

REPORT ON OIL ENGINE MACHINERY.

No. 9905

Received at London Office

Date of writing Report

19

When handed in at Local Office

24-1-1928 Port of

Belfast

No. in Survey held at
Reg. Book.

Belfast

Date, First Survey

3rd March, 1927

Last Survey

17 Jan. 1928

Number of Visits

41178 on the ^{Single}
^{Triple} Screw vessels

KING EGBERT

Tons { Gross 4520
Net 2690

Master

Built at Belfast

By whom built

Harland & Wolff Ltd.

Yard No. 79

When built

1928

Engines made at

Belfast

By whom made

Harland & Wolff Ltd.

Engine No. 79

When made

1928

Donkey Boilers made at

Aman

By whom made

Buchan & Co (Aman) Ltd.

Boiler No. 10413

When made

1927

Brake Horse Power

1900

Owners

Knights Ltd. (Dodd, Thomson & Co. Ltd.)

Port belonging to

London

Nom. Horse Power as per Rule

489

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

OIL ENGINES, &c.—Type of Engines

Harland & Wolff B.M. Type Diesel

2 or 4 stroke cycle

Single or double acting

Single

Maximum pressure in cylinders

500 lbs.

No. of cylinders

Six

No. of cranks

Six

Diameter of cylinders

740 mm.

Length of stroke

1500 mm.

Revolutions per minute

90

Means of ignition

Compression

Kind of fuel used

diesel oil

Is there a bearing between each crank

Yes

Span of bearings (Page 92, Section 2, par. 7 of Rules)

1004 mm.

Distance between centres of main bearings

1450 mm.

Is a flywheel fitted

Yes

Diameter of crank shaft journals

as per Rule 470 mm.
as fitted 485 mm. bored 115 mm.

Diameter of crank pins

485 mm.

Breadth of crank webs

as per Rule 625.1 mm.
as fitted 790 mm.

Thickness of ditto

as per Rule 263.2 mm.
as fitted 310 mm.

Diameter of flywheel shaft

as per Rule 14.475"
as fitted 15"

Diameter of tunnel shaft

as per Rule 13.16"
as fitted 13 1/2"

Diameter of thrust shaft

as per Rule 13.81"
as fitted 14 1/4"

Diameter of screw shaft

as per Rule 14.475"
as fitted 15"

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 watertight 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

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

Yes

If without liners, is the shaft arranged to run in oil

Yes

Type of outer gland fitted to stern tube

Yes

Length of stern bush

Yes

Diameter of propeller

15' 9"

Pitch of propeller

12' 6"

No. of blades

4

state whether moveable

No

Total surface

82

square feet

Method of reversing

Revo. motor

Is a governor or other arrangement fitted to prevent racing of the engine when declutched

Yes

Thickness of cylinder liners

53 mm.

Are the cylinders fitted with safety valves

Yes

Means of lubrication

faced

Are the exhaust pipes and silencers water cooled or lagged with

non-conducting material

Yes

If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine

led up funnel

No. of cooling water pumps

2

Is the sea suction provided with an efficient strainer which can be cleared

within the vessel

Yes

No. of bilge pumps fitted to the main engines

—

Diameter of ditto

—

Stroke

—

Can one be overhauled while the other is at work

—

No. of auxiliary pumps connected to the main bilge lines

3

How driven

motor

Sizes of pumps

1 Bilge 80 long 2 Ballast 100 long

No. and sizes of suction connected to both main bilge pumps and auxiliary bilge pumps:—In engine room 2 1/2" 3" 4" 5" 6" 8" 10" 12" 14" 16" 18" 20" 22" 24" 26" 28" 30" 32" 34" 36" 38" 40" 42" 44" 46" 48" 50" 52" 54" 56" 58" 60" 62" 64" 66" 68" 70" 72" 74" 76" 78" 80" 82" 84" 86" 88" 90" 92" 94" 96" 98" 100"

and in holds, etc.

No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

No. of ballast pumps

2

How driven

motor

Sizes of pumps

100 long

Is the ballast pump fitted with a direct suction from the engine room bilges

Yes

State size

2 1/2" 6"

Is a separate auxiliary pump suction fitted in

Engine Room and size

Yes 2 1/2" 5"

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 floor plates

Yes

Are the discharge pipes above or below the deep water line

both

Are they each fitted with a discharge valve always accessible on the plating of the vessel

Yes

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

Main Deck

If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

No. of main air compressors

One

No. of stages

3

Diameters

750 mm 675-150

Stroke

460 mm

Driven by

main engines

No. of auxiliary air compressors

Three

No. of stages

3

Diameters

320-280-82

Stroke

270 mm

Driven by

Aux. Diesels

No. of small auxiliary air compressors

One

No. of stages

2

Diameters

106 3/4

Stroke

80 mm

Driven by

Steam

No. of scavenging air pumps

—

Diameter

—

Stroke

—

Driven by

—

Diameter of auxiliary Diesel Engine crank shafts

as per Rule 180 mm
as fitted

Are the air compressors and their coolers made so as to be easy of access

Yes

AIR RECEIVERS:—No. of high pressure air receivers

Six

Internal diameter

295 mm.

Cubic capacity of each

388 litres

350 litres

material

Steel

Seamless, lap welded or riveted longitudinal joint

Seamless

Range of tensile strength

26-30 tons

thickness

30 mm.

working pressure by Rules

2912 lbs.

