

REPORT ON MACHINERY.

No. 28033

Received at London Office

WED. OCT. 28. 1914

Date of writing Report

When handed in at Local Office

19/10/14 Port of Hull

No. in Survey held at
Reg. Book.

Hull

Date, First Survey 26-5-14 Last Survey 13-10-14 19

(Number of Vessels 29

Hull on the steel screw trawler Restriwo

Master

Built at

Beverley

By whom built

Cook, Wilton & Gemmell

Tons { Gross 245
Net 107

When built 1914-10

Engines made at

Hull

By whom made

C. D. Holmes & Co. Ltd

when made 1914-10

Boilers made at

Hull

By whom made

C. D. Holmes & Co. Ltd

when made 1914-10

Registered Horse Power

Owners

G. F. Light

Port belonging to

Gumbly

Nom. Horse Power as per Section 28

80

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

yes

ENGINES, &c.—Description of Engines

Triple Expansion

No. of Cylinders

Three

No. of Cranks

3

Dia. of Cylinders

12 1/2 - 22 - 35

Length of Stroke

24

Revs. per minute

Dia. of Screw shaft

as per rule 7.27
as fitted 7 1/2

Material of screw shaft

Iron

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

If two

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

Length of stern bush

3-0

Dia. of Tunnel shaft

as per rule 6.54
as fitted

Dia. of Crank shaft journals

as per rule 6.87
as fitted 7

Dia. of Crank pin

7

Size of Crank web

4 1/2 x 13 1/4

Dia. of thrust shaft under

collars

7

Dia. of screw

8-9

Pitch of Screw

10-9

No. of Blades

4

State whether moveable

no

Total surface

29 ft

No. of Feed pumps

one

Diameter of ditto

2 3/8

Stroke

14 1/4

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

one

Diameter of ditto

2 3/8

Stroke

14 1/4

Can one be overhauled while the other is at work

yes

No. of Donkey Engines

one & 2 1/2

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" dia

In Holds, &c. one 2" in each compartment

No. of Bilge Injections

one

size 3"

Connected to condenser, or to circulating pump

pump

Is a separate Donkey Suction fitted in Engine room & size

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

Forward suction

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

Dates of examination of completion of fitting of Sea Connections

8-6-14

of Stern Tube

8-6-14

Screw shaft and Propeller

8-6-14

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

Phoenix & Co. Ltd. Huddersfield

Total Heating Surface of Boilers

1402

Is Forced Draft fitted

no

No. and Description of Boilers

one single ended

Working Pressure

190

Tested by hydraulic pressure to

380

Date of test

25-8-14

No. of Certificate

3016

Can each boiler be worked separately

yes

Area of fire grate in each boiler

45.64

No. and Description of Safety Valves to

each boiler

two spring loaded

Area of each valve

4.9

Pressure to which they are adjusted

195

Are they fitted with easing gear

yes

Smallest distance between boilers or uptakes and bunkers or woodwork

8

Mean dia. of boilers

13-6

Length

10-6

Material of shell plates

S

Thickness

1/8

Range of tensile strength

29-33

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

double

long. seams

J.R.B.

Diameter of rivet holes in long. seams

1/32

Pitch of rivets

7 7/8

Lap of plates or width of butt straps

17

Per centages of strength of longitudinal joint

rivets 92.6
plate 85.3

Working pressure of shell by rules

193

Size of manhole in shell

16 x 12

No. of strengthening rings

yes

Size of compensating ring

7 x 1/8

No. and Description of Furnaces in each boiler

3 plain

Material

S

Outside diameter

40

Length of plain part

top 76 3/4
bottom 67

Thickness of plates

crown 7 1/4
bottom 7 1/4

Description of longitudinal joint

welded

No. of strengthening rings

yes

Working pressure of furnace by the rules

191

Combustion chamber plates: Material

S

Thickness: Sides

1/16

Back

2 3/32

Top

1/16

Bottom

1/16

Pitch of stays to ditto: Sides

8 x 9 3/4

Back

9 1/2 x 9 3/4

Top

8 x 10

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

205

Material of stays

S

Diameter at smallest part

2 07

Area supported by each stay

87

Working pressure by rules

214

End plates in steam space

yes

Material

S

Thickness

1/32

Pitch of stays

18 x 18

How are stays secured

R.T. & W.

