

## REPORT ON OIL ENGINE MACHINERY.

No 13343

10 OCT 1942

Received at London Office

053

Writing Report

When handed in at Local Office

Port of

Belfast

Survey held at

Belfast.

Date, First Survey

10 Feb 1941

Last Survey

29 Sept 1942

Number of Visits

152

Single  
on the Twin  
Triple  
Quadruple

Screw vessel

MV. "EMPIRE SPENSER"

Tons Gross 8194  
Net 4776.

at

Belfast.

By whom built Harland &amp; Wolff Ltd.

Yard No. 1079 When built 1942

By whom made Harland &amp; Wolff Ltd.

Engine No. 1080 When made 1942

Boilers made at

Belfast

By whom made Harland &amp; Wolff Ltd.

Boiler No. 1080 When made 1942

Horse Power

3850

Owners Ministry of War Transport

Port belonging to Belfast.

Horse Power as per Rule

502

Is Refrigerating Machinery fitted for cargo purposes

No.

Is Electric Light fitted

Yes

for which vessel is intended Carrying Petroleum in Bulk.

ENGINES, &amp;c.

Type of Engines

Heavy oil

Under piston

2 or 4 stroke cycle

Single or double acting

Single

m pressure in cylinders

700 lbs

Diameter of cylinders

6 5/8 in

Length of stroke

400 in

No. of cylinders

8

No. of cranks

8

Indicated Pressure

135 lbs

bearings, adjacent to the Crank, measured from inner edge to inner edge

8 1/4 in

Is there a bearing between each crank

Yes

ons per minute

120

Flywheel dia.

22 1/8 in

Weight

2150 kg

Means of ignition

Compression

Kind of fuel used

Heavy oil

dia. of journals

as per Rule

as approved

Crank pin dia.

4 60 in

Crank Webs

Mid. length breadth

800 in

Thickness parallel to axis

267 in

All built

as fitted

460 in

Mid. length thickness

267 in

shrink

Thickness around eye-hole

285 in

Shaft, diameter

as per Rule

as approved

Intermediate Shafts, diameter

as per Rule

as approved

Thrust Shaft, diameter at collars

as per Rule

as approved

18 1/4 in

Shaft, diameter

as per Rule

as approved

Screw Shaft, diameter

as per Rule

as approved

Is the

shaft fitted with a continuous liner

Yes

Liners, thickness in way of bushes

as per Rule

as approved

Thickness between bushes

as per Rule

as approved

Is the after end of the liner made watertight in the

boss

Yes

If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner

boss

Yes

If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner

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

Is an approved Oil Gland or other appliance fitted at the after end of the tube

Length of Bearing in Stern Bush next to and supporting propeller

5'-0"

If so, state type

er, dia.

15' 6"

Pitch

12'-0"

No. of blades

4

Material

Bronze

whether Movable

Fixed

of reversing Engines

Air

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

Yes

Means of lubrication

Thickness of cylinder liners

4 8 in

Are the cylinders fitted with safety valves

Yes

Are the exhaust pipes and silencers water cooled or lagged with

ducting material

Lagged

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

2 Engine driven (FW &amp; SW)

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

Yes

Can one be overhauled while the other is at work

Yes

Pumps worked from the Main Engines, No.

2

connected to the Main Bilge Line

No. and Size

4; 2 @ 32 tons/hr.

How driven

Main Engine

1 @ 80 tons/hr.

1 @ 200 tons/hr.

Are they fitted with Valves or Cocks

Both

Are the Overboard Discharges above or below the deep water line

cooling water led to the bilges

No

If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping

Pumps, No. and size

1 @ 200 tons

Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size

2. 1 main @ 40 tons/hr.

1 independent @ 40 tons/hr.

independent means arranged for circulating water through the Oil Cooler

Yes

No. and size:—In Machinery Spaces

5; 3 @ 3 1/2 in dia.

2 @ 2 1/2 in dia.

Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

In Pump Room

2 @ 4 in dia

2 @ 2 1/2 in

ndent Power Pump Direct Suctions to the Engine Room Bilges, No. and size

2 @ 6 in dia.

the Bilge Suction pipes in Hold and Tunnel Well fitted with strum-boxes

easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges

Yes

Are the Bilge Suctions in the Machinery Spaces

Yes

Sea Connections fitted direct on the skin of the ship

Yes

Are they fitted with Valves or Cocks

Both

fixed sufficiently high on the ship's side to be seen without lifting the platform plates

Yes

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

How are they protected

Yes

Have they been tested as per Rule

Yes

Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

Yes

Arrangement of valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one

ment to another

Yes

Is the Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

worked from

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

Air Compressors, No.

2

No. of stages

2

Diameters

280/245 in

Stroke

130 in

Driven by

Steam engine

Auxiliary Air Compressors, No.

2

No. of stages

2

Diameters

280/245 in

Stroke

130 in

Driven by

Steam engine

Auxiliary Air Compressors, No.

2

No. of stages

2

Diameters

280/245 in

Stroke

130 in

Driven by

Steam engine

Provision is made for first Charging the Air Receivers

as above

ing Air Pumps, No.

2

Diameter

all auxiliary machinery

Stroke

2

Driven by

Steam engine

Engines crank shafts, diameter

as per Rule

Auxiliary Engines been constructed under special survey

Yes

Is a report sent herewith

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AIR RECEIVERS:—Have they been made under survey

Is each receiver, which can be isolated, fitted with a safety valve as per Rule

Can the internal surfaces of the receivers be examined and cleaned

Injection Air Receivers, No.

Seamless, lap welded or riveted longitudinal joint

Starting Air Receivers, No.

Seamless, lap welded or riveted longitudinal joint

IS A DONKEY BOILER FITTED?

Is the donkey boiler intended to be used for domestic purposes only

PLANS. Are approved plans forwarded herewith for Shafting

Donkey Boilers

Oil Fuel Burning Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied

State the principal additional spare gear supplied

The foregoing is a correct description.

Manufacturer.

Dates of Survey while building

During progress of work in shops--  
During erection on board vessel--  
Total No. of visits

Dates of Examination of principal parts--

Crank shaft

Screw shaft

Completion of fitting sea connections

Crank shaft, Material

Thrust shaft, Material

Tube shaft, Material

Identification Marks on Air Receivers

1941 Feb 10 Mar 8. 15. 19. 27 Apr 3. 7. 11. 18. 22. 25. 29 May 2. 12. 13. 23. 27 July 8. 10. 25. 28. 30  
Aug 4. 6. 8. 11. 12. 14. 16 Sept. 13. 16. 18. 22. 23. 26 Oct. 6. 14. 17. 22. 23. 24. 31 Nov. 1. 3. 4. 5. 6. 7. 11. 13. 14. 19. 18. 20. 21  
28. 29 Dec. 1. 4. 5. 8. 9. 10. 15. 18. 19. 20. 22. 26 27. 28. 30. 31. 1942 Jan. 3. 5. 6. 7. 9. 10. 12. 13. 14. 15. 16. 17. 19. 20  
24. 26 Feb. 3. 4. 6. 7. 12. 13. 14. 17. 19. 21. 25 Mar. 4. 9. 21. 27. 30 Apr. 3. 9. 14. 27. 28 May 7. 14. 21. 23. 25  
29 July 3. 22. Aug 3. 7. 11. 22. 31 Sept. 2. 5. 7. 8. 9. 10. 11. 12. 14. 15. 16. 17. 18. 19. 21. 22. 23. 24. 25. 26. 28. 29

26/5-1/6/42 Covers 16/4-15/6/42 Pistons 27/5-5/6/42 Rods 14/5/42 Connecting rods 6/5/42

11/4/42 Thrust shaft 11/4/42 Intermediate shafts 22/1/42 Tube shaft

3/7/42 Engine seatings 3/7/42 Engines holding down bolts 14/9/42

24/9/42 Engines tried under working conditions. 29/9/42

Identification Mark

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