

REPORT ON MACHINERY.

No. 2930

(Received at London Office 3rd MAR. 83.

No. in Survey held at Reg. Book.

Belfast

Date, first Survey 5/7/82

Last Survey 27th July 1883

on the

S.S. "Dungonnell"

Tons 128.92

Master

B. J. J. J.

Built at

Belfast

When built

1883

Engines made at

Belfast

By whom made Mr. Swaine & Lewis when made 1883

Boilers made at

Belfast

By whom made Mr. Swaine & Lewis when made 1883

Registered Horse Power

50

Owners

Antrim Iron Ore Co.

Port belonging to

Belfast

ENGINES, &c.—

Description of Engines

Compound Inverted Vertical acting

Diameter of Cylinders

19" x 32"

Length of Stroke

24"

No. of Rev. per minute

85

Point of Cut off, High Pressure

1/2 stroke

Low Pressure 1/2 stroke

Diameter of Screw shaft

6"

Diameter of Tunnel shaft

6"

Diameter of Crank shaft journals

6"

Diameter of Crank pin

6"

size of Crank webs 6 3/4 x 4 3/8

Diameter of screw

9-0"

Pitch of screw

12-6"

No. of blades

4

state whether moveable

yes

total surface 23 sq. ft.

No. of Feed pumps

one

diameter of ditto

3"

Stroke

12"

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

one

diameter of ditto

3"

Stroke

12"

Can one be overhauled while the other is at work

yes

Where do they pump from

all compartments

No. of Donkey Engines

one

Size of Pumps

3" dia 6 1/2" (6" x 6")

Where do they pump from

all compartments

from sea also fore and aft peak tanks

Are all the bilge suction pipes fitted with roses

yes

Are the roses always accessible

yes

Are the sluices on Engine room bulkheads always accessible

yes

No. of bilge injections

one

and sizes 5" dia

Are they connected to condenser, or to circulating pump

on suction valve

How are the pumps worked

by levers

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

yes

Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times

yes

Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges

yes

When were stern tube, propeller, screw shaft, and all connections examined in dry dock

before launching

Is the screw shaft tunnel watertight

yes

and fitted with a sluice door

yes

worked from top platform

BOILERS, &c.—

Number of Boilers

one

Description

Cylindrical, single ended (all steel plating)

Working Pressure

75 lbs

Tested by hydraulic pressure to

150 lbs

Date of test

9/1/83

Description of superheating apparatus or steam chest

Can each boiler be worked separately

yes

Can the superheater be shut off and the boiler worked separately

yes

No. of square feet of fire grate surface in each boiler

3.3 sq. ft.

Description of safety valves

direct spring

No. to each boiler

two

area of each valve

9.6 sq. in.

Are they fitted with easing gear

yes

No. of safety valves to superheater

one

area of each valve

yes

are they fitted with easing gear

yes

Smallest distance between boilers and bunkers or ~~woodwork~~

5"

Diameter of boilers

11'-0"

Length of boilers

9'-0"

description of riveting of shell long. seams

double butt, strap

circum. seams

single lap

Thickness of shell plates

5/8"

diameter of rivet holes

3/16"

whether punched or drilled

drilled

pitch of rivets

3 1/4"

Gap of plating

11" butt

per centage of strength of longitudinal joint

75 lbs

working pressure of shell by rules

89 lbs

Size of manholes in shell

15" x 12"

size of compensating rings

5" x 7 1/2"

No. of Furnaces in each boiler

two

outside diameter

2'-10 7/8"

length, top

6'-0"

bottom

8'-0"

Thickness of plates

7/16"

description of joint

double butt

if rings are fitted

angle iron

greatest length between rings

6'-0"

Working pressure of furnace by the rules

85 lbs

Combustion chamber plating, thickness, sides

7/16"

back

7/16"

top

7/16"

Thickness of stays to ditto

yes

sides

8 7/8" x 8 7/8"

back

8 7/8" x 8 7/8"

top

8 1/2" x 8 1/2"

Are stays fitted with nuts or riveted heads

yes

working pressure of plating by rules

77 lbs

Diameter of stays at smallest part

1 1/8"

working pressure of ditto by rules

88 lbs

Plating in steam space, thickness

7/16"

pitch of stays to ditto

15"

how stays are secured

yes washers

Working pressure by rules

75 lbs

diameter of stays at smallest part

2"

working pressure by rules

83 lbs

Plating at bottom, thickness

9/16"

Back plates, thickness

9/16"

greatest pitch of stays

11"

working pressure by rules

80 lbs

Diameter of tubes 3" ¹⁰/₁₆ pitch of tubes 4 ³/₈" thickness of tube plates, front ³/₈" back ³/₈"
How stayed Stay tubes pitch of stays 13 ¹/₈ x 13 ¹/₈" width of water spaces 1 ³/₈"
Diameter of Superheater or Steam chest length
Thickness of plates description of longitudinal joint diameter of rivet holes pitch of rivets
Working pressure of shell by rules Diameter of flue thickness of plates
If stiffened with rings distance between rings Working pressure by rules
End plates of superheater, or steam chest; thickness How stayed
Superheater or steam chest; how connected to boiler

DONKEY BOILER— Description Upright, with two water tubes (Steel)
Made at Belfast By whom made Mr. Shuman & Lewis when made 1883
Where fixed Storehold working pressure 60 lbs Tested by hydraulic pressure to 120 lbs No. of Certificate 25
Fire grate area 9 sq ft. Description of safety valves Leverweight No. of safety valves one area of each 9.6 sq"
If fitted with easing gear yes If steam from main boilers can enter the donkey boiler no
Diameter of donkey boiler 4'-9" length 8'-3" description of riveting double lap on vertical seams
thickness of shell plates ³/₈" diameter of rivet holes ³/₄" whether punched or drilled punched & reamed
pitch of rivets 2 ¹/₂" lap of plating 4 ¹/₂" per centage of strength of joint about 70
thickness of crown plates ⁷/₁₆" stayed by uptake & dished
Diameter of furnace, top 3'-9" bottom 4'-4" length of furnace 4'-7"
thickness of plates ³/₈" description of joint lap
thickness of furnace crown plates ⁷/₁₆" stayed by uptake & dished
Working pressure of shell by rules 70 lbs working pressure of furnace by rules 62 lbs mean dia of 4 ft
diameter of uptake 13" thickness of plates ³/₈ steel thickness of water tubes ³/₈ iron Lumber

The foregoing is a correct description,

Mr. Shuman & Lewis 16th Stth Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c.)

The Engines and Boilers have been especially surveyed during construction the workmanship and materials are good, A. T. O.
They are now in good order and safe working condition
& eligible in my opinion to be noted in the Register Book
Hyd. M.C. - 2. 83.

Main Engines and Boilers satisfactorily tested under steam, safely & properly
adjusted & admits of a load of 75 lbs per square inch. Completed Survey,
Duncan Ritchie.

This is submitted that this
record is acceptable to have the
notification & that recorded
J.M. 3/3/83

The amount of Entry Fee .. £ 2 : - : - received by me,

Special .. £ 7 : 10 : -

Certificate (if required) .. £ - : - : - 1.3. 1883

To be sent as per margin.

(Travelling Expenses, if any, £ 4-4-0) the permitted to be sent.

Committee's Minute Tuesday, 6th March, 1883.

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