

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

13 NOV 1939

Received at London Office

Date of writing Report... 6-11-39 When handed in at Local Office... 19... Port of Rottendam

No. in Survey held at Krimpen a/d IJssel Date, First Survey 2-8-39 Last Survey 31-12-1939
Reg. Book. (Number of Visits... 15)

on the m.v. "BEVERLAND" Tons { Gross 387.09
Net 202.81

Built at Krimpen a/d IJssel By whom built C. & A. Giesse & Zonen Yard No. 661 When built 1939

Owners M. Schepmaart en Steenkolen Maatschappij Port belonging to Rottendam

Electrical Installation fitted by P. P. Schachter & Houwens' Electrotechn. N.V. Contract No. When fitted 1939

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

Have plans been submitted and approved yes System of Distribution two conductor insulated Voltage of supply for Lighting 110

Heating ✓ Power 110 Direct or Alternating Current, Lighting A.C. Power A.C. If Alternating Current state frequency ✓ Prime Movers,

has the governing been tested and found efficient when the whole load is suddenly thrown on and off yes Are turbine emergency governors fitted with a

trip switch as per Rule ✓ Generators, are they compound wound yes, are they level compounded under working conditions yes,

if not compound wound state distance between generators ✓ and from switchboard ✓ Where more than one generator is fitted are they

arranged to run in parallel no, are shunt field regulators provided yes Is the compound winding connected to the negative or positive pole

Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing ✓ Have certificates of

test for machines under 100 kw. been supplied yes and the results found as per rule yes Are the lubricating arrangements and the construction

of the generators as per rule yes Position of Generators in engine room main generator on portside
auxiliary generator on starboardside
shaft driven generator

, is the ventilation in way of generators satisfactory yes are they clear of inflammable material yes, if situated

near unprotected combustible material state distance from same horizontally ✓ and vertically ✓, are the generators protected from mechanical

injury and damage from water, steam and oil yes, are the bedplates and frames earthed yes and the prime movers and generators in metallic

contact yes Switchboards, where are main switchboards placed in engine room against forward bulkhead

are they in accessible positions, free from inflammable gases and acid fumes yes, are they protected from mechanical injury and damage from water, steam

and oil yes, if situated near unprotected combustible material state distance from same horizontally ✓ and vertically ✓, what insulation

material is used for the panels enclosed in a steel compartment if of synthetic insulating material is it an Approved Type yes, if of

semi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule ✓ Is the frame effectually earthed yes

Is the construction as per Rule yes, including accessibility of parts yes, absence of fuses on the back of the board yes, individual fuses

to pilot and earth lamps, voltmeters, etc. yes locking of screws and nuts yes, labelling of apparatus and fuses yes, fuses on the "dead"

side of switches yes Description of Main Switchgear for each generator and arrangement of equaliser switches: a double pole switch

& double pole fuses - battery: a double pole change over switch, a double pole switch with reversed

current trip, double pole fuses & battery charge & discharge control a quadr. pole change over switch with
navolt tripping, charging resistances and
a double pole switch

and for each outgoing circuit a double pole switch or a double pole change over switch alternatively & double pole

fuses (the battery can only supply to the lighting installation and to the wireless station)

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

ammeters ✓ voltmeters ✓ synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the

equaliser connection ✓ Earth Testing, state means provided two pairs of earthfault indicating lamps

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Switches, Circuit Breakers and Fuses, are they as per Rule... yes... are the fuses an approved type... yes... are all fuses labelled as per Rule... yes... are the reversed current protection devices connected on the pole opposite to the equaliser connection... ✓... have they been tested under working conditions... yes... Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule... yes... Cables, are they insulated and protected as per the appropriate Tables of the Rules... 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... 4 Volts... are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets... yes... Are paper insulated and varnished cambric insulated cables sealed at the exposed ends... ✓... with insulating compound... ✓... or waterproof insulating tape... ✓... 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 cables laid under machines or floorplates... no... if so, are they adequately protected... ✓... Are cables in machinery spaces, galleys, laundries, etc., lead covered... yes... or run in conduit... ✓... State how the cables are supported and protected... Cables are clipped to metal trays or direct to steelwork or woodwork of vessel; in the cargo holds the cables are protected by sheet steel covers; wiring between cargo winches and their controlling gear is run in conduit. lead covered rubber insulated cables are used for the wiring in the accommodation, all other cables have steelwire braiding over the lead sheath. Are all lead sheaths, armouring and conduits effectually bonded and earthed... yes... Refrigerated chambers, are the cables and fittings as per Rule... ✓... 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 effectually bushed... yes... and with what material... Lead... Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule... yes... Emergency Supply, state position... by a battery housed in a compartment under the wheel house... and method of control... by charging and discharging charge over switches mounted on the main switchboard... Navigation Lamps, are they separately wired... yes... controlled by separate double pole switches... yes... and fuses... yes... Are the switches and fuses in a position accessible only to the officers on watch... yes... is an automatic indicator fitted... yes... Secondary Batteries, are they constructed and fitted as per Rule... yes... are they adequately ventilated... yes... Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof... yes... Are fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present... no... if so, how are they protected... ✓... and where are the controlling switches fitted... ✓... are all fittings suitably ventilated... yes... are all fittings and accessories constructed and installed as per Rule... yes... Searchlight Lamps, No. of... whether fixed or portable... are their fittings as per Rule... Heating and Cooking, is the general construction as per Rule... ✓... are the frames effectually earthed... ✓... are heaters in the accommodation of the convection type... ✓... Motors, are all motors constructed and installed as per Rule... yes... and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage from water, steam and oil... yes... if situated near unprotected combustible material state minimum distance from same horizontally... ✓... and vertically... ✓... Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing... ✓... Have certificates of test for motors under 100 BHP intended for essential services been supplied and the results found as per Rule... yes... Control Gear and Resistances, are they constructed and fitted as per Rule... yes... Lightning Conductors, where required are they fitted as per Rule... Ships carrying Oil having a Flash Point less than 150° F. Have all the special requirements of the Rules for such ships been complied with... ✓... are all fuses of the cartridge type... ✓... are they of an approved type... ✓... If portable lamps for use in dangerous spaces are supplied, are they of a self-contained battery-fed flameproof type... ✓... Spare Gear, if the vessel is for open sea service have spares been provided as per Rule... yes... are they suitably stored in dry situations... yes... Insulation Tests, has the insulation resistance of all circuits and apparatus been megger tested and found satisfactory... yes...

