

Rpt. 4.

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

No. 470

Date of writing Report 10.2.1933 When handed in at Local Office 15.2.1933 Port of *Szrak* Received at London Office 18 FEB 1933  
 No. in Survey held at *Fiume & Szrak* Date, First Survey 23.10.31 Last Survey 2.2.1933  
 Reg. Book. on the *TWIN SH JUGOSLAVIA* (Number of Visits)  
 Built at *Fiume* By whom built *Santeri Munkki & Co. Danzig* Yard No. Tons Gross 1274.54 Net 627.58  
 Engines made at *Geffart* By whom made *Habland & Woffel* Engine No. 472 When built 1915  
 Boilers made at *Walter* By whom made *Manchurian & Wagon Works* Boiler No. 1412 when made 1931  
 Registered Horse Power *286 278* Owners *Jadanska Plovidba DO* Port belonging to *Szrak*  
 Nom. Horse Power as per Rule *286 278* Is Refrigerating Machinery fitted for cargo purposes ☒ Is Electric Light fitted *yes*

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

*Four Scotch Quadruple Expansion*

Dia. of Cylinders *13 1/2 - 14 1/2 - 28 - 40* Length of Stroke *28"* Revs. per minute *150* No. of Cylinders *8* No. of Cranks *8*  
 Dia. of Crank shaft journals as per rule *7.6* as fitted *8.25* Dia. of Crank pin *8 1/2* Crank webs Mid. length breadth *12* If shrunk Thickness parallel to axis  
 Diameter of Thrust shaft under collars as per rule *7.6* as fitted *8.14* Diameter of Tunnel shaft as per rule *7.24* as fitted *8* Diameter of Screw shaft as per rule *8* as fitted *8.5/8* Is the Screw shaft fitted with a continuous liner the whole length of the stern tube *yes* 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 joints burned *yes* 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 appliance fitted at the after end of the shaft to permit of it being efficiently lubricated ☒  
 Pitch of Propeller *13" - 0"* No. of Blades *four* Length of Stern Bush *3" - 3 1/4"* Diameter of Propeller *9" - 0"* square feet. *28*  
 No. of Feed Pumps fitted to the Main Engines ☒ Diameter of ditto ☒ Stroke ☒ Can one be overhauled while the other is at work ☒  
 No. of Bilge Pumps fitted to the Main Engines ☒ Diameter of ditto ☒ Stroke ☒ Can one be overhauled while the other is at work ☒  
 Total number and size of power driven Feed and Bilge Auxiliary Pumps *N° 2, feed simplex 13 1/2 x 9 x 21", N° 2 bilge duplex*  
 No. and size of Pumps connected to the Main Bilge Line *N° 2, 6 x 6 x 6, - 4 1/2 x 4 1/2 x 5,*  
 No. and size of Ballast Pumps *N° 1, - 6 x 6 x 6* No. and size of Lubricating Oil Pumps, including Spare Pump ☒  
 Are two independent means arranged for circulating water through the Oil Cooler ☒ No. and size of suction connected to both Main Bilge Pumps and Auxiliary and in Holds, &c. *3 - 2 1/2"*  
 Bilge Pumps;—In Engine and Boiler Room *4 - 2 1/2"*

## No. and size of Main Water Circulating Pump Bilge Suctions

*N° 1, - 6"*

## No. and size of Donkey Pump Direct Suctions

to the Engine Room Bilges *one 3 1/2"* Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes *yes*  
 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 *yes*  
 Are all connections with the sea direct on the skin of the ship *yes* Are they Valves or Cocks *valves*  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates *yes* Are the Discharge Pipes above or below the deep water line *below*  
 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*  
 What Pipes are carried through the bunkers *bilge suction & tank fresh water* How are they protected *strong steel casing*  
 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 Screw Shaft Tunnel watertight *yes* Is it fitted with a watertight door *yes* worked from *floor & top of bulkhead block*

MAIN BOILERS, &c.—(Letter for record *S*)Total Heating Surface of Boilers *4440 sq ft*Working Pressure *200 lbs*

