

Rpt. 4. **REPORT ON MACHINERY.** No. 33426

Received at London Office 1/6/22 Port of Hull
Date of writing Report 19 When handed in at Local Office 1/6/22
No. in Survey held at Hull Date, First Survey Dec 13/21 Last Survey 26th May 1922
Reg. Book. on the *Steel S.K. "EXTENSION"* (Number of Visits 24)
Master Built at *Selby* By whom built *Lockman & Son* Tons { Gross 103
Engines made at *Galt & Sons* By whom made *Galt & McCulloch Ltd.* Net 36
Boilers made at *do* By whom made *do* When built 1922.
Registered Horse Power *33* Owners *Wilton Fishing Co. Ltd.* when made 1917.
Nom. Horse Power as per Section 28 *33* Is Refrigerating Machinery fitted for cargo purposes *No* when made 1922.
Is Electric Light fitted *No* Port belonging to *Hull*

ENGINES, &c.—Description of Engines *Compound.* No. of Cylinders *Two* No. of Cranks *Two*
Dia. of Cylinders *12 & 24* Length of Stroke *16* Revs. per minute *148* Dia. of Screw shaft *5 1/4* as per rule *5 3/4* Material of screw shaft *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 *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 *No* If two
liners are fitted, is the shaft lapped or protected between the liners *No* Length of stern bush *2-3*
Dia. of Tunnel shaft *5 1/2* as per rule *5 1/2* Dia. of Crank shaft journals *5 1/2* as per rule *5 1/2* Dia. of Crank pin *5 1/2* Size of Crank web *10 1/2 x 6 1/2* Dia. of thrust shaft under
collars *5 1/2* Dia. of screw *6-3* Pitch of Screw *8-1 1/2* No. of Blades *4* State whether moveable *No* Total surface *18 1/2*
No. of Feed pumps *One* Diameter of ditto *2 1/2* Stroke *8* Can one be overhauled while the other is at work *No*
No. of Bilge pumps *One* Diameter of ditto *2 1/2* Stroke *8* Can one be overhauled while the other is at work *No*
No. of Donkey Engines *One* Sizes of Pumps *6 x 4 x 6 DUPLEX* No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room *Two @ 2"* In Holds, &c. *One to Fish room 2" dia*
One to flush well @ 2" dia
No. of Bilge Injections *One* sizes *3"* Connected to condenser, or to circulating pump *Pump* Is a separate Donkey Suction fitted in Engine room & size *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 *Yes*
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 *Fish & Fuel Pumps* How are they protected *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 *No* worked from *No*

BOILERS, &c.—(Letter for record *5*) Manufacturers of Steel
Total Heating Surface of Boilers *1800* Is Forced Draft fitted *No* No. and Description of Boilers *One single ended Smith*
Working Pressure *140 lbs* Tested by hydraulic pressure to *210 lbs* Date of test *12/4/22* No. of Certificate *—*
Can each boiler be worked separately *Yes* Area of fire grate in each boiler *24* No. and Description of Safety Valves to
each boiler *2 spring loaded* Area of each valve *3.14* Pressure to which they are adjusted *140 lbs* Are they fitted with easing gear *Yes*
Smallest distance between boilers or uptakes and bunkers or woodwork *7 in. lagged* Mean dia. of boilers *9-6* Length *9-0* Material of shell plates *Steel*
Thickness *1/8* Range of tensile strength *—* Are the shell plates welded or flanged *No* Descrip. of riveting: cir. seams *Double*
long. seams *D.R.D.B.S.* Diameter of rivet holes in long. seams *29/32* Pitch of rivets *5-8* Lap of plates or width of butt straps *9 1/2*
Per centages of strength of longitudinal joint *84* Working pressure of shell by rules *145* Size of manhole in shell *12 x 16*
Size of compensating ring *12 x 16* No. and Description of Furnaces in each boiler *2 plain* Material *Steel* Outside diameter *37 1/2*
Length of plain part *69* Thickness of plates *3/8* Description of longitudinal joint *S.R.D.B.S.* No. of strengthening rings *—*
Working pressure of furnace by the rules *128* Combustion chamber plates: Material *Steel* Thickness: Sides *9/16* Back *9/16* Top *9/16* Bottom *1/8*
Pitch of stays to ditto: Sides *9 x 7* Back *8 1/2 x 8* Top *9 x 7* If stays are fitted with nuts or riveted heads *Nuts* Working pressure by rules *159*
Material of stays *Steel* Area at smallest part *13* Area supported by each stay *68* Working pressure by rules *148* End plates in steam space:
Material *Steel* Thickness *1/8* Pitch of stays *15 x 13* How are stays secured *D.V.* Working pressure by rules *152* Material of stays *Steel*
Area at smallest part *2* Area supported by each stay *195* Working pressure by rules *127* Material of Front plates at bottom *Steel*
Thickness *1/8* Material of Lower back plate *Steel* Thickness *1/8* Greatest pitch of stays *18* Working pressure of plate by rules *166*
Diameter of tubes *3* Pitch of tubes *1 1/4* Material of tube plates *Steel* Thickness: Front *1/8* Back *5/8* Mean pitch of stays *8 1/2*
Pitch across wide water spaces *13* Working pressures by rules *136* Girders to Chamber tops: Material *Steel* Depth and
thickness of girder at centre *6 x 1 1/2* Length as per rule *23 1/8* Distance apart *9* Number and pitch of stays in each *2 @ 7*
Working pressure by rules *178* Steam dome: description of joint to shell *D.R.* % of strength of joint *87 1/2*
Diameter *30* Thickness of shell plates *5/8* Material *Steel* Description of longitudinal joint *D.R.L.* Diam. of rivet holes *29/32*
Pitch of rivets *3* Working pressure of shell by rules *327.5* Crown plates *Steel* Thickness *5/8* How stayed *One*

