

Rpt. 4.

REPORT ON MACHINERY.

No. 37123

Received at London Office

22 JUL 1926

Date of writing Report

19

When handed in at Local Office

21/6/26 Port of

Hull

No. in Survey held at
Reg. Book.

Hull

Date, First Survey

5/8/25

Last Survey

21-6-

1926

(Number of Visits 55)

324

on the

Steam whaler "WILLIAM SCORESBY."

Master

Built at

Beverly

By whom built

Cook, Wiltm & Gemmell (No 477)

Tons

Gross

324

Net

108

When built

1926.

Engines made at

Hull

By whom made

Ains & Smith Ltd. (No 3646)

when made

1926.

Boilers made at

Hull

By whom made

Ains & Smith Ltd. (No 3646)

when made

1926.

Registered Horse Power

Owners

Crown Agents for the Colonies Port belonging to London

Nom. Horse Power as per Section 28

160

Is Refrigerating Machine fitted for cargo purposes

no

Is Electric Light fitted

yes

ENGINES, &c.—Description of Engines

Triple expansion

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

16 x 27 x 44

Length of Stroke

30"

Revs. per minute

125

Dia. of Screw shaft

as per rule 8.94

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

yes

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

liners are fitted, is the shaft lapped or protected between the liners

Length of stern bush

42"

Dia. of Tunnel shaft

as per rule 7.98

as fitted 8.4

Dia. of Crank shaft journals

as per rule 8.38

as fitted 8.8

Dia. of Crank pin

8.8

Size of Crank webs

11.2 x 5.2

Dia. of thrust shaft under

collars

8.2

Dia. of screw

10-4

Pitch of Screw

11-3

No. of Blades

4

State whether moveable

no

Total surface

34 sq

No. of Feed pumps

2

Diameter of ditto

3"

Stroke

16"

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

2

Diameter of ditto

3"

Stroke

16"

Can one be overhauled while the other is at work

yes

No. of Donkey Engines

2 + 1 extra

Sizes of Pumps

6 x 8.5 x 13.5 Weir feed.

No. and size of Suctions connected to both Bilge and Donkey pumps

6 x 6 x 6 Duplex.

In Engine Room

Engine room for 102", apt 102", 302" oil well bilge.

In Hold, &c. One 2" from each of following:—

For. star room, apt star room, fore peak, apt peak, cross bunker port & starboard.

No. of Bilge Injection

1

sizes

5"

Connected to condenser, or to circulating pump

pump

Is a separate Donkey Suction fitted in Engine room

size

yes. 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

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

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

zinc

What pipes are carried through the bunkers

Forward suction

How are they protected

Steel 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

yes

BOILERS, &c.—(Letter for record S)

Manufacturers of Steel

David Colville & Sons Ltd.

Total Heating Surface of Boilers

2480

Is Forced Draft fitted

yes

No. and Description of Boilers

one

(S.E.) main

Working Pressure

180 lb

Tested by hydraulic pressure to

320 lb

Date of test

14-1-26

No. of Certificate

3585

Can each boiler be worked separately

yes

Area of fire grate in each boiler

62 sq

No. and Description of Safety Valves to

each boiler

2 spring loaded

Area of each valve

9.62 sq

Pressure to which they are adjusted

180 lb

Are they fitted with easing gear

yes

Smallest distance between boilers or uptakes and bunkers or woodwork

15"

Mean dia. of boilers

15-3.2

Length

11-6

Material of shell plates

S

Thickness

1.4

Range of tensile strength

28/32

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

D.R.

long. seams

T.R.D.B.S.

Diameter of rivet holes in long. seams

1.32

Pitch of rivets

9"

Lap of plates or width of butt straps

19.76

Per centages of strength of longitudinal joint

plate

85.6

Working pressure of shell by rules

180 lb

Size of manhole in shell

16 x 12

Size of compensating ring

40 x 30 x 1.4

No. and Description of Furnaces in each boiler

3

Dighton

Material

S

Outside diameter

Length of plain part

top

bottom

Thickness of plates

crown

1.9

bottom

Description of longitudinal joint

welded

No. of strengthening rings

—

Working pressure of furnace by the rules

187

Combustion chamber plates: Material

S

Thickness: Sides

2.32

Back

2.8

Top

1.16

Bottom

Pitch of stays to ditto: Sides

8 x 9.2

Back

8 x 9

Top

9.2 x 9.2

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

183

Material of stays

S

Area at smallest part

1.34 dia

Area supported by each stay

90.250

Working pressure by rules

200

End plates in steam space:

