

REPORT ON MACHINERY.

No. 12599
WED. NOV. 15 1922

Received at London Office

Date of writing Report 15-11-1922 When handed in at Local Office

Port of Rotterdam

No. in Survey held at Schiedam
Reg. Book. on the Steel Screw Steamer "LING NAM"

Date, First Survey 14 August Last Survey 15-11-1922

(Number of Visits 13)

Master Built at Hamburg By whom built Reichert's Schiffswerft

Gross 6218

Net 3748

When built 1903

Engines made at Hamburg By whom made Reichert's Schiffswerft when made 1903

Boilers made at Hamburg By whom made Reichert's Schiffswerft & Maschinenfabrik when made 1903

Registered Horse Power Owners The Chungking Navigation Co Ltd Port belonging to Lima, Peru.

Nom. Horse Power as per Section 28 763 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines 2. Vertical triple expansion No. of Cylinders 2 x 3 No. of Cranks 2 x 3

Dia. of Cylinders 23 1/4 x 30 1/2 x 64 1/2 Length of Stroke 48 Revs. per minute Dia. of Screw shaft 14 1/2" Material of Steel

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 water tight

in the propeller boss Yes If the liner is in more than one length are the joints burned on lengths 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 Yes If two

liners are fitted, is the shaft lapped or protected between the liners Length of stern bush 5'0"

Dia. of Tunnel shaft as per rule 12'6" Dia. of Crank shaft journals as per rule 13'22" Dia. of Crank pin 13'54" Size of Crank webs 8'4 x 1'2"

collars 13'54" Dia. of screw 15'6" Pitch of Screw 20'6" No. of Blades 4 State whether moveable Yes Total surface 64.5 sq.

No. of Feed pumps 2 Diameter of ditto 4 1/4 Stroke 24" Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 4 1/4 Stroke 24" Can one be overhauled while the other is at work Yes

No. of Donkey Engines 3 + 2 feed pumps No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 2 in Engine room 2 in Boiler room 2 in Hold, &c. 2 in CV's hold, 2 in CV's hold, 2 in CV's hold

2 in CV's hold, 2 in CV's hold one in CV's hold, one in aft peak

No. of Bilge Injections 2 sizes 1 1/8" Connected to circulating pump Is a separate Donkey Suction fitted in Engine room & size 4 1/8"

Are 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 None

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

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 Above

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 Steel bilge suction pipes How are they protected

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 the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Upper platform

OILERS, &c.—(Letter for record 13) Manufacturers of Steel Steel.

Total Heating Surface of Boilers 10473 Is Forced Draft fitted Yes No. and Description of Boilers 3 double ended Marine boilers

Working Pressure 200 lbs Tested by hydraulic pressure to Date of test No. of Certificate

Can each boiler be worked separately Yes Area of fire grate in each boiler 98 1/2 sq. ft. No. and Description of Safety Valves to

each boiler 3 Spring loaded Area of each valve 12.56 sq. in. Pressure to which they are adjusted 200 lbs Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork No side bunkers Mean dia. of boilers 15'9 1/2" Length 19'2 1/2" Material of shell plates Steel

Thickness 1.25" Range of tensile strength 28-32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams lap & rivet

long. seams Double butt 4 x rivet Diameter of rivet holes in long. seams 1.34" Pitch of rivets 12'29" Lap of plates or width of butt straps 24'2 1/2" 15'24"

Per centages of strength of longitudinal joint rivets 93 1/2% Working pressure of shell by rules 209 lbs Size of manhole in shell 19'68" x 16'92"

Size of compensating ring 34'56" x 35'32" No. and Description of Furnaces in each boiler 6 Morrison Material Steel Outside diameter 43.3"

Length of plain part top 6" Thickness of plates crown 62" Description of longitudinal joint Welded No. of strengthening rings

Working pressure of furnace by the rules 232 lbs Combustion chamber plates: Material Steel Thickness: Sides .62" Back .62" Top .62" Bottom .74"

Pitch of stays to ditto: Sides 7'28" x 48" Back 7'48" x 74" If stays are fitted with nuts or riveted heads Nutted Working pressure by rules 24 lbs

Material of stays Steel Area at smallest part 1.450" Area supported by each stay 560" Working pressure by rules 204 lbs End plates in steam space:

Material Steel Thickness 1" Pitch of stays 49'6" x 15'74" How are stays secured Double nuts Working pressure by rules 201 lbs Material of stays Steel

Area at smallest part 6.420" Area supported by each stay 2350" Working pressure by rules 156 lbs Material of Front plates at bottom Steel

