

Rpt. 13.

No. 7314

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report 16. 3. 19 59 When handed in at Local Office 19 Port of H A M B U R G

No. in Survey held at Hamburg Date, First Survey 18. 2. Last Survey 6. 3. 19 59
 g. Book. (No. of Visits 7)

82418 on the S Tanker " T I N A O N A S S I S " Tons Gross 27853
 Net

Built at Hamburg By whom built Howaldtswerke AG. Yard No. 885 When built 1953

Owners Palmas Transportation Co. Port belonging to Monrovia

Installation fitted by Messrs. A.E.G. Schiffbau, Hamburg When fitted 1953
 Raytheon Mariner

Is vessel equipped for carrying Petroleum in bulk yes Is vessel equipped with D.F. yes E.S.D. yes Gy.C. yes Sub.Sig. no Radar Pathfinder

Plans, have they been submitted and approved yes System of Distribution Insulated 3+1 phase, 3+2 wire AC, Voltage of Lighting 115
 Cooking 220 Power 440/120 D.C. or A.C., Lighting A.C. 2 wire DC
 Heating 220 Power A.C./D.C. If A.C. state frequency 60

Prime Movers, has the governing been found as per Rule when full load is thrown on and off yes Are turbine emergency governors fitted
 with a trip switch - Alternators fitted with automatic voltage regulators
~~Generators, are they compound wound, and what compound winding conditions~~

Are the generators arranged to run in parallel main:- yes Is the compound winding connected to the negative or positive pole -

Have machines 100 kw. and over been inspected by the Surveyors during manufacture and testing no Have certificates of test for machines
 under 100 kw. been supplied and the results found as per Rule see letter Position of Generators In Engine Room:- Turbo Alternators

Platform Deck port and starboard; Emergency Diesel Alternator: After Peak Deck starboard side.

is the ventilation in way of generators satisfactory yes are they clear of inflammable material and protected from mechanical injury and
 damage from water, steam and oil yes Switchboards, where are main switchboards placed In Engine Room on raised flat
 above platform deck starboard side and facing portside.

are they in accessible positions, free from inflammable gases and acid fumes and protected from mechanical injury and damage from water,
 steam and oil yes, what insulation is used for the panels dead front construction, if of synthetic insulating
 material is it an Approved Type - if of semi-insulating material (slate or marble) are all conducting parts insulated therefrom as
 per Rule - Is the construction as per Rule, including locking of screws and nuts yes Description of Main Switchgear
 for each generator and arrangement of equaliser switches Turbo-Alternators:- Triple pole circuit breaker with three
 thermal, three short circuit, undervoltage and reverse power trips. Emergency Diesel Alternator:-
 Triple pole circuit breaker with three thermal, three short circuit and reverse power trips.

and the switch and fuse gear (or circuit breakers) for each outgoing circuit Triple pole circuit breaker with overload trips
 or triple pole linked switch and three fuses or 2/3-single-pole miniature circuit breakers with fuses
 as group "back-up" protection

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard 2(+10)
 ammeters 2 voltmeters one synchronising devices. For compound machines in parallel are the ammeters and reverse current
 protection devices connected on the pole opposite to the equaliser connection - Earth Testing, state means provided
 voltmeters Preference Tripping, state if provided no, and tested -

Switches, Circuit Breakers and Fuses, are they as per Rule yes, are the fuses an Approved Type yes

make of fuses AEG/Voigt & Haefner, are all fuses labelled yes If circuit breakers are provided for the generators, ~~are they~~
 set at thermal 1050 amps. thermal 160 amps.
 overload ~~are they~~ Turbos s/c 3000 " Diesel s/c 1000 " and at what current do the reverse current protective-
 devices operate approx. 4 % full load power Cables, are they insulated and protected as per Rule see letter

if otherwise than as per Rule are they of an Approved Type see letter state maximum fall of pressure between bus bars and any point
 under maximum load less than 6% volts. Are all paper insulated and varnished cambric insulated cables sealed at the ends -

