

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

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

Received London  
-6. MAY 1966

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 560160	Date of completing rpt.	30-4-66	Rpt. No. 4017c
Gross tons	299.43	Place of survey, if different from above	Martenshoek	
No. of visits:				
In shops	-	First date	-	Last date
On ship	14	First date	16-7-65	Last date 23-2-66
Owners	Deutsche Seereederei		Port of registry	Rostock
Ship built by	Scheepswerf Hoogezand N.V.		Yard No. 128	Yr.   Mo. When 1966 2
Main engines made by	VEB Schwermaschinenbau "Karl Liebknecht", Magdenburg.		Engine No. 83594	When 1965.
Gearing made by	-		Gear No. -	When -
Aux./donkey boilers made by	-		Boiler No. -	When -
Machinery installed by	Messrs. Wolfard & Wessels, Groningen			When 1966.
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

\*Is a torsional vibration damper or detuner fitted to the shafting? yes

\*Where positioned? forward end

\*Type Viscosity

Is the engine equipped to operate on heavy fuel? no.

No. of fresh water coolers

MAIN one

AUX. -

No. of lub. oil coolers

MAIN one

AUX. one

Is engine fitted directly on tank top, or on a built-up seating? seating

\*Can engine be reversed? yes

\*If not, how is reversing effected? -

Cooling medium for

CYLINDERS F.W.

PISTONS

FUEL VALVES



**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 m<sup>3</sup>/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. qirreceivers 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/cm<sup>2</sup>.

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

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No. of steam condensers

-

Position

-

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/SHP 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/mm<sup>2</sup>**Minimum approved  
tensile strength **44 kg/mm<sup>2</sup>**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 sterntube **cast iron.****TUBE SHAFT (if separate)**

Diameter —

Is tube shaft fitted with a  
continuous liner in  
way of stern tube? —Is sterntube fabricated?  
In multiple screw ships, is  
the liner between sterntube  
& "A" bracket continuous?  
If not, is the exposed length  
of shafting between liners  
readily visible in drydock? —Thickness of screw/tube  
shaft liner at bearings —**PROPELLER**

If of special design, state type —

State method of control —

Is it of reversible pitch type? —

If so, is it of approved design? —

PROPEL- LER	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**

PROPEL- LER	DESIGN MOMENT OF INERTIA OF PROPELLER (DRY) kgm <sup>2</sup>	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 forecandle for aux.set.****LUBRICATION**

No. of lub. oil pumps and how driven

**Two aux.electr.**

No. of oil coolers

**yes**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.**







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 53C84 -	50 KVA SR.Gen..
b	" 53C83 -	50 KVA SR.Gen..
c	" 175C 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
- (2) For refrigerated cargo purposes

one 50 KVA

-

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 &amp; 3) are correct.

**MACHINEFABRIEK**  
**Wolffhard en Wessels N.V.**  
**M.E.B. Weg 19 - Groningen**

(date)

(signature)

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 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.**



# 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

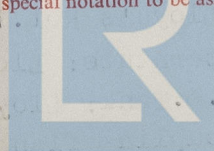
Date of Committee

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.