No. of starting air receivers

Two

Internal diameter

7 3/8"

Total cubic capacity

1076 ft³

Material

Steel

Seamless, lap welded or riveted longitudinal joint

riv. lap joint

Range of tensile strength

28-32 tons

thickness

1 1/2"

Working pressure by rules

360 lbs.

Is each receiver, which can be isolated,

fitted with a safety valve as per Rule

Yes

Can the internal surfaces of the receivers be examined

Yes

What means are provided for cleaning their

inner surfaces

Manhole Access

Is there a drain arrangement fitted at the lowest part of each receiver

Yes

W435-0252

IS A DONKEY BOILER FITTED?

Yes

If so, is a report now forwarded?

Yes

HYDRAULIC TESTS:-

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS					
" " COVERS	19 th & 27 th Sept. 1927	500 lbs	1000 lbs	R.L.A.	
" " JACKETS	10 th & 18 th Oct. 1927		50 lbs	R.L.A.	
" PISTON WATER PASSAGES					
MAIN COMPRESSORS—1st STAGE	17 th & 18 th Oct. 1927	75 lbs	150 lbs	R.L.A.	
" 2nd "	13 th Oct. 1927	250 lbs	500 lbs	R.L.A.	
" 3rd "	10 th Oct. 1927	1000 lbs	2000 lbs	R.L.A.	
AIR RECEIVERS—STARTING	16 th & 28 th Sept. 1927	356 lbs	585 lbs	R.L.A.	
" INJECTION	24 th & 28 th Nov. 1927	1000 lbs	2000 lbs	R.L.A.	
AIR PIPES	3 rd Jan. 1928	256 lbs	712 lbs	R.L.A.	
FUEL PIPES					
FUEL PUMPS	11 th Oct. & 14 th Nov. 1927	1000 lbs	2000 lbs	R.L.A.	
SILENCER	27 th Oct. 1927	—	5 lbs	R.L.A.	
" WATER JACKET					
SEPARATE FUEL TANKS	18 th Oct. 1927		8 lbs	R.L.A.	

PLANS. Are approved plans forwarded herewith for shafting 3rd Dec. 1926 Receivers 30th Nov. 1926 Separate Tanks 21st Jan. 1927

SPARE GEAR In excess of Lloyd's Register requirements - See Separate List.

The foregoing is a correct description.
FOR HARLAND AND WOLFF, LIMITED,

7 & 8, Leebbeck

Manufacturer.

Dates of Survey while building
During progress of work in shops--
During erection on board vessel--
Total No. of visits

1927
Mar 3-22 Apr 11-13-22-28 May 4-9-23-24 July 27-30 Aug 1-2-5-8-9-10-11-15-16-23-24-31
Sept 1-16-19-20-22-23-27-28 Oct 3-4-5-10-11-12-13-14-17-18-20-21-24-25-16-27-28
31 Nov 1-2-3-4-7-8-14-16-17-18-21-28-30 Dec 2-19 Jan 3-12-17
68

Dates of Examination of principal parts—Cylinders 10th & 18th Oct. 1927 Covers 19th & 27th Sept. 1927 Pistons 14th Oct. 1927 Rods 15th Aug. 1927 Connecting rods 3rd Oct. 1927
Crank shaft 20th Sept. 1927 Thrust shaft 21st Oct. 1927 Tunnel shafts 12th Oct. 1927 Screw shaft 21st Oct. 1927 Propeller 21st Oct. 1927 Stern tube 10th Oct. 1927 Engine seatings 31st Oct. 1927
Engines holding down bolts 3rd Jan. 1928 Completion of pumping arrangements 12th Jan. 1928 Engines tried under working conditions 17th Jan. 1928
Completion of fitting sea connections 26th Oct. 1927 Stern tube 26th Oct. 1927 Screw shaft and propeller 26th Oct. 1927
Material of crank shaft S.M. Lloyd Steel Identification Mark on Do. 1481 R.L.A. Material of thrust shaft S.M. Lloyd Steel Identification Mark on Do. 1809 R.L.A.
Material of tunnel shafts S.M. Lloyd Steel Identification Marks on Do. 1705 1802 1699 R.L.A. Material of screw shafts S.M. Lloyd Steel Identification Marks on Do. 1710 R.L.A.

Is the flash point of the oil to be used over 150° F. Yes

Is this machinery duplicate of a previous case Yes If so, state name of vessel "King Edgar" "King Edwin"

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

The machinery of this vessel has been constructed under special survey. The materials and workmanship are sound and good. The main and auxiliary engines were tried out at a mooring and at a deep sea trials with satisfactory results. The fuel oil lines were tested by hydraulic pressure. The air relief valves were adjusted to lift at their respective pressures. The donkey boiler safety valves were adjusted under steam. In my opinion the vessel is now eligible for notation in the Society's Register Book T.L.M.C. 1-28 C.L. (Signed for oil fuel F. Palmer 1-28)

The amount of Entry Fee ... £ 5 : -
Special ... £ 98 : 7 : 24-1-1928
Donkey Boiler Fee ... £ 8 : 8 :
Travelling Expenses (if any) £ : : 7-2-1928

When applied for,

When received,

TUES. 7 FEB 1928

Committee's Minute

Assigned

R. Lee Ames

Engineer Surveyor to Lloyd's Register of Shipping.



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