

# REPORT ON MACHINERY.

No. 176731  
WED. JUL. 7 1920

Received at London Office

4. Writing Report 24<sup>th</sup> June 1920 When handed in at Local Office 29<sup>th</sup> June 1920 Port of Greenock  
 Survey held at Greenock & Ardrossan Date, First Survey 26<sup>th</sup> Aug. 1919 Last Survey 27<sup>th</sup> June 1920  
 on the Steel Steamer Poljana (Number of Visits 72) Tons { Gross / Net }  
 Built at Ardrossan By whom built Ardrossan & Co. Ltd When built 1920  
 Engines made at Greenock By whom made John S Kincaid & Co. Ltd when made 1920  
 Boilers made at Greenock By whom made John S Kincaid & Co. Ltd when made 1920  
 Registered Horse Power \_\_\_\_\_ Owners \_\_\_\_\_ Port belonging to \_\_\_\_\_  
 Is Refrigerating Machinery fitted for cargo purposes \_\_\_\_\_ Is Electric Light fitted \_\_\_\_\_

Kincaid & Co. Ltd

**PROPPELLERS, &c.**—Description of Engines Triple Compound No. of Cylinders Three No. of Cranks Three  
 of Cylinders 25-41-69 Length of Stroke 45 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 is in more than one length are the joints burned \_\_\_\_\_  
 If the liner does not fit tightly at the part \_\_\_\_\_  
 Is the space charged with a plastic material insoluble in water and non-corrosive \_\_\_\_\_  
 Length of stern bush 55  
 Dia. of Crank shaft journals 1 1/2 Dia. of Crank pin 1 1/2 Size of Crank webs 21.84 Dia. of thrust shaft under \_\_\_\_\_  
 Dia. of screw 1 1/2 Pitch of Screw 18.0 No. of Blades 4 State whether moceable Yes Total surface 98.29  
 Diameter of ditto 4 Stroke 27 Can one be overhauled while the other is at work Yes  
 Diameter of ditto 4 Stroke 27 Can one be overhauled while the other is at work Yes  
 Sizes of Pumps 1 1/2-10-6-P-4 No. and size of Suctions connected to both Bilge and Donkey pumps \_\_\_\_\_  
 In Holds, &c. 10-12 Tunnel 5  
 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 above  
 Are the Blow Off Cocks fitted with a spigot and brass covering plate Yes  
 How are they protected \_\_\_\_\_  
 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 1st Platform

**BOILERS, &c.**—(Letter for record S) Manufacturers of Steel John S Kincaid & Co. Ardrossan  
 Total Heating Surface of Boilers 6408.52 Is Forced Draft fitted Yes No. and Description of Boilers Thrupling & Landed (3)  
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 24 May 1920 No. of Certificate 1456  
 Area of fire grate in each boiler 63.2 sq ft No. and Description of Safety Valves to \_\_\_\_\_  
 Area of each valve 7.07 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  
 Range of tensile strength 22-32 Are the shell plates welded or flanged Yes Descrip. of riveting: str. seams all on 4/4  
 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 x 12  
 No. and Description of Furnaces in each boiler 3 firing Material Steel Outside diameter 48 1/2  
 Description of longitudinal joint Welded No. of strengthening rings Corrug  
 Thickness of plates 9/16 Description of longitudinal joint Welded No. of strengthening rings Corrug  
 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 1/16  
 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 181 lbs  
 Area at smallest part 1.5 Area supported by each stay 60 Working pressure by rules 200 lbs End plates in steam space: \_\_\_\_\_  
 Working pressure by rules 180 lbs Material of stays Steel  
 Area at smallest part 6.9 Area supported by each stay 590 Working pressure by rules 181 lbs Material of Front plates at bottom Steel  
 Greatest pitch of stays 13 Working pressure of plate by rules 181 lbs  
 Material of tube plates Steel Thickness: Front 1 Back 2 1/32 Mean pitch of stays 13 1/2 x 8 1/4  
 Working pressures by rules 182 lbs Girders to Chamber tops: Material Steel Depth and \_\_\_\_\_  
 Distance apart 8 Number and pitch of stays in each Three 7 1/2  
 Description of joint to shell \_\_\_\_\_ % of strength of joint \_\_\_\_\_  
 Description of longitudinal joint \_\_\_\_\_ Diam. of rivet holes \_\_\_\_\_  
 Thickness of shell plates \_\_\_\_\_ Material \_\_\_\_\_  
 Working pressure of shell by rules \_\_\_\_\_ Crown plates \_\_\_\_\_ Thickness \_\_\_\_\_ How stayed \_\_\_\_\_  
 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 \_\_\_\_\_  
 Pressure to which each is adjusted \_\_\_\_\_ Is Easing Gear fitted \_\_\_\_\_

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. etc. Sprocket.*

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. 10-27. Nov. 6-10-24-27. Dec. 1-5-19-26-29. 1920. Jan. 12-15-19-22-26-29. Feb. 6-16-18-20. 27. Mar. 2-5-9-10-11-15-17-18-19-23-25-26-29-30-31. Apr. 2-5-7-9-12-15-18-20-21-25-26-28-30. May. 3-6-11-14-18-27. During erection on board vessel - 27-31 June 3-4-7-9-11-14-16-17-18-22-23-24-26-27. 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 *15/5/20* 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 *3/3/20* Propeller *3/6/20*

Stern tube *26/3/20* 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 *P13/2 5 3/4" P13/2 5 3/4" P11/2 5"*

Material of Crank shaft *Steel* Identification Mark on Do. *382* Material of Thrust shaft *Steel* Identification Mark on Do. *382*

Material of Tunnel shafts *Steel* Identification Marks on Do. *382* Material of Screw shafts *Steel* Identification Marks on Do. *382*

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 - *No* If so, state name of vessel -

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 coal is respectfully submitted for the satisfaction fitted for oil fuel over 150°F and + LMC 6-20 in the Register Book. The two main cylinders stand 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 ... £ *6* : *4* :  
Travelling Expenses (if any) £ : :  
When applied for, *29/6/1920*  
When received, *1/7/1920*

*J.W.D.*  
*15/7/20*  
*J.M.*  
Engineer Surveyor to Lloyd's Register of Shipping.

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.

GREENOCK

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



Port of GreenockS.S. Poljana of Christiania

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

The intermediate piston rod renewed, the  
neck ring and gland bush renewed, the cylinder  
bush on port side where scored, and the piston flange  
piston rings and junk ring filed 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 hours 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.