Thickness .90" Material of Lower back plate Steel Thickness .90" Greatest pitch of stays 2" Working pressure of plate by rules

Diameter of tubes 3" Pitch of tubes 4'13" x 4'33" Material of tube plates Steel Thickness: Front 1" Back 1.02" Mean pitch of stays 8'66" x 8'26"

Pitch across wide water spaces 14'17" Working pressures by rules 204 lbs Girders to Chamber tops: Material Steel Depth and

thickness of girder at centre 11'99" x 1'04" Length as per rule 57'18" Distance apart 7'48" Number and pitch of stays in each 5 2 7'48"

Working pressure by rules 208 lbs Steam dome: description of joint to shell % of strength of joint

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

Pitch of rivets Working pressure of shell by rules Crown plates Thickness How stayed

SUPERHEATER. Type Date of Approval of Plan Tested by Hydraulic Pressure to

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

Diameter of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted

Lloyd's Register

W992-0222

Foundation

IS A DONKEY BOILER FITTED? *No*

If so, is a report now forwarded? *✓*

SPARE GEAR. State the articles supplied:— *2 set of top end bolts and nuts, 2 set of bottom end bolts and nuts, 2 set of main bearing bolts and nuts, 2 sets of coupling bolts, 2 sets of feed and helge pump valves, a quantity of assorted bolts and nuts. Iron of various size 2 screw shafts 2 propeller blades, 2 pump links, 2 set of top end braces, one set of bottom end braces, 4 piston valve rings, one horse shoe, a full set of gear gear for centrifugal pump, electric light engines, fan engines and ship lamp.*

The foregoing is a correct description,

Manufacturer.

Dates { During progress of work in shops -- *Aug 17. 18. 22. 25. 29. Sept 5. 8. 9. 21. 23. 25. 28. Oct 4. 5. 9. 16. 20. 21. 27. 18. 30. Nov 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31.*
of Survey while building { During erection on board vessel -- *Nov 9. 13.*
Total No. of visits *23*

Is the approved plan of main boiler forwarded herewith *Retained in London Office.*

Dates of Examination of principal parts—Cylinders *18.8.22* Slides *18.8.22* Covers *18.8.22* Pistons *18.8.22* Rods *21.8.22* Propeller *17.8.22*
Connecting rods *22.8.22* Crank shaft *17.8.22* Thrust shaft *17.8.22* Tunnel shafts *17.8.22* Screw shaft *17.8.22* Engines holding down bolts *5.9.22*
Stern tube *17.8.22* Steam pipes tested *27.9.22* Engine and boiler seatings *✓* Engines tried under steam *✓*
Completion of pumping arrangements *21.10.22* Boilers fixed *Good* Engines tried under steam *✓*
Completion of fitting sea connections *17.8.22* Stern tubes *17.8.22* Screw shaft and propeller *18.9.22*
Main boiler safety valves adjusted *27.10.22* Thickness of adjusting washers *✓*
Material of Crank shafts *Steel* Identification Mark on Do. *✓* Material of Thrust shafts *Steel* Identification Mark on Do. *✓*
Material of Tunnel shafts *Steel* Identification Marks on Do. *✓* Material of Screw shafts *Steel* Identification Marks on Do. *✓*
Material of Steam Pipes *Steel* Test pressure *600 lbs*
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 *✓* If so, state name of vessel *✓*

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery has been carefully examined, all parts compared with approved plans and found in order, all steam pipes, oil fuel pipes and settling tanks tested as required, safety valves adjusted and accumulation tank held, the whole machinery was found in a good working condition under full working condition and I am of opinion that the vessel is eligible to be recorded in the Society's Register Book with LMC 11-22. Fitted for oil fuel. Flash point above 150°F. Screw shafts fitted with continuous liners*

It is submitted that this vessel is eligible for THE RECORD. L.M.C. 11.22. F.D. C.L. "Fitted for Oil Fuel" 11.22. F.P. above 150°F. S. 11.22.

A.H.D.
20/11/22 *Ans.*

The amount of Entry Fee ... £ *9.50.00*
Special ... £ *30.00*
Donkey Boiler Fee ... £ *30.00*
Travelling Expenses (if any) ... £ *30.00*
Committee's Minute
Assigned *L.M.C. 11.22 F.D. C.L.*

When applied for, *13/11/1922*
When received, *18/11/22*
J. J. Lekoo
Engineer Surveyor to Lloyd's Register of Shipping.

MACHINERY TESTED
WHILE IN
duplicate
22/11/22

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Foundation

*Lined for oil fuel 11.22
F.P. above 150°F.*