

Rpt. 4b/4f REPORT ON INSTALLATION OF INTERNAL COMBUSTION MACHINERY
(Inst) (Sheet 1)

Received London
-6. MAY 1966

FOR CONSIDERATION BY THE COMMITTEE OF LLOYD'S REGISTER OF SHIPPING

NOTE.—The particulars in this report are to 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 items are marked with an asterisk the particulars need not be repeated here if they have already been given on the relevant Rpt. 4b (Cons) or 4f (Cons). Wording not applicable to be cancelled.

Ship's Name	m.s. "ALTEFAHR".	Port	Groningen
Processing Number:	LR 660160	Date of completing rpt.	30-4-66
Gross tons	299.43	Place of survey, if different from above	Martenshoek
Rpt. No.			4017c
No. of visits:			
In shops	-	First date	-
On ship	14	First date	16-7-65
Last date		Last date	23-2-66
Owners	Deutsche Seereederei	Port of registry	Rostock
Ship built by	Scheepswerf Hoogezand N.V.	Yard No.	128
Main engines made by	VEB Schwermaschinenbau "Karl Liebknecht", Magdenburg.	Engine No.	83594
Gearing made by	-	Gear No.	-
Aux./donkey boilers made by	-	Boiler No.	-
Machinery installed by	Messrs. Wolfard & Wessels, Groningen		
Particulars of service of ship if limited for classification	-		
Particulars of vegetable oil or other special cargo notation, if required	-		
If ship is to be classed for navigation in ice, state whether class 1, 2 or 3			Class 2.
Is ship an oil tanker?	no.	Is refrigerating machinery fitted?	no.
If so, is it for cargo purposes?	-	Type of refrigerant	-
Is the refrigerating machinery space isolated from the propelling machinery space?			-
Is the refrigerated cargo installation to be classed?			-
No. of main engines	one	Brief description of propulsion system	Direct reversible propulsion.
No. of propellers	one		
Fee	Fl. 492.--	Expenses	Fl. 91.--

MAIN INTERNAL COMBUSTION RECIPROCATING ENGINE

To be reported on Rpt. 4b (Cons) Port Groningen Rpt. No. 4017b

MAIN GAS TURBINES

To be reported on Rpt. 4f (Cons) Port - Rpt. No. -

ELECTRIC PROPULSION. (Internal combustion reciprocating engines or gas turbines)

Electrical particulars to be reported on Rpt. 4d Port - Rpt. No. -

REDUCTION GEARING. (Internal combustion reciprocating engines or gas turbines)

To be reported on Rpt. 4e Port - Rpt. No. -

*Are flame guards or traps fitted to crankcase relief devices?	yes	No. of lub. oil coolers	MAIN one	AUX. one
*Is a torsional vibration damper or detuner fitted to the shafting?	yes	Is engine fitted directly on tank top, or on a built-up seating?	seating	
*Where positioned?	forward end	*Can engine/motor be reversed?	yes	
		*If not, how is reversing effected?	-	
*Type	Viscosity			
Is the engine equipped to operate on heavy fuel?	no.	Cooling medium for	F.W.	
No. of fresh water coolers	MAIN one	PISTONS	FUEL VALVES	

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J. Baart
Surveyor to Lloyd's Register of Shipping

CLUTCHES, FLEXIBLE COUPLINGS, &c. If a clutch or other flexible connection is fitted between engine/turbine and gearing, or between engine and line shafting, give Makers' name, brief description and, for clutches, state how operated.

If main engine can be used for purposes other than propulsion when declutched, state what purpose also at what maximum B.H.P. & R.P.M.

AIR COMPRESSORS AND RECEIVERS

State No. of independently driven air compressors, also capacity of each and whether a separator or filter is provided between each compressor and the air receivers, type of prime mover, position in ship, Port and No. of cert.

One 39 m³/h Hatlapa, separator, electric motor (S) E.R. no. 22221, Hamburg cert. 65/2618. ✓

State No. of starting air receivers, both main and auxiliary, capacity of each, position in ship, Port and No. of cert.

Two, 500 ltrs. (P + S) E.R., Augsburg cert. nos. 65/1622, 65/1623. Airreceivers nos. 7190, 7197. ✓

How are air receivers first charged? Aux. eng. hand started.

