

REPORT ON MACHINERY.

No. 6164.

Received at London Office

TUE. JUL. 21 1914

4.

Writing Report 18 July 1914

Port of Amsterdam

Survey held at Amsterdam

Date, First Survey 13 Sept. 1913 Last Survey 16 July 1914

For the *Steel Petroleum tank twin Screw Motor Vessel Elbruz.*

Gross 4880.66

Net 1942.84

Robert Saret Built at Newcastle on Tyne By whom built Pyne Iron & B Co Ltd

When built 1914.

made at Amsterdam By whom made Werkspoor

when made 1914.

made at Newcastle By whom made North Eastern Marine Eng Co

when made 1914.

made at Hockton By whom made Messrs Bailey Bros Ltd

Horse Power Owners Soc. Anon d'Armement d'Industrie et de Commerce

Port belonging to Antwerp.

Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted Yes.

ES, &c.—Description of Engines *Two single Acting four Cycle Horizontal Diesel Engines* No. of Cylinders 12 No. of Cranks 12

Cylinders 560 Length of Stroke 39.5 Revs. per minute 140 Dia. of Screw shaft 3.5

screw shaft fitted with a continuous liner the whole length of the stern tube Yes. Is the after end of the liner made water tight

propeller boss Yes If the liner is in more than one length are the joints burned If the liner does not fit tightly at the part

the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive If two

are fitted, is the shaft lapped or protected between the liners Length of stern bush

Tunnel shaft as per rule 1.70 Dia. of Crank shaft journals as per rule 3.26 Dia. of Crank pin 3.40 Size of Crank webs 480x170 Dia. of thrust shaft under

s 1.90 Dia. of screw 3.600 Pitch of Screw 3/100 No. of Blades 3 State whether moveable Yes Total surface 4.556

Feed pumps Diameter of ditto Stroke Can one be overhauled while the other is at work

Bilge pumps 2x2 Diameter of ditto 100 Stroke 300 Can one be overhauled while the other is at work

Donkey Engines Two Sizes of Pumps One duplex 9x8 1/2 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room 9 Suctions. One 4" and five of 3 1/2" In Holds, &c.

Bilge Injections One sizes 5/8" Connected to condenser, or other pump Yes Is a separate Donkey Suction fitted in Engine room & size Yes 3 1/2"

all the bilge suction pipes fitted with roses Yes Are the roses in Engine room always accessible Yes Are the sluices on Engine room bulkheads always accessible Yes

all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Both

they fixed sufficiently high on the ship's side to be seen without lifting the hatch plates Yes Are the Discharge Pipes above or below the deep water line Above

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.

pipes are carried through the bunkers How are they protected

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

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

of examination of completion of fitting of Sea Connections of Stern Tube Screw shaft and Propeller

Screw Shaft Tunnel watertight Is it fitted with a watertight door worked from

ELERS, &c.—(Letter for record) Manufacturers of Steel

Heating Surface of Boilers Is Forced Draft fitted No. and Description of Boilers

Working Pressure Tested by hydraulic pressure to Date of test No. of Certificate

each boiler be worked separately Area of fire grate in each boiler No. and Description of Safety Valves to

boiler Area of each valve Pressure to which they are adjusted Are they fitted with easing gear

least distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers Length Material of shell plates

thickness Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams

seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps

percentages of strength of longitudinal joint rivets Working pressure of shell by rules Size of manhole in shell

of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter

length of plain part top Thickness of plates crown Description of longitudinal joint No. of strengthening rings

working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom

ch of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules

material of stays Diameter at smallest part Area supported by each stay Working pressure by rules End plates in steam space

material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays

diameter at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom

thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules

diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays

ch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and

thickness of girder at centre Length as per rule Distance apart Number and pitch of stays in each

working pressure by rules Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked

separately Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet

plates Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

strengthened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed

working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

W1232-0099

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IS A DONKEY BOILER FITTED? *two Donkey Boilers fitted* If so, is a report now forwarded? *Yes enclosed 8/69*
SPARE GEAR. State the articles supplied: *two propellers, One screw shaft, 1/2 Crankshaft, 1/2 Coupling bolts, 6 piston rods, 2 guide shoes, One H.I. and L.P. air compressors, 6 inlet, 6 exhaust, 6 fuel inlet, 6 starting air valves with springs complete, One complete set of valves for main & auxiliary compressors, two main bearings two top and bottom end brasses with bolts, One cooling & one oil pump complete, 40 piston rings, Valves & seats for donkey & ballast pump, 24 Condensers and 30 common tubes for boilers, Holding down bolts, Bolts and nuts assorted, Iron & sheet copper of different thickness, two safety valve springs*