Material

S

Thickness

1.76

Pitch of stays

19 x 17.2

How are stays secured

DN4W

Working pressure by rules

218

Material of stays

S

Area at smallest part

3 dia

Area supported by each stay

332.50

Working pressure by rules

202

Material of Front plates at bottom

S

Thickness

2.8

Material of Lower back plate

S

Thickness

2.8

Greatest pitch of stays

13.2 x 9

Working pressure of plate by rules

244

Diameter of tubes

2.2

Pitch of tubes

3.34

Material of tube plates

S

Thickness: Front

2.8

Back

3.4

Mean pitch of stays

7.2

Pitch across wide water spaces

13.4

Working pressures by rules

226

Girders to Chamber tops: Material

S

Depth and

thickness of girder at centre

9 x 1.2

Length as per rule

2.70

Working pressure by rules

182

Steam dome: description of joint to shell

butt

100%

% of strength of joint

100%

Diameter

10"

Thickness of shell plates

2.8

Material

S

Description of longitudinal joint

butt

Diam. of rivet holes

1.32

Pitch of rivets

9"

Working pressure of shell by rules

180 lb

Crown plates

—

IS A DONKEY BOILER FITTED?

SPARE GEAR. State the articles supplied:-

Two top end bolts & nuts, 2 bottom end bolts & nuts; 2 main bearing bolts & nuts; 1 set coupling bolts; 1 set air feed & bilge pump valves; complete set piston ring; screw shaft, propeller, stern bush, 2 each main & auxy check valves, 1 pair top & bottom end brasses; eccentric strap; air pump rod; HP, IP & LP piston & 1 piston rod. Eccentric rod & brasses; HP & MP piston valves & LP slide valve. Core pump impeller & spindle; 1 safety valve; 1/2 set boiler tubes, set fire bars.

The foregoing is a correct description
For AMOS & SMITH LTD.

J. H. Robinson
DIRECTOR.

Manufacturer.

Dates of Survey while building
During progress of work in shops -- 1925: - Aug. 5, 12, 18, 24, 28, 31. Sep 2, 7, 23, 24, 28, Oct 3, 8, 19, 23, 29 Nov 3, 13, 14
During erection on board vessel --- 23, Dec 4, 11, 16, 1926: - Jan 1, 2, 7, 14, 18, 28, 29 Feb 3, 11, 17, 19, 23, 26, Mar 3, 4, 5, 6, 8, 17, 25.
Total No. of visits 55
Is the approved plan of main boiler forwarded herewith yes

Dates of Examination of principal parts—Cylinders 24-9-25 2-10-25 4-12-25 Slides 4-12-25 Covers 2-10-25 4-12-25 Pistons 4-12-25 Rods 23-10-25
Connecting rods 23-10-25 Crank shaft 31-8-25 Thrust shaft 3-10-25 Tunnel shafts 3-10-25 Screw shaft 3-10-25 Propeller 16-12-25
Stern tube 11-12-25 Steam pipes tested 4-3-26 Engine and boiler seatings 29-1-26 Engines holding down bolts 9-3-26
Completion of pumping arrangements 12-5-26 Boilers fixed 3-3-26 Engines tried under steam 12-5-26
Completion of fitting sea connections 1-6-26 Stern tube 1-6-26 Screw shaft and propeller 1-6-26
Main boiler safety valves adjusted 25-3-26 Thickness of adjusting washers P 1 1/2. S 1 1/2 lbs.
Material of Crank shaft Steel Identification Mark on Do. 1232 McK Material of Thrust shaft Steel Identification Mark on Do. 189 P.F.
Material of Tunnel shafts Steel Identification Marks on Do. 189 P.F. Material of Screw shafts Steel Identification Marks on Do. 189 P.F.
Material of Steam Pipes S.D. Copper 5 1/2 dia. 5 W.G. Test pressure 360 lbs per sq. in.
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 no If so, state name of vessel
General Remarks (State quality of workmanship, opinions as to class, &c.) The engines & boiler of this vessel have been built under special survey & in accordance with the approved plans & the Rules of this Society. The materials & workmanship are good. The machinery has been satisfactorily fitted on board, tried under working conditions & found good. The steam & feed pipes & oil fuel pipes have been tested by hydraulic pressure as required by the Rules. The safety valves have been adjusted under steam & tried for accumulation. The machinery is eligible in my opinion for the record & LMC 6.26. C.L. Fitted for oil fuel F.P. above 150°F, in the Register Book.

It is submitted that
this vessel is eligible for
THE RECORD & LMC 6.26. FD. CL.
Fitted for oil fuel 6.26. F.P. above 150°F.

The amount of Entry Fee ... £ 3 : 0 : 0
Special ... £ 40 : 0 : 0
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, 18/6/26
When received, 22/6/26

Committee's Minute
Assigned
FRI. 25 JUN 1926
+ LMC 6:26. F.D. C.L.
Fitted for Oil fuel 6:26 F.P. above 150°F

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

CERTIFICATE WRITTEN

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