Are the safety devices in accordance with the Rules? yes

Are bursting discs or flame arresters fitted at the starting air valves on each cylinder? no. H.G. pipe.

Maximum working pressure of starting air system 30 kg/cm².

Has the starting of the main engines been tested and found satisfactory? yes, good.

STEAM INSTALLATION

No. of aux./donkey boilers (see Key to R.B.) burning oil fuel

Can the exhaust heated boilers deliver steam directly to the steam range or do they operate only as economisers in conjunction with oil-fired boilers?

Working pressure

Port and rpt. or cert. Nos. for aux./donkey boilers

Type

Position

Is a superheater fitted?

Is steam essential for the operation of the ship at sea?

Are these boilers also heated by exhaust gas?

If so, are any steam pipes over 3 ins. bore?

No. of aux./donkey boilers (see Key to R.B.) heated by exhaust gas only

What is their material?

Working pressure

For oil-fired boilers, is the arrangement of pipes, valves, controls, &c., in accordance with Rules?

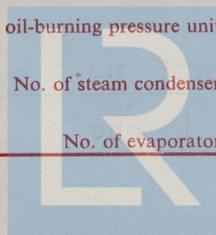
Type

No. of oil-burning pressure units

Position

No. of steam condensers

No. of evaporators



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Ship's Name **m.s. "ALTEFAHR"** Port **Groningen** Rpt. No. **4017c**

Date of approval of torsional vibration characteristics of the propelling machinery system with:—

Particulars of barred speed range(s) if imposed, with:—

(a) Working propeller **7-1-66**

(a) Working propeller —

(b) Spare propeller —

(b) Spare propeller —

STRAIGHT SHAFTING

Max. BHP/SHHP approved for each line of shafting
THRUST SHAFT. Separate or integral with crank, wheel or electric motor shaft?

540

Corresponding RPM of propeller

375

MN **108**

integral with crankshaft.

Thickness of liner between bearings
How is the after end of the liner made watertight in the propeller boss?

—

Diameter adjacent to collar

—

Material of screw/tube shaft

SM steel.

Material

SM steel

Minimum approved tensile strength

44 kg/mm²

Minimum approved tensile strength

44 kg/mm²

Is an oil gland fitted?

yes

INTERMEDIATE SHAFT

Diameter

—

What type?

Simplex.

Material

—

If an approved type, state name

Deutsche Werft

Minimum approved tensile strength

—

Length of bearing next to and supporting propeller

630 mm.

SCREWSHAFT. Dia. of cone at large end

175 mm.

Material of bearing

cast iron

Is screwshaft fitted with a continuous liner?

no.

Material of stern tube

cast iron.

TUBE SHAFT (if separate)

Diameter

—

Is tube shaft fitted with a continuous liner in way of stern tube?

—

Is stern tube fabricated? In multiple screw ships, is the liner between stern tube & "A" bracket continuous? If not, is the exposed length of shafting between liners readily visible in drydock?

—

—

—

PROPELLER

If of special design, state type

—

State method of control

—

Is it of reversible pitch type?

—

If so, is it of approved design?

—

PROPELLER	BLADE MATERIAL	TENSILE STRENGTH kg/mm	BUILT OR SOLID	LEFT HAND (LH) OF RIGHT HAND (RH)	NO. OF BLADES	DIAMETER mm.	PITCH mm.	TOTAL DEVELOPED SURFACE
Working	Bronze	53.1	solid	RH	4	1650	1070	58.4%
Spare	—	—	—	—	—	—	—	—

FOR ICE STRENGTHENING ONLY

PROPELLER	DESIGN MOMENT OF INERTIA OF PROPELLER (DRY) kgm ²	CLASS 1, 2 OR 3	THICKNESS OF BLADES			LENGTH OF BLADE SECTION AT 25% RADIUS	RAKE OF BLADES
			AT TOP OF ROOT FILLET	AT 25% RADIUS	AT TIP		
Working	288		Finnish Ice Class 1B				
Spare							

OIL FUEL TANKS

No. and position of oil fuel settling or service tanks not forming part of ship structure

One Main in E.R. on 1st platform.
One aux. in forecabin for aux.set.

LUBRICATION

No. of lub. oil pumps and how driven

Two aux.electr.

No. of oil coolers

yes

one

Can normal supply be maintained with any one pump out of action?

