

Rpt. 13

No. 52553

REPORT ON ELECTRICAL EQUIPMENT

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report 7 - 9 - 1961 When handed in at Local Office 19 Port of ROTTERDAM.

No. in Survey held at Gorinchem Date, First Survey 21-11-1960 Last Survey 13-9-1961
Reg. Book (No. of Visits 30)

1/40249 on the m.s. "BRITA DAN" Tons Gross 3000 Net 1700

Built at Gorinchem By whom built Bijker's Aannemingsbedrijf Yard No. 163 When built 1961.

Owners J. Lauritzen Port belonging to Esbjerg.

Installation fitted by N.V. van Rietschoten & Houwens When fitted 1961.

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

Plans, have they been submitted and approved yes System of Distribution 3 pole 3 wire Voltage of Lighting 220

Heating 440/220 Power 440 D.C. or A.C. Lighting A.C. Power A.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 -- Generators, are they compound wound, and level compounded under working conditions --

Are the generators arranged to run in parallel 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 yes Have certificates of test for machines under 100 kw. been supplied and the results found as per Rule yes Position of Generators PS, centre and stbd. side

E.R. floorlevel forward

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 1st platform E.R.

forward PS.

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 type, 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. triple pole C/B's with no volt; O.L.; pref. tripping

and rev. power relays

and the switch and fuse gear (or circuit breakers) for each outgoing circuit. triple pole switches and fuses and

triple pole contactors with triple pole fuses as "back up" protection.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule. yes. Instruments on main switchboard 24

ammeters 3 voltmeters 2 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 earth

lamps Preference Tripping, state if provided 105% FLKW & 110% FLC, and tested yes

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

make of fuses Siemens & Artic, are all fuses labelled yes If circuit breakers are provided for the generators, at what

overload do they operate thermal relay + 150% FLC & 300 direct, and at what current do the reverse current protective

devices operate - 10% FLKW Cables, are they insulated and protected as per Rule yes

if otherwise than as per Rule are they of an Approved Type --, state maximum fall of pressure between bus bars and any point

under maximum load under 6% volts. Are all paper insulated and varnished cambric insulated cables sealed at the ends yes

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 VC, LCB & VIR, LCB HR type VC, LCB & VIR, LCB

and laundries VC, LCB & VIR, LCB State how the cables are supported or protected

Machinery spaces: clipped to steel trays or in pipe.

Acc. spaces: clipped to wooden grounds or in PVC conduit.

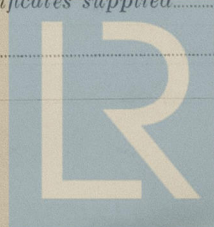
Are all lead sheaths, armouring and conduits effectually bonded and earthed yes Are all cables passing through decks and watertight

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 --



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Rpt. 13 (cont).

DESCRIPTION.		CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return) M.	INSULATION.	PROTECTIVE COVERING.
		No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. $\frac{1}{2}$ in. or mm.	In the Circuit.	Rule.			
DISTRIBUTION CABLES								
Power D.F.B. heating bridged.stbd.	5H	1	2 x 25	56 ✓	63	30	VIR	HR type
" " " " h. upperd.stbd. fore	6H	1	2 x 25	56 ✓	63	25	"	" "
" " " " " stbd.aft	7H	1	2 x 25	56 ✓	63	30	"	" "
" " " " " tweend. stbd.	8HA	1	2 x 10	29 ✓	49	20	"	" "
" " " " " ps.	8HB	1	2 x 10	26 ✓	49	30	"	" "
Lighting D.F.B.'s From Sectionboard SL								
"NAV"	N	1	2 x 2.5	3 ✓	15.5	5	"	LCB
NAUT.	1L	1	2 x 6.45	22 ✓	39	30	VC	"
Boatdeck	2L	1	2 x 6	20 ✓	29	35	VIR	"
Bridgedeck ps	3L	1	2 x 6	19 ✓	29	30	"	"
" " stbd.	4L	1	2 x 4	14 ✓	22.5	25	"	"
Lighting upperdeck	5L	1	2 x 4	11 ✓	22.5	30	"	"
" " "	6L	1	2 x 4	16 ✓	22.5	15	"	"
" tween "	7L	1	2 x 6	24 ✓	29	21	"	"
Decklighting & Cargoh.	8L	1	2 x 19.35	59 ✓	93	30	VC	"
Decklighting & Cargoh.	9L	1	2 x 19.35	53 ✓	93	60	"	"
E.R. casing	10L	1	2 x 2.5	8 ✓	15.5	15	VIR	"
E.R.	11L	1	2 x 2.5	4.5 ✓	15.5	7	"	"
E.R.	12L	1	2 x 2.5	4.5 ✓	15.5	11	"	"

