

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

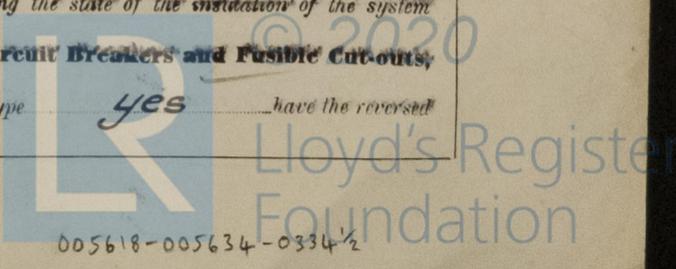
MAR -9 1939

Received at London Office

Date of writing Report 2-3-1939 when handed in at Local Office 10 Port of Rotterdam
 No. in Survey held at Kinderdyk Date, First Survey 10-1-39 Last Survey 28-2-1939
 Reg. Book. on the m.v. "B.P. SPIRIT." (Number of Visits 5)
 Built at Kinderdyk By whom built Messrs. L. Smit & Zn. Yard No. 892 When built 1938/1939
 Owners Messrs. Union Lighterage Co. Port belonging to London.
 Electric Light Installation fitted by Messrs. L. Smit & Zn. Contract No. When fitted 1939
 Is the Vessel fitted for carrying Petroleum in bulk Yes

Tons { Gross 440.48
 Net 234.02

System of Distribution Two conductor insulated system ✓
Pressure of supply for Lighting 110 volts, **Heating** 110 volts, **Power** ✓ volts.
Direct or Alternating Current, Lighting Direct current ✓ **Power** ✓
 If alternating current system, state frequency of periods per second ✓
 Has the **Automatic Governor** been tested and found efficient when the whole load is suddenly thrown on or off Yes
Generators, do they comply with the requirements regarding temperature rise Yes, are they compound wound Yes
 are they over compounded 5 per cent. Yes, if not compound wound state distance between each generator ✓
 Where more than one generator is fitted are they arranged to run in parallel No, is an adjustable regulating resistance fitted in series with each shunt field Yes ✓
 Have certificates of test results for machines under 100 kw. been submitted and approved Yes ✓
 Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing ✓
 Have certificates for generators under 100 kw. been supplied and approved Yes (attached to 1st entry reports of "SHELLSPIRIT-I-II")
 Are all terminals accessible, clearly marked, and furnished with sockets Yes ✓, are they so spaced or shielded that they cannot be accidentally earthed, short circuited, or touched Yes ✓
 Are the lubricating arrangements of the generators as per Rule Yes ✓
Position of Generators in engine room, main generator on portside - aux. generator on starboard side is the ventilation in way of the generators satisfactory Yes ✓ are they clear of all inflammable material Yes ✓ if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the generators ✓ and ✓
 are the generators protected from mechanical injury and damage from water, steam or oil Yes ✓ are their axes of rotation fore and aft Yes ✓
Earthing, are the bedplates and frames of the generating plant efficiently earthed Yes ✓ are the prime movers and their respective generators in metallic contact Yes ✓
Main Switch Boards, where placed in engine room against forward bulkhead
 If the generators and main switchboard are not placed in the same compartment, is each generator provided with a fuse on each insulated pole as near as possible to the terminals of the generator, additional to that provided on the main switchboard ✓
Switchboards, are they placed in accessible positions, free from inflammable gases and acid fumes Yes ✓, are they protected from mechanical injury and damage from water, steam or oil Yes ✓, if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the switchboards Yes ✓
gas tight construction ✓ and ✓, are they constructed wholly of durable, non-ignitable non-absorbent materials Yes ✓, is all insulation of high dielectric strength and of permanently high insulation resistance Yes ✓
 is it of an approved type Yes ✓, if semi-insulating material is used, are all conducting parts insulated from the slab with mica or micaite or other non-hygroscopic insulating material, and the slab similarly insulated from its framework ✓, is the non-hygroscopic insulating material of an approved type Yes ✓, and is the frame effectively earthed Yes ✓
 Are the fittings as per Rule regarding: — spacing or shielding of live parts Yes ✓, accessibility of all parts Yes ✓, absence of fuses on back of board Yes ✓, temperature rise of omnibus bars Yes ✓, individual fuses to voltmeter, pilot or earth lamp Yes ✓, are moving parts of switches alive in the "off" position No ✓
 are all screws and nuts securing connections effectively locked Yes ✓ are any fuses fitted on the live side of switches No ✓
Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches main generator: a double pole rotary switch & double pole fuses — aux. generator: a double pole rotary change over switch & double pole fuses — each outgoing circuit: a double pole rotary switch & double pole fuses. ✓
 Are turbine driven generators fitted with emergency trip switch as per rule ✓ Are cupboard or compartments containing switchboards composed of fire-resisting material or lined with approved material Yes ✓
Instruments on main switchboard 2 ammeters 2 voltmeters ✓
 synchronising device for paralleling purposes. For compound machines is the ammeter connected on the opposite pole to equaliser connection ✓
Earth Testing, state what means are provided at the main switchboard for indicating the state of the installation of the system one pair of earthfault indicating Lamps ✓
 do these comply with the requirements of the Rules. Yes ✓ are the fusible cutouts of an approved type Yes ✓ have the reverse



current protection devices been tested under working conditions are all fuses labelled as per rule **yes**