Is Forced Draft fitted *yes* No. and Description of Boilers *two Scotch single end*  
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? *yes completion (see Newcastle on Tyne Rep. N° 87000)*  
 IS A DONKEY BOILER FITTED? ☒ If so, is a report now forwarded? ☒

## PLANS. Are approved plans forwarded herewith for Shafting

☒Main Boilers ☒Auxiliary Boilers ☒Donkey Boilers ☒General Pumping Arrangements *yes*Oil uel Burning Piping Arrangements ☒

## SPARE GEAR. State the articles supplied:—

*4 connecting rod top end bolts and nuts, 4 connecting rod bottom end bolts and nuts, 4 main bearing bolts, 2 sets of coupling bolts, 1 set of piston springs, 1 pair of connecting rod branes, 1 pair of crosshead branes, 6 bylinder cover bolts, 6 crank pin bolts, 4 valve chest cover bolts, 1 set feed pump valves, a quantity of assorted bolts and nuts and 1 ton of various sizes.*

The foregoing is a correct description,

Manufacturer.



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Dates of Survey while building  
During progress of work in shops - - - 16/2/31, - 18/2, 19/2, 20/2, 26/2, 15/3, 17/3, 21/3, 11/4/1932  
During erection on board vessel - - - 23/10, 14/11, 26/11, 27/11, 29/12, 30/12/1931 - 21/1, 5/2, 12/2, 4/5, 6/5, 7/5/1932 - 2/2/1933  
Total No. of visits 22

Dates of Examination of principal parts - Cylinders  
Covers  
Connecting rods  
Tunnel shafts  
Stern tube 26/11/31  
Completion of pumping arrangements 6.5.32  
Completion of fitting sea connections 27.11.31  
Main boiler safety valves adjusted 26.4.32 - 1.2.33  
Material of Crank shaft J. M. J.  
Material of Thrust shaft  
Material of Tunnel shafts  
Material of Screw shafts  
Material of Steam Pipes copper  
Is an installation fitted for burning oil fuel  
Have the requirements of the Rules for carrying and burning oil fuel been complied with  
Is this machinery duplicate of a previous case

Pistons  
Crank shaft  
Screw shaft  
Engines holding down bolts 25.1.32  
Engines tried under steam 7.5.32 - 2.2.33  
Screw shaft and propeller 4.5.32  
Thickness of adjusting washers 11 1/2 bolts  
Identification Mark on Do. LLOYD'S R.J.B 1.3.15  
Identification Mark on Do.  
Identification Marks on Do. N: 6192 T.D.S - 16.2.31  
Identification Marks on Do. LLOYD'S 1039 J.H - LLOYD'S 1038 J.H. 17.3  
Test pressure 400 lbs  
Date of Test 19.2.32 - 26.2.32  
Is the flash point of the oil to be used over 150°F.  
If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.)  
Material and workmanship of this machinery erection on board is good.  
The machinery of this vessel is constructed at Belfast, and fitted on board at  
Finne, makes special survey in accordance with the Rules and the approved  
plans.  
It has been tested under full working condition and found satisfactory.  
It is submitted the machinery of this vessel is eligible to have the  
notation of + LMC - 2.33 and notation of + NE 1915 refitted 2.33.  
The following new approved plans forwarded under separate cover:  
1) Main steam pipes  
2) Pumping arrangements  
3) Auxiliary steam pipes  
4) Steam discharge pipes  
5) Gybe and double bottom section  
6) Thrust shaft seatings  
7) Gybe mounting arrangements.  
A test certificate herewith enclosed.

The amount of Entry Fee  
14 00 question of fees submitted  
15 Special  
Donkey Boiler Fee  
Travelling Expenses (if any) £  
When applied for, 19  
When received, 2/6/33

Committee's Minute  
Assigned + L.M.C. 2.33 + N.E. 5.15 Refitted 33.  
+ N.B. 2.33. S(N) 2.33 C.L.  
CERTIFICATE WRITTEN

Engineer Surveyor to Lloyd's Register of Shipping.