

# REPORT ON MACHINERY.

Received at London Office

18 SEP 1924

Date of writing Report 16-9-1924 When handed in at Local Office 17-9-1924 Port of *Dundee*

No. in Survey held at *Dundee* Date, First Survey 18<sup>th</sup> June 1924 Last Survey 11<sup>th</sup> Sept<sup>r</sup> 1924  
 Reg. Book. on the *Twin Screw Steamer "KHOEN HOEA"* (Number of Visits 24)

Master *By whom built Caledon S.S. & Co. (No 289)* When built 1924

Engines made at *Coathbridge* By whom made *W. Beardmore & Co. Ltd. No 604/5* when made 1924

Boilers made at *Parkhead* By whom made *W. Beardmore & Co. Ltd. No 170/1* when made 1924

Registered Horse Power Owners *Thong & S.S. Co* Port belonging to *Portianak*

Nom. Horse Power as per Section 28 *139* Is Refrigerating Machinery fitted for cargo purposes *no* Is Electric Light fitted *Yes*

ENGINES, &c.—Description of Engines *Twin Screw Triple Expansion* No. of Cylinders 6 No. of Cranks 6

Dia. of Cylinders *12-20-33"* Length of Stroke *23"* Revs. per minute *125* Dia. of Screw shaft *as per rule* Material of screw shaft *as fitted*

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 *no* 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 *Yes* If *two*

liners are fitted, is the shaft lapped or protected between the liners *Yes* Length of stern bush *as per rule*

Dia. of Tunnel shaft *as per rule* Dia. of Crank shaft journals *as per rule* Dia. of Crank pin *as per rule* Size of Crank webs *as per rule* Dia. of thrust shaft under collars *as per rule* Dia. of screw *as per rule* Pitch of Screw *as per rule* No. of Blades *as per rule* State whether moveable *as per rule* Total surface *as per rule*

No. of Feed pumps *as per rule* Diameter of ditto *as per rule* Stroke *as per rule* Can one be overhauled while the other is at work *as per rule*

No. of Bilge pumps *as per rule* Diameter of ditto *as per rule* Stroke *as per rule* Can one be overhauled while the other is at work *as per rule*

No. of Donkey Engines *Two* Sizes of Pumps *6x4x4 Ballast 7x5x6* No. and size of Suctions connected to both Bilge and Donkey pumps *as per rule*

In Engine Room *2 @ 2 1/2" Thrust Rods 1 @ 2 1/2" Tunnel 1 @ 2 1/4" Strokehold 2 @ 2 1/4"* In Holds, &c. *Fore hold 3 @ 2 3/4" after Hold 3 @ 2 1/4"*

No. of Bilge Injections *2* sizes *3 1/2"* Connected to condenser, or to circulating pump *C.P.* Is a separate Donkey Suction fitted in Engine room & size *Yes 3 1/2"*

Are all the bilge suction pipes fitted with roses *Yes* Are the roses in Engine room always accessible *Yes* Are the sluices in Engine room bulkheads always accessible *no*

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 *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 *Fore hold suction* How are they protected *Strong wood casings*

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 deck level*

BOILERS, &c.—(Letter for record *as per rule*) Manufacturers of Steel *as per rule*

Total Heating Surface of Boilers *2492* Is Forced Draft fitted *no* No. and Description of Boilers *Two single ended multitubular*

Working Pressure *180* Tested by hydraulic pressure to *320* Date of test *15-5-24 (P) 23-5-24 (S)* No. of Certificate *16512*

Can each boiler be worked separately *Yes* Area of fire grate in each boiler *39.4* No. and Description of Safety Valves to each boiler *Two spring loaded* Area of each valve *5.93* Pressure to which they are adjusted *185 lbs* Are they fitted with easing gear *Yes*

Smallest distance between boilers or uptakes and bunkers or woodwork *24"* Mean dia. of boilers *as per rule* Length *as per rule* Material of shell plates *as per rule*

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

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

Per centages of strength of longitudinal joint *as per rule* Working pressure of shell by rules *as per rule* Size of manhole in shell *as per rule*

Size of compensating ring *as per rule* No. and Description of Furnaces in each boiler *as per rule* Material *as per rule* Outside diameter *as per rule*

Length of plain part *as per rule* Thickness of plates *as per rule* Description of longitudinal joint *as per rule* No. of strengthening rings *as per rule*

Working pressure of furnace by the rules *as per rule* Combustion chamber plates: Material *as per rule* Thickness: Sides *as per rule* Back *as per rule* Top *as per rule* Bottom *as per rule*

Pitch of stays to ditto: Sides *as per rule* Back *as per rule* Top *as per rule* If stays are fitted with nuts or riveted heads *as per rule* Working pressure by rules *as per rule*

Material of stays *as per rule* Area at smallest part *as per rule* Area supported by each stay *as per rule* Working pressure by rules *as per rule* End plates in steam space: *as per rule*

Material *as per rule* Thickness *as per rule* Pitch of stays *as per rule* How are stays secured *as per rule* Working pressure by rules *as per rule* Material of stays *as per rule*

Area at smallest part *as per rule* Area supported by each stay *as per rule* Working pressure by rules *as per rule* Material of Front plates at bottom *as per rule*