Working pressure by rules

196

Material of stays

S

Diameter

at smallest part

6 3/8

Area supported by each stay

324

Working pressure by rules

202

Material of Front plates at bottom

S

Thickness

7/8

Material of Lower back plate

S

Thickness

1/16

Greatest pitch of stays

15 x 9 3/8

Working pressure of plate by rules

190

Mean pitch of stays

9 1/2

Diameter of tubes

3 1/2

Pitch of tubes

4 3/4 x 4 3/4

Material of tube plates

S

Thickness: Front

7/8

Back

7/8

Mean pitch of stays

9 1/2

Pitch across wide water spaces

15

Working pressures by rules

325

Girders to Chamber tops: Material

S

Depth and

yes

thickness of girder at centre

10 3/8

Length as per rule

2-11 7/8

Distance apart

10

Number and pitch of stays in each

three

Pitch

yes

Working pressure by rules

194

Superheater or Steam chest; how connected to boiler

yes

Can the superheater be shut off and the boiler worked

separately

yes

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

IS A DONKEY BOILER FITTED? no

If so, is a report now forwarded? ✓

SPARE GEAR. State the articles supplied: - Two top end bolts & nuts, two bottom end bolts & nuts, two main bearing bolts & nuts, one set of coupling bolts & nuts, one set of feed & bilge pump valves, one feed & one donkey chest valves & a quantity of bolts & nuts & nuts of various sizes.

The foregoing is a correct description,

P. PRO CHARLES D. HUGHES & CO., LTD.

Starhills & Co.

Manufacturer.

Dates of Survey while building { During progress of work in shops - 1914 - May 26 Jun 5. 8. 12 20. 30 Jul 8. 14. 23. 25. 28. 31 Aug 5. 10. 14. 18. 20. 21. 25. 28
During erection on board vessel - Sep 1 8. 15. 21. 22. 24. 28. Oct 2. 13.
Total No. of visits 29

Is the approved plan of main boiler forwarded herewith yes

" " " donkey " " " ✓

Dates of Examination of principal parts - Cylinders 21-8-14 Slides 1-9-14 Covers 1-9-14 Pistons 28-8-14 Rods 28-8-14
Connecting rods 28-8-14 Crank shaft 5-8-14 Thrust shaft 10-8-14 Tunnel shafts ✓ Screw shaft 5-6-14 Propeller 5-6-14
Stern tube 8-6-14 Steam pipes tested 21-9-14 Engine and boiler seatings 8-6-14 Engines holding down bolts 22-9-14
Completion of pumping arrangements 24-9-14 Boilers fixed 22-9-14 Engines tried under steam 13-10-14
Main boiler safety valves adjusted 24-9-14 Thickness of adjusting washers P 1/4 S 1/4

Material of Crank shaft steel Identification Mark on Do. 1235 J 9/11 Material of Thrust shaft steel Identification Mark on Do. 1235 J 9/11

Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts iron Identification Marks on Do. 1235 J 9/11

Material of Steam Pipes solid drawn copper Test pressure 400 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 Remarks, Retake, Returns, etc.

General Remarks (State quality of workmanship, opinions as to class, &c.) The machinery of this vessel has been constructed under special survey in accordance with the approved plans & the rules of this society, the materials & workmanship are good. The Boiler & steam pipes have been tested as above, found sound & good. The machinery has been properly fitted & secured on board & on completion was tested under steam & found satisfactory. The safety valves have been adjusted under steam & tested for accumulation which did not exceed 200 lbs. In my opinion the vessel is eligible for the record & L.M.C. 10.14

It is submitted that
this vessel is eligible for
THE RECORD. + L.M.C. 10.14.

A.P.R.

J.W.D.

28/10/14

The amount of Entry Fee ... £ 1 : 0 :
Special ... £ 12 : 0 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : 1 :
When applied for, 27/10/1914
When received, 31/10/1914

Frank A. Sturgeon J. G. MacKillop
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute FRI OCT 30. 1914

Assigned + L.M.C. 10.14



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Foundation