220 V.
A.C.

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

DESCRIPTION		No. in Parallel per Pole	CONDUCTORS	MAXIMUM CURRENT IN AMPERES		APPROX. LENGTH (lead plus return) m.	INSULATION	PROTECTIVE COVERING
			Sectional Area or No. and Dia. of Strands mm. ² or mm.	In the Circuit	Rule			
<u>Power D.F.B.'s from Main switchboard</u>								
E.R. stbd. aft	2P	1	3 x 4.5	12.4	21.5	30	VC	LCB
E.R. stbd. forward	3P	1	3 x 38.7	78.5	102	5	"	"
E.R. ps. forward	4P	1	3 x 14.5	33.3	54	6	"	"
E.R. ps. aft	5P	1	3 x 25.8	71	78	5	"	"
E.R. ps. forward	6P	1	3 x 14.5	38.5	54	23	"	"
Refr. plant	7P	1	3 x 6.45	30	31	35	"	"
Workshop	8P	1	3 x 19.35	44	68	11	"	"
Fans E.R.	9P	1	3 x 9.35	22	40	35	"	"
Vent. holds	10P	1	3 x 25.8	69.5	78	28	"	"
Vent. Accommodation	11P	1	3 x 38.7	85	102	33	"	"
Winches ps	12P	1	3 x 38.7	97	102	28	"	"
Winches stbd.	13P	1	3 x 38.7	97	102	28	"	"
Winches ps	14P	1	3 x 38.7	97	102	58	"	"
Winches stbd.	15P	1	3 x 38.7	97	102	58	"	"
Catering Department	1D	1	3 x 25.8	72	78	40	"	"
<u>Power D.F.B. from Sectionboard SP</u>								
Power D.F.B. E.R. ps. aft	1P	1	3 x 4.5	6.6	21.5	25	"	"
<u>Power D.F.B. from Sectionboard SL</u>								
Heating Nav. Bridgedeck	1H	1	2 x 25	48	63	28	VIR	HR type
Domestic Service	2D	1	3 x 6	16	33	30	"	LCB
<u>Power D.F.B. from Sectionboard SH</u>								
Heating boatdeck ps.	2HA	1	2 x 10	26	38	35	"	HR type
Heating boatdeck stbd.	2HB	1	2 x 16	36	49	30	"	" "
Heating bridgedeck ps. forward	3H	1	2 x 25	49.5	63	35	"	" "
Heating bridgedeck ps. aft	4H	1	2 x 25	56	63	40	"	" "
MOTOR CABLES (cont.)								

V.

MOTOR CABLES

ALL IMPORTANT MOTORS TO BE ENUMERATED		No.	B.H.P.						
Air compressor		2	42	1	3 x 19.35	58	68	9	VC LCB
Fire extinguishing pump		1	24	1	3 x 9.35	30	40	5	" "
L.O. pump		2	24	1	3 x 9.35	32	40	30	" "
Fresh coolingw. pump		1	12	1	3 x 4.5	14.5	21.5	25	" "
Capstan		1	44	1	3 x 19.35	55	68	46	" "
Steering gear		2	12	1	3 x 4.5	16	21.5	30	" "
Windlass		1	50	1	3 x 25.8	75	78	70	" "
Turbo charger		1	27	1	3 x 9.35	35	40	25	" "
Sea coolingw. pump		1	12	1	3 x 4.5	14.5	21.5	15	" "
<u>From Power D.F.B. 1P</u>									
Hydrophores		3	2	1	3 x 2.5	2.8	13	2	VIR "
<u>From Power D.F.B. 2P</u>									
F.O. circ. pump		2	1.5	1	3 x 2.5	2.7	13	5	" "
Turning gear		1	3.5	1	3 x 2.5	7	13	15	" "
<u>From Power D.F.B. 3P</u>									
F.O. separator		2	5	1	3 x 2.5	6.4	13	9	" "
Lubr. and D.O. Sep.		2	4	1	3 x 2.5	5.5	13	15	" "
Oil preheaters		4	15 KW	1	3 x 4.5	20	21.5	8	VC "
<u>From Power D.F.B. 4P</u>									
Bilge sanitary pump		1	17	1	3 x 6.45	23	31	18	" "
Fan main switchboard		1	85 W.	1	3 x 1.5	0.1	7	3	" "
Ballast pump		1	17	1	3 x 6.45	20.5	31	3	VC "
Hotw. Circ. pump+drinking.		2	0.2	1	3 x 2.5	0.5	13	18	VIR "
Brine pump and cond.pump		2	1	1	3 x 2.5	1.4	13	11	" "
Ejector pump		1	5.5	1	3 x 2.5	6.9	13	25	" "
<u>From Power D.F.B. 5P</u>									
F.O. heater		2	15	1	3 x 4.5	20	21.5	19	VC "
Bilge sanitary pump		1	17	1	3 x 6.45	23	31	11	" "
Heating bilgewater sep.		1	6 KW	1	3 x 2.5	8	13	8	VIR "

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

(Cont.)

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.

Van Rietschoten & Houwens
Electrotechnische Maatschappij N.V.

Electrical Contractors.

Date 18/9/61

COMPASSES

Have the compasses been adjusted under working conditions yes

Bijker's Aannemingsbedrijf N.V.
IJSELWERF
GORINCHEM

Builder's Signature.

Date 27/9/61

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

Is this installation a duplicate of a previous case yes If so, state name of vessel RITVA DAN

Plans. Are approved plans forwarded herewith no If not, state date of approval Secr. letter of 5.4.1961.

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

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

The electrical equipment of this ship has been installed under Special Survey in conformity with the Society's Rules and Regulations and in accordance with the Secretary's letter and the approved plans or equivalent thereto.

The materials used are of a good quality and the design and workmanship are good.

On completion the equipment has been tried out under full working conditions and found satisfactory, subject to alteration of the generator sets /= This equipment is in my opinion suitable for a classed ship.

/= to make the generating equipment suitable for running in parallel up to the rated load before the 1st April, 1962.

Total Capacity of Generators 519 Kilowatts.

The amount of Fee ... £ Fl. 1079, -- When applied for, 31 OCT. 1961

Travelling Expenses (if any) £ fl 264,50 When received, 19

Surveyor to Lloyd's Register of Shipping
F.N. Nooteboom.

Committee's Minute FRIDAY 1-DEC 1961

Assigned Su Rpr. 1



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