

Rpt. 4b

RECEIVED

0961 NVB 1959

17454.

Date of writing report 6-3-59

Received London

Port Copenhagen

No.

Survey held at Copenhagen

No. of visits

In shops 24

First date 13-10-58

Last date

14-3-59

## FIRST ENTRY REPORT ON INTERNAL COMBUSTION MACHINERY

No. in R.B. Name

Cross tons

Owners

Managers

Port of Registry

Hull built at Tamise, Belgium

By Chantiers Navals Jos. Boel &amp; Fils

Yard No. 1362

Year Month

Main Engines made at Copenhagen

By Burmeister &amp; Wain

Eng. No. 6488

When

When 1959-2

Gearing made at

By

Blr. Nos.

When

Donkey boilers made at

By

Machinery installed at Tamise, Belgium

By Chantiers Navals Jos. Boel &amp; Fils

When

Particulars of restricted service of ship, if limited for classification

Particulars of vegetable or similar cargo oil notation, if required

Is ship to be classed for navigation in ice? No

Is ship intended to carry petroleum in bulk?

Is refrigerating machinery fitted?

If so, is it for cargo purposes?

Type of refrigerant

Is the refrigerating machinery compartment isolated from the propelling machinery space?

Is the refrigerated cargo installation intended to be classed?

The following particulars should be given as fully and as clearly as possible. Where the answer is "No" or "None", say so! Ticks and other signs of doubtful meaning are not to be used. Where the wording is not applicable to the installation, a black line may be inserted. If the main engines have been constructed at another port and are covered by a separate report, the particulars given in that report need not be repeated below, but the port and report number should be stated.

No. of main engines 1

No. of propellers 1

Brief description of propulsion system

Reversible heavy oil eng. Direct to propeller

MAIN RECIPROCATING ENGINES.

Licence Name and Type No. B&amp;W-DM.874VTBF-160

Turbocharged, crosshead type, solid injection.

No. of cylinders per engine 8

Dia. of cylinders 740 mm

stroke 1600 mm

2 or 4 stroke cycle 2

Single or double acting single

Maximum approved BHP per engine 10000

at

115

RPM of engine and

115 RPM of propeller.

Corresponding MIP 8.0 kg/cm<sup>2</sup>

(For DA engines give MIP top &amp; bottom)

Maximum cylinder pressure 55 kg/cm<sup>2</sup>

Machinery numeral 2000

Are the cylinders arranged in Vee or other special formation? No

If so, number of crankshafts per engine

TWO STROKE ENGINES.

Is the engine of opposed piston type? No

If so, how are upper pistons connected to crankshaft?

Valve in

Is the exhaust discharged through ports in the cylinders or through valve(s) in the cylinder covers? cylinder cover

engine and how driven none

No. and type of mechanically driven scavenge pumps or blowers per

No. of exhaust gas driven scavenge blowers per engine 2

Where exhaust gas driven blowers only are fitted, can the engine operate with one blower out of action? yes

If a stand-by or emergency pump or blower is fitted, state how driven electrically driven

power 0.42 kg/cm<sup>2</sup>

Are scavenge manifold explosion relief valves fitted? yes

No. of scavenge air coolers 2

Scavenge air pressure at full

FOUR STROKE ENGINES.

Is the engine supercharged? No

Are the undersides of the pistons arranged as supercharge pumps? No

No. of exhaust gas driven blowers per

engine

No. of supercharge air coolers per engine

Supercharge air pressure

Can engine operate without supercharger? No

TWO &amp; FOUR STROKE ENGINES-GENERAL.

No. of valves per cylinder: Fuel 2

Inlet in cyl. Exhaust 1

Starting 1

Safety 1

Material of cylinder covers cast steel

Material of piston crowns cast steel

Is the engine equipped to operate on heavy fuel oil? yes

Cooling medium for: Cylinders Fresh water

Pistons lub. oil

Fuel valves fuel oil

Overall diameter of piston rod for double acting engines

Is the rod fitted with a sleeve? no

Is welded construction employed for: Bedplate? no

Frames? no

Entablature? no

Is the crankcase separated from the

underside of pistons? yes

Is the engine of crosshead or trunk piston type? head

Total internal volume of crankcase 156 m<sup>3</sup>

No. and total area of explosion relief

devices 17-9910 cm<sup>2</sup>

Are flame guards or traps fitted to relief devices? no

Is the crankcase readily accessible? yes

If not, must the engine be removed for

overhaul of bearings, etc? No

Is the engine secured directly to the tank top or to a built-up seating?

How is the engine started? compressed air

Can the engine be directly reversed? yes

If not, how is reversing obtained?

Has the engine been tested working in the shop? yes

How long at full power? 6 hours

base 410C.

CRANK &amp; FLYWHEEL SHAFTING.

Date of approval of torsional vibration characteristics of the propelling machinery system 25-3-1958

State barred speed range(s), if imposed

for working propeller

For spare propeller

Is a governor fitted? yes

Is a torsional vibration damper or detuner fitted to the shafting? No

Where positioned?