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN ...	1	66	115	574	600	oil engine	diesel oil above 150° F.	
main engine-driven	1	9	115	70	900	"	"	
	1	5.5	115	48	900/1600	"	"	
EMERGENCY ...								
ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (load plus return feet).	INSULATED WITH.	HOW PROTECTED.
		No. In Parallel Per Pole.	Sectional Area or Nominal Diameter of Conductor, sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR ...	66	3	450	574	590	20	rubber	lead sheath steelwire braiding
" EQUALISER ...								
Auxiliary generator Shaft driven	9	1	50	82	99	70	"	"
	5.5	1	15	50	63	85	"	"
Battery connections		1	10	25	38	90	"	"
EMERGENCY GENERATOR ...								
ROTARY TRANSFORMER: MOTOR ...								
" " GENERATOR ...								

MAIN DISTRIBUTION CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (load plus return feet).	INSULATED WITH.	HOW PROTECTED.
AUX. SWITCHBOARDS AND SECTION BOARDS ...						
Navigation board	1	2.5	1	15.5	100	"
Lighting dist. board in accommodation	1	4	8	22.5	60	"
Decklights dist. board	1	2.5	8	15.5	60	"

LIGHTING AND HEATING, ETC., CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (load plus return feet).	INSULATED WITH.	HOW PROTECTED.
WIRELESS ...	1	2.5	5	15.5	100	"
NAVIGATION LIGHTS (masthead, side, pooplight)	1	1.5	4.08	9.5	270 160	"
LIGHTING AND HEATING ...						
Engine room lighting (2 circuits)	1	1.5	2	9.5	90	"
Cargolights	1	1.5	2	9.5	290	"

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (load plus return feet).	INSULATED WITH.	HOW PROTECTED.
Ballast pump	1	10	1	50	79	99	30
Bilge pump	1	5	1	16	40	49	40
Air compressor	1	6	1	16	46.5	49	65
Oil fuel transfer pump	1	1.2	1	2.5	10.7	13.5	80
Oil purifiers	2	0.5	1	2.5		15.5	60-40
Windlass	1	18	1	70	140	150	310
Deck winches	4	15	1	30	116	150	180
Capstan	1	9	1	35	72	78	140
Steering gear motor	1	4	1	16	32	49	100

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
 Electrical Engineers

Electrical Engineers. Date

COMPASSES.

Minimum distance between electric generators or motors and standard compass 17 ft. steering gear motor
17 ft. battery connections.
 Minimum distance between electric generators or motors and steering compass 12 ft. steering gear motor
12 ft. battery connections.

The nearest cables to the compasses are as follows:—

A cable carrying 0.5 Ampères 1.5 feet from standard compass 1 feet from steering compass. compass lights.
 A cable carrying 32 Ampères 1.5 feet from standard compass 10 feet from steering compass. supply to steering gear
 A cable carrying 1.5 Ampères 1.7 feet from standard compass 1.2 feet from steering compass. battery cables.

Have the compasses been adjusted with and without the electric installation at work at full power yes

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted yes

The maximum deviation due to electric currents was found to be nil degrees on every course in the case of the standard compass, and nil degrees on every course in the case of the steering compass.

G. VAN DER GIESSEN & ZONEN'S
 SCHEFFERSWYK
 Builder's Signature. Date

Is this installation a duplicate of a previous case no If so, state name of vessel

General Remarks (State quality of workmanship, whether insulation tests, etc., have been made, opinions as to class, etc.)

The electrical equipment on this vessel has been fitted on board under special survey, tested under full working conditions and found satisfactory. The material and workmanship are good and the installation merits in my opinion the Committee's approval.

Noted
 24
 15/11/39

Total Capacity of Generators 70.5 Kilowatts.

The amount of Fee ... £ 365.00 : When applied for, 7/11/39
 Travelling Expenses (if any) £ 11.00 : When received, 20/12/39 RBY

H. van der Wijk.
 Surveyor to Lloyd's Register of Shipping.

FRI. 17 NOV 1939

Committee's Minute

Assigned See Rot. No. 28639

2m.10.38.—Transfer. (MADE IN ENGLAND.)
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)