Thickness *as per rule* Material of Lower back plate *as per rule* Thickness *as per rule* Greatest pitch of stays *as per rule* Working pressure of plate by rules *as per rule*

Diameter of tubes *as per rule* Pitch of tubes *as per rule* Material of tube plates *as per rule* Thickness: Front *as per rule* Back *as per rule* Mean pitch of stays *as per rule*

Pitch across wide water spaces *as per rule* Working pressures by rules *as per rule* Girders to Chamber tops: Material *as per rule* Depth and thickness of girder at centre *as per rule* Length as per rule *as per rule* Distance apart *as per rule* Number and pitch of stays in each *as per rule*

Working pressure by rules *as per rule* Steam dome: description of joint to shell *as per rule* % of strength of joint *as per rule*

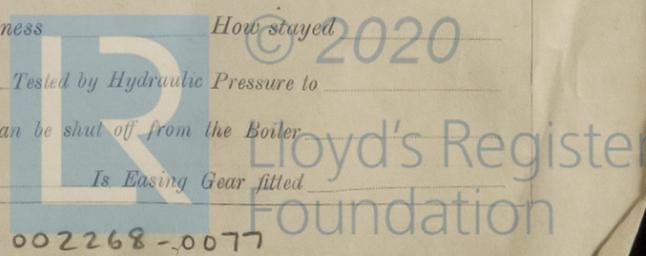
Diameter *as per rule* Thickness of shell plates *as per rule* Material *as per rule* Description of longitudinal joint *as per rule* Diam. of rivet holes *as per rule*

Pitch of rivets *as per rule* Working pressure of shell by rules *as per rule* Crown plates *as per rule* Thickness *as per rule* How stayed *as per rule*

SUPERHEATER. Type *as per rule* Date of Approval of Plan *as per rule* Tested by Hydraulic Pressure to *as per rule*

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

Diameter of Safety Valve *as per rule* Pressure to which each is adjusted *as per rule* Is Easing Gear fitted *as per rule*



IS A DONKEY BOILER FITTED? *Yes* ✓

If so, is a report now forwarded? *Yes. Rpt No 77935*

SPARE GEAR. State the articles supplied:— *1 set each of top & bottom end, main bearing coupling bolts & nuts. 1 set each of air, circulating, feed & Bilge pump valves. 6 condenser tubes & 12 ferrules, 6 boiler tubes (plain) 6 junk ring bolts, 6 cylinder cover studs, 1 set of boiler check valves for each of the main & donkey boilers, 1 cast iron propeller, 1 screw shaft, assorted nuts, bolts & brass work.*

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops - - } *1924*  
{ During erection on board vessel - - - } *JUNE 18. 20. 24. 26 July 3. 9. 15. 18. 22. 24. AUG. 4. 6. 11. 13. 15. 19. 21. 24. 28. 29. SEPT. 2. 3. 4. 8. 9. 10. 11.*  
Total No. of visits *24* Is the approved plan of main boiler forwarded herewith ✓  
" " " donkey " " " ✓

Dates of Examination of principal parts—Cylinders ✓ Slides ✓ Covers ✓ Pistons ✓ Rods ✓  
Connecting rods ✓ Crank shaft ✓ Thrust shaft ✓ Tunnel shafts ✓ Screw shaft ✓ Propeller ✓  
Stern tube ✓ Steam pipes tested *27-8-24* Engine and boiler seatings *18-6-24* Engines holding down bolts *13-8-24*  
Completion of pumping arrangements *9-9-24* Boilers fixed *13-8-24* Engines tried under steam *3-9-24*  
Completion of fitting sea connections *20-6-24* Stern tube *20-6-24* Screw shaft and propeller *26-6-24*  
Main boiler safety valves adjusted *2-9-24* Thickness of adjusting washers P. *P 3/8" S 3/8"* S. *P 3/8" S 5/16"*  
Material of Crank shaft ✓ Identification Mark on Do. ✓ Material of Thrust shaft ✓ Identification Mark on Do. ✓  
Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts ✓ Identification Marks on Do. ✓  
Material of Steam Pipes *Seamless Copper 3 1/2" Vol. 8. W.G.* Test pressure *360 lbs*  
Is an installation fitted for burning oil fuel ✓ Is the flash point of the oil to be used over 150°F. ✓  
Have the requirements of Section 49 of the Rules been complied with ✓  
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 and boilers of this vessel have been fitted on board in an efficient manner, tried under working conditions and found satisfactory and are eligible in my opinion to be classed with record of L.M.C. 9-24.*

*Glasgow Report No 43837, & Newcastle Report No 77935 are forwarded herewith.*

It is submitted that this vessel is eligible for THE RECORD. + LMC 9.24.

*W.D. [Signature]* 19/9/24

The amount of Entry Fee ... £ : : When applied for, Sept. 17<sup>d</sup> 1924  
Special *1/5th Littering on board* ... £ 6 : 19 :  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) £ : : 16. 10. 1924

*J. Seller* Engineer Surveyor to Lloyd's Register of Shipping.

FRI. 3 OCT 1924

Committee's Minute *FRI. 26 SEP 1924*  
Assigned *+ L.M.C. 9.24*

CERTIFICATE WRITTEN



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

If not, state whether, and when, one will be sent. Is a Report also sent on the Hull of the ship?