Two M.E.
yes

No. of duplex oil strainers

SUCTION	PRESSURE
one	one

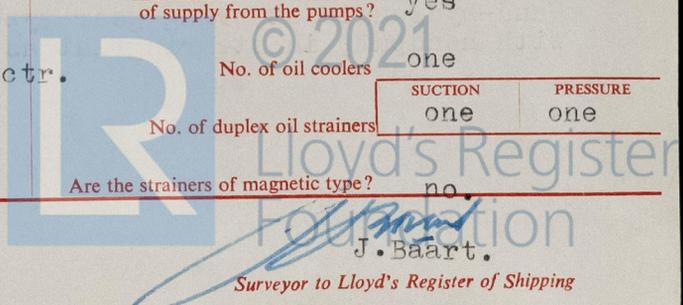
Is an emergency supply automatically available as per Rule? (turbines only)

—

Are the strainers of magnetic type?

no.

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INDEPENDENT PUMPS	SERVICE FOR WHICH EACH PUMP IS CONNECTED TO BE MARKED THUS X												
	SUCTION							DELIVERY					
	Bilge Main	Bilge Direct	Ballast Main	Oil Fuel Tanks	Condenser Extraction	Sea	Feed Tanks	Boiler Feed	Main Condenser	Oil Fuel Burners	Oil Fuel Tanks	Fire Main	Overboard
G.S.pump (S) fwd.ER 50 m ³ /h.	X	X	X			X						X	X
G.S.pump (S) aft ER 50 m ³ /h.	X	X	X			X						X	X
Salt Coolw.pump Port Fwd.ER inboard no.1						X							X
F.W.Coolw.pump. Port outboard ER													
Spare coolw.pump. Fwd.ER inboard no.2						X							X
Aux.L.O.pumps nos. 1 & 2. Port Aft ER.													
F.O.Transferpump. Port Fwd.ER				X						X			
Fire Service pump forecastle.						X						X	

BILGE SUCTIONS

No. and size in each hold, deep tank, cofferdam and pump room

in hold 4 - 63/70 mm. ✓

Sizes and positions of direct suction in machinery spaces

1 - 70/76 mm. in (P) ER.

No. and size connected to main bilge line in:—

Main engine room 1 - 70/76 mm. Aft ER. ✓

Sizes and positions of emergency suction in machinery spaces

1 - 76/83 mm. in (S) ER.

Aux. engine room -

Boiler room -

Tunnel -

Are all suction of non-return type? yes

Has the bilge or ballast system means for separating oily water on the overboard discharge side? yes (Turbulo Deutsche Werft) on separate ER Bilge-suction

Do the pumping arrangements comply with the Rules, including special requirements for oil tankers, Class 1, 2 or 3? (Strike out words not applicable) Class 2 yes.

If to be classed for navigation in ice, state means provided for clearing ice from ship's side valves

Compressed air. + re-circ.

STEERING GEAR. (State type, also No. of steam engines, electric motors, hydraulic pumps and other particulars, including particulars of the alternative means of steering)

Hand-hydraulic steering gear type Atlas, Bremen cert.no.65/6090, with handpump in steeringflat as Alternative means.



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Ship's Name **m.s. "ALTEFAHR"**. Port **Groningen**

Rpt. No. **4017c**

STEAM AND OIL ENGINE AUXILIARIES

REF	POSITION OF EACH	TYPE	MADE BY
a	Port ER floorlevel	4 SCSA	VEB-Dieselmotorenwerk, Leipzig.
b	(S) ER floorlevel	4 SCSA	" - "
c	Forecastle	4 SCSA	" - "
d			
e			
f			
g			
h			

REF	PORT & No. OF REPORT OR CERTIFICATE	DRIVEN MACHINERY (for electric generators state kw, volts & amps)
a	DSRK 53084 -	50 KVA SR.Gen.
b	" 53083 -	50 KVA SR.Gen.
c	" 1750 7. -	20 KVA SR.Gen.+ Fire Service pump.
d		
e		
f		
g		
h		

If electric current is used for essential services at sea, state the minimum No. and capacity of generators required

- (1) So that the ship may operate at sea **one 50 KVA**
- (2) For refrigerated cargo purposes **-**

Has the spare gear required by the Rules been supplied? **yes**
 Has all the machinery been tried under full working conditions & found satisfactory? **yes**

Date & duration of full-power sea trials of main engines **23-2-66**
 Has the manœuvring of the main engines been tried and found satisfactory? **6 hours. yes good.**

DECLARATION TO BE SIGNED BY INSTALLING ENGINEERS

To the best of our knowledge this machinery has been installed in conformity with the Rules, Regulations and requirements of Lloyd's Register of Shipping, and the foregoing particulars of main and auxiliary machinery and pressure vessels (as shown on sheets 1, 2 & 3) are correct.