Joint Boxes, Section and Distribution Boards, is the construction, protection, insulation, material, and position of these as per rule **yes**

Cables: Single, twin, concentric, or multicore all types are the cables insulated and protected as per Tables IV, V, X, XI, XII or XIII of the Rules **yes**

If the cables are insulated otherwise than as per Rule, are they of an approved type **yes**

any point of the installation under maximum load **1 Volts**

Fall of Pressure, state maximum between bus bars and **1 Volts**

Cable Sockets, are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets **yes**

Paper Insulated and Varnished Cambric Insulated Cables, are the cables fixed as far as possible in accessible positions

If conductors are paper or varnished cambric insulated, is the dielectric at the exposed ends of the conductor protected from moisture by being suitably sealed with insulating compound or waterproof insulating tape **yes**

Cable Runs, are the cables fixed as far as possible in accessible positions not exposed to drip or accumulation of water or oil, or to high temperature from boilers, steam pipes, uptakes or other hot objects, or to avoidable risk of mechanical damage **yes** are cables laid under machines or floorplates **no** if so, are they adequately protected **yes**

Are cables in machinery spaces, galleys, laundries, bathrooms and lavatories lead covered or run in conduit **yes**

Support and Protection of Cables, state how the cables are supported and protected **cables are clipped to metal trays or direct to steelwork or woodwork of vessel by metal clips, or run in conduit**

If cables are run in wood casings, are the casings and caps secured by screws are the cap screws of brass are the cables run in separate grooves If armoured and lead covered cables are secured by metal clips, are the clips spaced as per Table VIII **yes**

Refrigerated Chambers, are the cables and fittings in accordance with the special requirements **yes**

Joints in Cables, state if any, and how made, insulated, and protected **none**

Watertight Glands and Deck Tubes, are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands **yes**

Bushes in Beams and Non-watertight Partitions, where unarmoured cables pass through beams and non-watertight partitions, are the holes efficiently bushed **yes** state the material of which the bushes are made **Lead**

Earthing Connections, state what earthing connections are fitted and their respective sectional areas **lead sheath & steel wire braiding of cables and all apparatus earthed where necessary to Rule requirements** are their connections made as per Rule **yes**

Alternative Lighting, are the groups of lights in the propelling machinery space arranged as per Rule **yes** **Emergency Supply**, state position and method of control of the emergency supply and how the generator is driven **by a sk.w. oil driven generator in engine room controlled by a double pole rotary change over switch & double pole fuses on main switch board**

Navigation Lamps, are these separately wired **yes** controlled by separate switch and separate fuses **yes** are the fuses double pole **yes** are the switches and fuses grouped in a position accessible only to the officers on watch **yes, in wheelhouse**

has each navigation lamp an automatic indicator as per Rule **yes** **Secondary Batteries**, are they constructed and fitted as per Rule **yes** are they ventilated as per Rule **yes**

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, watertight **yes (gas tight)** are any fittings placed in spaces in which goods are liable to be stacked in close proximity to them; if so, how are they protected **none**

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected **none**

how are the cables led **yes**

where are the controlling switches situated **yes**

are all fittings suitably ventilated **yes** are all switches and lampholders constructed wholly of non-ignitable, non-absorbent materials **yes**

Heating and Cooking Appliances, are they constructed and fitted as per Rule **yes** are air heaters constructed and fitted as per Rule **yes**

Searchlight Lamps, No. of **none** whether fixed or portable are their fittings as per Rule **yes**

Motors, are their working parts readily accessible are the coils self-contained and readily removable for replacement **yes** are the brushes, brush holders, terminals and lubricating arrangements as per Rule are the motors placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material are they protected from mechanical injury and damage from water, steam or oil are their axes of rotation fore and aft if situated near unprotected woodwork or other combustible material, are the motors of the totally enclosed, pipe ventilated, forced draught, drip or flame proof type if not of this type, state distance of the combustible material horizontally or vertically above the motors and **yes**

have machines of over 100 BHP been inspected by the Surveyors during manufacture and testing have certificates for all motors for essential services been supplied and approved **yes**

Control Gear and Resistances, are the generator field and motor speed regulators, starters and controllers constructed and fitted as per Rule **yes**