Are all the cable runs in accessible positions not exposed to drip or accumulation of water or oil, high temperatures or risk of mechanical
 damage yes, are any cables laid under machines or floorplates yes, if so, are they adequately protected yes State
 type of cables (if in conduit this should also be stated) in machinery spaces VRILC & metal braided, galleys VRILC & metal braided
 and laundries VRILC & metal braided State how the cables are supported or protected Clipped to metal trays, supports,
 frameworks, structure or wood grounds and protected by pipes or plates as necessary

Are all lead sheaths, armouring and conduits effectually bonded and earthed yes Are all cables passing through decks and watertight
 bulkheads provided with deck tubes or watertight glands yes, where unarmoured cables pass through beams, etc., are the holes
 effectively bushed yes Refrigerated chambers, are the cables and fittings as per Rule -

Have refrigeration fan motors been constructed under survey - and test certificates supplied -

Are the motors accessible for maintenance at all times -

Supply, state position
ing transformers

switches and fuses in

provided. yes

battery capacity in

on -

are fitted -

atherproof. yes

lament

, are heaters in the

d in well-ventilated

of fire in the pump

ing no

Rule. see letter

ips been complied

fittings for pump

per Rule. yes

es

es

ER.

AG., Hamburg

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kertwerke

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OTIVE COVERING.

metal braid

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etal braid

etal braid

DISTRIBUTION CABLES (to Section-Boards and Distribution-Fuse-Boards, etc.).

DESCRIPTION.	CONDUCTORS.			MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULA- TION.	PROTECTIVE COVERING.
	No. in Parallel	Sectional Area		In the Circuit.	Rule.			
		mm ²	sq. mm.					
440 volts power. Steering Gear Panel	2	3 c	70	132	2 x 87	-	Rubber	LC & metal braid
440 volts power. Vents. E.R. DB	1	3 c	25	55	44 X	-	"	"
440 volts power. Vents. B.R. DB 12 A	1	3 c	25	44	44	-	"	"
440 volts power. Aft Accommo. DB	1	3 c	16	38	33 X	-	"	"
440 volts power. Aft Pump Rm. DB 9 A	1	3 c	4	10	16	-	"	"
440 volts power. Midships DB 3/2	1	3 c	16/6	32	33/21	-	"	"
440 volts power. E.R. Aux. Motors DB 13/13A	1	3 c	10	20	27	-	"	"
440 volts power. Soot Blower " DB 12	1	3 c	4	-	21	-	"	"
440 volts power. Dom. Refr. Plant DB 11	1	3 c	25	48	44 X	-	"	"
440 volts power. Workshop DB 10	1	3 c	10	18	27	-	"	"
220 volts power. Galley aft DB 4	1	3 c	120	150	123 X	-	"	"
220 volts power. Cat. Appliances Mids. DB 3	1	3 c	10	21	27	-	"	"
220 volts power. Laundry aft DB 9	1	3 c	4	2.5	16	-	"	"
115 volts Ltg. & Small Power Mids. DB 3/2	1	3 c	50	51	69	-	"	"
115 volts Ltg. & Small Power Aft DB 7/5	1	3 c	25	48	44	-	"	"
115 volts Ltg. & Small Power Aft DB 8/6	1	3 c	35	60	55 X	-	"	"
115 volts Ltg. & Small Power Mids. DB 1/N1B	1	3 c	35	38	55	-	"	"
115 volts Emerg. Ltg. Mids. DB 3/2/1	1	3 c	16	24	33	-	"	"
115 volts Emerg. Ltg. Aft DB 8/6	1	3 c	4	13	16	-	"	"
115 volts Emerg. Ltg. E.R. Main S. Bd.	1	3 c	10	20	27	-	"	"
115 volts Emerg. Ltg. Aft DB 5	1	3 c	4	9	16	-	"	"
115 volts Dom. Refr. Plant DB 11	1	2.5	5	5	15	-	"	"
115 volts Wireless	1	3 c	10	20	27	-	"	"
220 volts D.C. Wireless	1	10	20	38	-	-	"	"
220 volts D.C. Communications Mids. DB 3	1	6	25	29	-	-	"	"

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE
ENUMERATED.

