

## REPORT ON MACHINERY.

No. 1497  
MON. JAN. 25. 1915

Received at London Office

Date of writing Report 22. 12 1914 when handed in at Local Office

Port of Shanghai

No. in Survey held at  
Reg. Book.

Shanghai

Date, First Survey 10<sup>th</sup> June 1914 Last Survey 15<sup>th</sup> Dec. 1914

on the Steel Twin Screw Icebreaker "Meiling"

(Number of Visits 29)

Gross 342.29

Master Built at Shanghai By whom built Kiangnan Dock &amp; Eng Works When built 1914

Engines made at Shanghai By whom made Kiangnan Dock &amp; Eng Works when made 1914

Boilers made at Glasgow By whom made Lindsay Burnet &amp; Co Ltd when made 1914

Registered Horse Power 133 Owners Hai-Ho Insurance Commission Port belonging to Lientsin

Nom. Horse Power as per Section 28 226 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &amp;c.—Description of Engines Twin compound surface condensing No. of Cylinders 4 No. of Cranks 2

Dia. of Cylinders 14 1/2", 30" Length of Stroke 21" Revs. per minute 137 Dia. of Screw shaft as per rule 6.67" Material of Steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube No 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 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 No liners fitted Length of stern bush 2'-7"

Dia. of Tunnel shaft as per rule 6.00" 5.97" Dia. of Crank shaft journals as per rule 6.3" 6.27" Dia. of Crank pin 6.5" Size of Crank webs 4 1/4" x 13" Dia. of thrust shaft under

collars 6.5" Dia. of screw 7'-0" Pitch of Screw 9'-6" No. of Blades 4 State whether moveable No Total surface 21.0 ft

No. of Feed pumps 2 Hairs Diameter of ditto 5" Stroke 12" Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 2 1/4" Stroke 6" Can one be overhauled while the other is at work Yes

No. of Donkey Engines 1 duplex Sizes of Pumps 5' x 3' x 5' No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 3, 2 1/2" In Holds, &amp;c. 2, 2"

No. of Bilge Injections 1 size 5 1/2" Connected to condenser, or to circulating pump, pump Is a separate Donkey Suction fitted in Engine room &amp; size Yes 2 1/2"

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 None 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

Dates of examination of completion of fitting of Sea Connections 21<sup>st</sup> Sept of Stern Tube 15<sup>th</sup> Sept Screw shaft and Propeller 17<sup>th</sup> Sept

Is the Screw Shaft Tunnel watertight None Is it fitted with a watertight door worked from

Glasgow certificates Nos 128824/12877 Manufacturers of Steel

BOILERS, &amp;c.—(Letter for record)

Total Heating Surface of Boilers 3000 sq ft Is Forced Draft fitted No No. and Description of Boilers Two S.E. Cylnr Mults

Working Pressure 130 Tested by hydraulic pressure to 260 Date of test 23.9.14 &amp; 25.9.14 No. of Certificates 128824/12877

Can each boiler be worked separately Yes Area of fire grate in each boiler 46 sq ft No. and Description of Safety Valves to

each boiler Two direct spring Area of each valve 7.069" Pressure to which they are adjusted 135 lbs Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 2'-6" Mean dia. of boilers 12'-3" Length 10'-6" Material of shell plates

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

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

Per centages of strength of longitudinal joint rivets plate Working pressure of shell by rules Size of manhole in shell

Size 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

Pitch 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

Pitch 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

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

If stiffened 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



If so, is a report now forwarded?

*The foregoing is a correct description.*

*Manufacturer.*

Is the approved plan of main boiler forwarded herewith No

" " " donkey " "

Test pressure 260 lbs per sq in

Is the flash point of the oil to be used over 150°F. ☒

If so, state name of vessel. ✓

It is submitted that  
this vessel is eligible for  
THE RECORD. + LMC 12.14

Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

TUE. JAN. 26. 1915

+ Lmb 12.44

MACHINERY CERTIFICATE  
WRITTEN.



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Foundation