The foregoing is a correct description,

WERKSPoor

W. C. Kloos Manufacturer.

Dates of Survey while building { During progress of work in shops - 23 Sept. 11-22-24-30 Oct 5-13-21-22-25 November 1-9-9-11 December 1913, 7-11-26-30 Jan 9-10
During erection on board vessel - 27 February, 3-9-13-23 March, 2-8 April / 20-27 April, 11-20-22-26 May, 9-11-11-25 June, 3-6-10-13-24-27-16 July
Total No. of visits 46

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

SHAFTING

AIR VESSELS

"PUMPING ARRANGEMENT"

Pistons ditto

Rods ditto

Dates of Examination of principal parts - Cylinders *27-30-31-25-9-10-12* Slide *7-22-26-9-26-27* Cover *3-9-23-2-8*

Connecting rods *ditto* Crank shaft Thrust shaft Tunnel shafts Screw shaft Propeller *in drydock*

Stern tube Steam pipes tested Engine and boiler seatings Engines holding down bolts *2-6-9-11-11-25*

Completion of pumping arrangements *25 June* Boilers fixed Engines tried under steam *10 and 16 July 1914*

Donkey boiler safety valves adjusted *13 July* Thickness of adjusting washers *9" both*

Material of Crank shaft *Ann. L. 11 3144.45* Identification Mark on Do. *MB 5-13 MB 5-13* Material of Thrust shaft *Ann. L. 11 3144.45* Identification Mark on Do. *MB 5-13 MB 5-13*

Material of Tunnel shafts *Ann. L. 11 3144.45* Identification Marks on Do. *2932-3 2934-4* Material of Screw shafts *MB 5-13 MB 5-13* Identification Marks on Do. *Ann. L. 11 3144.45*

Material of Steam Pipes *Copper* Test pressure *HP 130 ATM LP 45 ATM LP 16 ATM*

Is an installation fitted for burning oil fuel *Yes for donkey boiler* 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? *Each set* If so, state name of vessel *One motor of the S.S. Juno report 125416*

General Remarks (State quality of workmanship, opinions as to class, &c.)

This vessel's machinery has been fitted in an efficient manner. Motors used in the construction of good quality and tested as required. Starting air vessels tested to 530 lbs per sq inch and safety valves adjusted to 265 lbs per sq inch. Injection air & fuel bottles tested to 2130 lbs per sq inch and its safety valves adjusted to 923 lbs per sq inch. During a consecutive run of 12 hours in open sea the motors worked most successfully no disturbance or heating whatever, main and auxiliary pumps working efficiently from the different compartments, and the reversing of the motors performed in seconds. S.B floating fuel bottle tested as required. See Secretary's letter of the 12th June. The Society rules as regards the use of liquid fuel for steam boilers fully complied with.

I am of opinion that this vessel is eligible to be classed in the Society Register Book LMC 7. 1914. Subject to a new floating fuel bottle duly tested as required being supplied before the end of August 1914.

The amount of Entry Fee ... \$ 30.-
Special ... \$ 514.20
Donkey Boiler Fee ... \$
Travelling Expenses (if any) \$ 32.20

When applied for,

July 1914

When received,

July 1914

FRI JUL 24 1914

Committee's Minute

Assigned *+ LMC 7. 14 (Oil Engines)*

Subject

Engineer *W. H. He* to Lloyd's Register of British & Foreign Shipping

OCT. 16 1914

FRI 11 JAN 1915

TUE NOV 25 1914

WED 11 APR 1917

FRI OCT 5 1917

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