No.

kW

XXXX

*working
amperes

Steering Gear	2	36	1	3 c	70	64	87	25	Rubber	LC & metal braid
Fire & General Service Pump	1	41	1	3 c	35	68	55	36	"	"
Boiler Blowers	2	110/47	1	3 c	185/50	195/84	164	62	"	"
Service Air Compressor	2	22	1	3 c	16	37.5	33	35	"	"
Combustion Control Air Compr.	1	10	1	3 c	4	18.6	16	17	"	"
Main Circ. Water Pumps	2	64	1	3 c	70	115	87	95	"	"
Lubricating Oil Pumps	2	31	1	3 c	25	56	44	41	"	"
Funnel Fan	1	75/40	1	3 c	95	127/72	105	60	"	"
Aux. Circ. Pumps	2	16	1	3 c	10	32	27	24	"	"
Aux. Cond. Pumps	2	7	1	3 c	2.5	12.7	13	9	"	"
O. F. Service Pumps	2	13.5	1	3 c	6	23	21	18	"	"
Main Cond. Pumps	2	29.5	1	3 c	25	52	44	30	"	"
Atmosph. Cond. Circ. Pump	1	27	1	3 c	16	49	33	36	"	"
Fire & Butterworth Pump	1	60	1	3 c	70	100	87	90	"	"
Boiler Start-up Pump	1	0.73	1	3 c	2.5	2.2	13	-	"	"
O. F. Transfer Pump	1	15.5	1	3 c	10	32	27	32	"	"
Bilge Pump	1	4.8	1	3 c	2.5	9.5	13	7	"	"
Sea Water Service Pumps	2	14	1	3 c	6	26	21	22	"	"
Condensate Transfer Pumps	2	8.8	1	3 c	4	16.2	16	16	"	"
Gland Exhaust Fan	1	2.2	1	3 c	2.5	4.1	13	-	"	"
Destillate Pumps	2	1	1	3 c	2.5	5.15	13	-	"	"
Brine Pumps	2	1	1	3 c	2.5	2.8	13	-	"	"
L. O. Separators	2	3	1	3 c	2.5	5.6	13	-	"	"
Turbo Gen. Lub. O. Pump	1	1.5	1	3 c	2.5	2.9	13	-	"	"
E. R. Fans	2	6.3/5	1	3 c	4/2.5	13.5/9.5	16/13	-	"	"
E. R. Fans	2	8.5/5	1	3 c	4/2.5	17/10.5	16/13	-	"	"
B. R. Fans	2	11.6/6.2	1	3 c	6/4	22/13	21/16	-	"	"
Turning Gear	1	10	1	3 c	4	17.3	16	5	"	"
Aft Pump Room Fans	2	2.5	1	3 c	2.5	5.4	13	-	"	"

NOTE.—Use Rpt. 13 Continuation Sheet if the above space is insufficient.



The Electrical Equipment is installed in accordance with the approved plans and the requirements of the Rules.
All Insulated Conductors are guaranteed to have been tested at the maker's works as specified in the Rules.
The foregoing is a correct description.

Electrical Contractors. Date

COMPASSES.

Have the compasses been adjusted under working conditions.

Builder's Signature. Date

Have the foregoing descriptions and schedules been verified and found correct.

Is this installation a duplicate of a previous case. If so, state name of vessel.

Plans. Are approved plans forwarded herewith. If not, state date of approval.

Certificates. Are certificates of test for motors engaged on essential sea services and generators forwarded herewith.

General Remarks. (State quality of workmanship and materials, opinions as to class, etc.)

The electrical equipment of this vessel has been examined for compliance with the Secretary's letter dated 24th February, 1959 the plans noted therein and the Rules for Electrical Equipment.

So far as could be seen, the materials used and workmanship employed are good and sound.

Minor repairs have been carried out and an alternative supply provided for the navigation indicator board.

The installation has been examined under working conditions and found to be in order and the class of the ship is submitted for the consideration of the Committee in conjunction with the correspondence dealing with this vessel.

Total Capacity of Generators 1300 Kilowatts.

The amount of Fee ... £	:	:	When applied for,
See Report 9	:	:	19
No. 7312	:	:	When received,
Travelling Expenses (if any) £	:	:	19

W. Mowbray
Surveyor to Lloyd's Register of Shipping.

FRIDAY 10 APR 1959

Committee's Minute

Assigned

See Rpt. 1.