Type

No. of main bearings 10

Are main bearings of ball or roller

type? No

Distance between inner edges of bearings in way of crank 958 mm

Distance between centre lines of side cranks or eccentrics of opposed piston engines

Crankshaft type: Built, semi-built, solid. (State which)

All built

Diameter of journals 550 mm

Diameter of crankpins 220 mm

Centre 550 mm hole

Side 220 mm centr. hole

Breadth of webs at mid-throw 1180 mm

Axial thickness of webs 335/280 mm

If shrunk, radial thickness around eyeholes

Are dowel pins fitted?

Crankshaft material Journals SM-Steel

Approved

Diameter of flywheel 4400 kgm<sup>2</sup>

Weight

Are balance weights fitted? Yes

Total 29900 kgm<sup>2</sup>

Radius of gyration

Diameter of flywheel shaft 520 mm

Material SM-Steel

Minimum approved tensile strength 44 kg/mm<sup>2</sup>

Flywheel shaft: separate, integral with crankshaft, integral with thrustshaft.

(State which) Integral with thrustshaft.

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.....Do the piping arrangements comply with the Rules including

(For electric generators, state output)

No. of Evaporators

Does this machinery installation contain any features of a novel or experimental nature? (Give particulars)

2008-09-01 10:00 AM

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BURMEISTER & WAIN'S MASKIN- OG SKIBSBYGGER

2008-09-01 10:00 AM

GENERAL REMARKS

State if the machinery has been constructed and/or installed under special survey in accordance with the Rules, approved plans and Secretary's letters. State quality of materials and workmanship and give recommendations for classification, including any special notation to be assigned. Where existing machinery is submitted for classification the circumstances should be explained as fully as possible.

The above machinery is built under special survey in accordance with the Rules, the approved plans and the Secretary's letters.

The material used has been tested as required by the Rules, the workmanship is good.

On completion the engine was tested under full power working condition in the shop.

The regulator and manoeuvring of the engine was also tested and found good.

Recommend the machinery of this vessel to have notation of L.M.C. when installed in the ship, under special survey.

Engineer Surveyor to Lloyd's Register of Shipping.

PARTICULARS OF IDENTIFICATION MARKS ((Including Port of origin) of important Forgings and Castings. (Copies of certificates should be forwarded with report.)

RODS	Piston Rods:	4 off	4 off	Lloyd's CPN Nos.	4482-4483	SD 4-2-59
	Connecting rods:	3 off	5 off	Lloyd's CPN Nos.	4477-4478	SD 2-2-59
CRANKSHAFT OR ROTOR SHAFT		1 off	forward $\frac{1}{2}$ length	Lloyd's CPN No.	4465	SD 30-1-59
Crank FLYWHEEL SHAFT		1 off	aftermost $\frac{1}{2}$ length	Lloyd's CPN No.	4466	SD 30-1-59
THRUST SHAFT		1 off		Lloyd's CPN No.	4467	SD 30-1-59

GEARING

INTERMEDIATE SHAFTS

SCREW AND TUBE SHAFTS

PROPELLERS

OTHER IMPORTANT ITEMS	Crossheads:	4 off	4 off	Lloyd's CPN Nos.	4479-4480	SD 2-2-59
	Cylinder Covers	8 off	1 off spare	Lloyd's Test CPN	10 Atm.	ED 29-12-5
	Cylinder Liners & Jackets	8 off		Lloyd's Test CPN	7 Atm.	SD 30-1-59
	Pistons	8 off	1 off spare	Lloyd's Test CPN	5 Atm.	VL 16-10-5

Is the installation a duplicate of a previous case?

If so, state name of vessel

Date of approval of plans for crankshaft 25-3-58

Straight shafting

Gearing

Clutch

Separate oil fuel tanks

Pumping arrangements

Oil fuel arrangements

Cargo oil pumping arrangements

Air receivers

Donkey boilers

Dates of examination of principal parts:—

Fitting of stern tube

Fitting of propeller

Completion of sea connections

Alignment of crankshaft in main bearings

Engine checks & bolts

Alignment of gearing

Alignment of straight shafting

Testing of pumping arrangements

Oil fuel lines

Donkey boiler supports

Steering machinery

Windlass

Date of Committee

FRIDAY - 4 MAR 1960

Decision

See Rpt. 1

Construction Special Survey Fee  
Forgings  
Turbo charger.BW.  
Pumps, coolers etc.

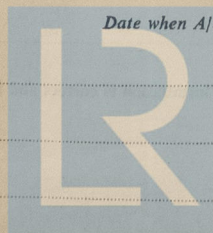
Kr. 6660,-  
Kr. 1830,-  
Kr. 440,-  
Kr. 500,-

Expenses

ENTERED IN COPENHAGEN ROUGH FEE BOOK ON 1

Date when A/c rendered

19/3 1959



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