MACHINEFABRIEK
Wolffard en Wessels N.V.
M.E.B. Weg 19 - Groningen
 (signature)

(date)

A previous similar case was for (name) **m.s. "SELLIN"**.

Port and Rpt. No. **Groningen 3072c**

IDENTIFICATION MARKS (copies of certificates to be forwarded)

Thrust shaft **Built in ME.**

Intermediate shafts **-**

Screw and ~~other~~ shafts **Lloyd's Dsf. 355. Gro.cert. 65/759**

Propellers **Lloyd's Rot.1569. Rot.cert. 65 2939**

Other important items

sterntube: **Lloyd's Gro. 3 kg. Gro.cert. 65/758**

D.S.Tank: **Lloyd's Gro. JB 7-12-65. Gro.cert. 66/9**

Coupling flange: **Lloyd's Dsf.348/1. Gro.cert.65/757.**

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0125 3/3

DATES OF APPROVAL OF PLANS

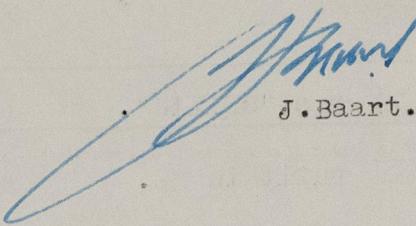
Straight shafting	Rot. 3-6-65	Oil burning arrangements	-
Air receivers	-	Compressed air system	Rot. 6-4-65.
Clutch	-	Main steam pipes	-
Reversing gear & control	-	Boiler feed system	-
Flexible coupling	-	Main boilers	-
Separate fuel tanks	Rot. 4-6-65	Superheaters	-
General pumping arrangements	Rot. 6-1-65	Aux. boilers	-
Bilge, ballast & oil fuel pumping arrangements in the machinery space	Rot. 13-7-65	Donkey boilers	-
Oil fuel piping & fittings at settling & service tanks	Rot. 13-7-65	Feed water economisers	-
Cargo oil pumping arrangements	-	Steam heated steam generators Propeller (including spare, if supplied)	-
		Stern gear Oil-retaining gland (if not shown on shafting plan)	-

DATES OF EXAMINATION OF:-

Fitting of stern tube	5-11-65	Alignment* of straight shafting	17-2-66
Fitting of propeller	2-11-65	Testing of pumping arrangements	23-2-66
Completion of sea connections	17-11-65	Oil fuel lines	10-2-66
Alignment* of crankshaft on board	17-2-66	Boiler supports	-
Alignment* of turbines/engines & gearing	-	Steering machinery	23-2-66
Holding down bolts & chocks	17-2-66	Windlass	23-2-66

*State if aligned when ship in light, ballast or loaded condition

† The machinery reported above has been constructed and installed under Special Survey in accordance with the Rules, approved plans and Secretary's letters. The materials and workmanship are good, the spare gear required by the Rules has been supplied and the machinery is eligible, in my opinion, to be classed. ‡ L.M.C. 2-66 "Oil Engine" "O.G.".

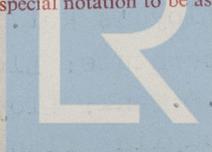

J. Baart.

Surveyor to Lloyd's Register of Shipping

Date of Committee **FRIDAY 27 MAY 1966**

Minute **LMC ES TS(OG) } 2.66**

† (a) If the installation contains any features of a novel or experimental nature, give particulars.
(b) If centralised and/or bridge control is fitted for main propelling and/or essential auxiliary machinery, state on a Rpt.-(cont.) where the control room is situated, the machinery controlled from it and give a brief description of the control system, including any automatic system for controlling essential auxiliary machinery.
‡ Include any special notation to be assigned.



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NOTE.—Where existing machinery is submitted for classification, the circumstances are to be explained as fully as possible, and the recommendation should be suitably amended.