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 *—*

IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— Two connecting rods top end & two bottom end bolts & nuts, two main bearings & one set coupling bolts & nuts one set each of bilge, feed, air & circulating pump valves, one set of HP & LP piston rings, one safety valve spring bolts nuts and rim of various sizes.

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1921 - Dec 13, 15 1922 Jan 13, 24 Mar 3, 15, 16, 17 22, 24, 25, 30 April 1922
During erection on board vessel -- 1920, 26 May 2, 9, 5, 11, 13 May 15, 23, 26.
Total No. of visits 24

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 24/1/22 Slides 13/12/21 Covers 13/12/21 Pistons 13/12/21 Rods 24/1/22.
Connecting rods 24/1/22 Crank shaft 24/1/22 Thrust shaft 24/1/22 Tunnel shafts 13/5/22 Screw shaft 15/3/22 Propeller 25/3/22.
Stern tube 24/1/22 Steam pipes tested 5/5/22 Engine and boiler seatings 30/3/22 Engines holding down bolts 19/4/22.
Completion of pumping arrangements 23/5/22 Boilers fixed 13/5/22 Engines tried under steam 23/5/22
Completion of fitting sea connections 25/3/22 Stern tube 22/3/22 Screw shaft and propeller 25/3/22
Main boiler safety valves adjusted 25/5/22 Thickness of adjusting washers F $\frac{19}{32}$ A $\frac{13}{16}$

Material of Crank shaft Steel Identification Mark on Do. — Material of Thrust shaft Steel Identification Mark on Do. —

Material of Tunnel shafts Steel Identification Marks on Do. 6147 Material of Screw shafts Steel Identification Marks on Do. —

Material of Steam Pipes Copper Test pressure 280 lbs. —

Is an installation fitted for burning oil fuel No 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 Yes If so, state name of vessel S. K. ABELIA.

General Remarks (State quality of workmanship, opinions as to class, &c.) The machinery & boiler of this vessel were built at Galt Ontario by Goldie & MacLellan for Canadian Gunboats and afterwards taken out & fitted in the present vessel.

An examination the materials and workmanship appear good. The boiler was subjected to a hydraulic pressure of 210 lbs. & found sound & tight. The machinery & boiler were properly fitted & secured on board.

In our opinion the machinery of this vessel is eligible to have the word LMC-5-22 marked in Red in the British Register Book. Also date for tail end shaft 5-22.

The amount of Entry Fee ... £ : :
Special ... £ 11-11-0
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, 1/6/1922
When received, 22/7/22

Committee's Minute

Assigned

WED. 7 JUN. 1922

L.D.B. 5.22. C.L.

Res B. 17 reprint 22.

P. Fitzgerald.
Engineer Surveyor to Lloyd's Register of Shipping.



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Foundation