. 10. 10. 10. 10. 10.*

The foregoing is a correct description,
FOR JOHN G. KINCAID & COY., LIMITED.

Robert Green

Secretary.

Manufacturer.

Dates of Survey while building
During progress of work in shops -- 1919. Aug. 26-29. Sept. 1. Oct. 10-17. Nov. 6-10. 24-27. Dec. 1-5. 19-24. 29. 1920 Jan. 12-15. 19-22. 26-29. Feb. 6-16. 18-20.
During erection on board vessel --- 27. Mar. 2-5. 9-10. 11-15. 17-18. 19-23. 25-26. 29-30. 31. Apr. 2-5. 7-9. 12-15. 18-20. 21-25. 28-30. May. 3-6. 11-14. 18-20.
Total No. of visits 79.

Is the approved plan of main boiler forwarded herewith *Yes*

" " " donkey " " " *Yes*

Dates of Examination of principal parts—Cylinders 25/5/20 Slides 25/5/20 Covers 25/5/20 Pistons 18/5/20 Rods 11/5/20

Connecting rods 9/4/20 Crank shaft 9/4/20 Thrust shaft 9/4/20 Tunnel shafts 11/5/20 Screw shaft 11/5/20 Propeller 11/5/20

Stern tube 26/5/20 Steam pipes tested 14-18-23/6/20 Engine and boiler seatings 19/4/20 Engines holding down bolts 14/6/20

Completion of pumping arrangements 22/6/20 Boilers fixed 9/6/20 Engines tried under steam 22/6/20

Completion of fitting sea connections 19/4/20 Stern tube 19/4/20 Screw shaft and propeller 7/6/20

Main boiler safety valves adjusted 22/6/20 Thickness of adjusting washers *1 1/2" 5 1/2"* *1 1/2" 5 1/2"* *1 1/2" 5 1/2"*

Material of Crank shaft *Steel* Identification Mark on Do. *182* Material of Thrust shaft *Steel* Identification Mark on Do. *182*

Material of Tunnel shafts *Steel* Identification Marks on Do. *182* Material of Screw shafts *Steel* Identification Marks on Do. *182*

Material of Steam Pipes *Steel* *and copper* Test pressure *main boiler and work*

Is an installation fitted for burning oil fuel *Yes* Is the flash point of the oil to be used over 150°F. *Yes*

Have the requirements of Section 49 of the Rules been complied with *Yes*

Is this machinery duplicate of a previous case *Yes* If so, state name of vessel *Yes*

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

The machinery and boiler of this steamer have been constructed under special survey and placed on board in accordance with the Society's Rules. They are now in my opinion in safe working condition and the case is respectfully submitted for the ratification fitted in oil fuel over 150°F and + LMC 6-20 in the Register Book. The two main cylinders have to be examined in six months time.

See report following attached hereto.

It is submitted that this vessel is eligible for THE RECORD + LMC 6-20 subject to the I.D. cylinder barrel being examined before the end of December 1920. Fitted for oil fuel 6-20 F.P. above 150°F

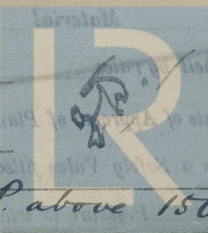
The amount of Entry Fee ... £ 3 : 0 :
Special ... £ 59 : 8 :
Donkey Boiler Fee ... £ 4 : 4 :
Travelling Expenses (if any) £ : :
When applied for, 29/6/1920
When received, 1/7/1920

Committee's Minute GLASGOW 6-JUL 1920

Assigned + LMC 6-20 subject to

Fitted for oil fuel 6-20 F.P. above 150°F
MACHINERY CERT
WRITTEN 4-7-20 Note Limit

Engineer Surveyor to Lloyd's Register of Shipping.



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Foundation

GREENOCK

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

Port of *Greenock**S.S. Poljana of Christiania*

Damage stated through the overheating of the intermediates from the piston rod, on the official trial trip.

The intermediates piston rod renewed, the neck ring and gland bush renewed, the cylinder barrel on port side where scored, and the piston flange piston rings and piston ring fitted up, where slightly scored. The vessel afterwards worked under full power at sea for nearly five hours, after which the cylinder was opened out and examined, and found sufficiently good to enable the vessel to proceed to sea, which she did. Arrangements were then made, that the cylinder be submitted for examination within ten months time, when, if the one is not then absolutely good, the cylinder will be retred, and a new piston with rings complete will be fitted.

In my opinion the cylinder is perfectly safe.

James Jones.