Lightning Conductors, where lightning conductors are required, are these fitted as per Rule **yes** **Ships carrying Oil having a Flash Point less than 150° F.** Have the special requirements of the Rules been complied with regarding switches, joint boxes, section and distribution boards, protection of cables, method of distribution, lead of cables, lights and fittings **yes** are all fuses of the filled cartridge type **yes** are they of an approved type **yes**

If portable lamps for use in dangerous spaces are supplied, are they of a self-contained, battery-fed flameproof type approved for use in dangerous spaces **yes**

Spare Gear, if the vessel is for open sea service have spares been supplied as per Rule **yes** are they suitably stored in dry situations **yes**

DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Amps.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	1	16	110	145	750	Oil engine	diesel oil	Above 150°F
AUXILIARY						"	"	"
EMERGENCY	1	3	115	26	1250	"	"	"
ROTARY TRANSFORMER								

DESCRIPTION.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		Approximate Length (Lead and Return) Feet.	Insulated with	HOW PROTECTED.
	No. per Pole.	Total Nominal Area per Pole Sq. mm/m ²	No.	Diameter m.m.	Circuits.	Rule.			
MAIN GENERATOR	1	95	19	2.57	145	150	39	rubber	Lead sheath & Steel wire braiding
EQUALISER CONNECTIONS									
AUXILIARY GENERATOR									
EMERGENCY GENERATOR	1	10	7	1.37	26	38	30	"	"
ROTARY TRANSFORMER (GENERATOR)									
ENGINE ROOM (2 circuits)	1	1.5	1	1.39	3.5	9.5	90	"	"
BOILER ROOM									
AUXILIARY SWITCHBOARDS									
Galley range	1	16	7	1.75	45	49	60	"	"
Hot water boiler dist. tra.	1	6	7	1.05	16.5	29	60	"	"
Navigation board	1	1.5	1	1.39	2	9.5	100	"	"
Cux. navigation board	1	1.5	1	1.39	2	9.5	100	"	"
ACCOMMODATION									
Lighting (2 circuits)	1	1.5	1	1.39	3	9.5	100	"	"
WIRELESS									
SEARCHLIGHT									
MASTHEAD LIGHT	1	1.5	1	1.39	4	9.5	70	"	"
SIDE LIGHTS	1	1.5	1	1.39	4	9.5	20 30	"	"
COMPASS LIGHTS	1	1.5	1	1.39	2	9.5	8	"	"
POOP LIGHTS	1	1.5	1	1.39	4	9.5	110	"	"
CARGO LIGHTS									
HEATERS (9 circuits)	1	2.5	1	1.79	6	15.5	60	"	"

DESCRIPTION.	No. of Motors.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		Approximate Length (Lead and Return) Feet.	Insulated with	HOW PROTECTED.
		No. Per Pole.	Total Nominal Area per Pole Sq. mm/m ²	No.	Diameter m.m.	In Circuit.	Rule.			
BALLAST PUMP										
MAIN BILGE LINE PUMPS										
GENERAL SERVICE PUMP										
EMERGENCY BILGE PUMP										
SANITARY PUMP										
CIRC. SEA WATER PUMPS										
CIRC. FRESH WATER PUMPS										
AIR COMPRESSOR										
FRESH WATER PUMP										
ENGINE TURNING GEAR										
ENGINE REVERSING GEAR										
LUBRICATING OIL PUMPS										
OIL FUEL TRANSFER PUMP										
WINDLASS										
WINCHES, FORWARD										
WINCHES, AFT										
STEERING GEAR—										
(a) MOTOR GENERATOR										
(b) MAIN MOTOR										
WORKSHOP MOTOR										
VENTILATING FANS										
Bailer I	1	1	2.5	1	1.79	5.5	15.5	60	rubber	Lead sheath & Steel wire braiding
Bailer II	1	1	4	7	.86	11	22.5	60	"	"
Galley range circuits	1	1	4	7	.86	16.5	22.5	5	"	"
" " "	4	1	2.5	1	1.79	11	15.5	5	"	"

The Electrical Equipment is installed in accordance with the approved plans.
 All Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.
 The foregoing is a correct description.

J. SMIT & ZOON'S
 Scheeps- en Werktuigbouw N.V.
 Engelen- en Dijkhuizen.

J. C. H. Smit
 Electrical Engineers.

Electrical Engineers.

Date

COMPASSES.

Minimum distance between electric generators or motors and standard compass

Minimum distance between electric generators or motors and steering compass

36 feet (Lighting generator)

The nearest cables to the compasses are as follows:—

A cable carrying 2 Ampères feet from standard compass 1 feet from steering compass. Compass Light

A cable carrying 2 Ampères feet from standard compass 4 feet from steering compass. navigation Lights

A cable carrying 2 Ampères feet from standard compass 3 feet from steering compass. Lighting wheelhouse

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.

J. SMIT & ZOON'S
 Scheeps- en Werktuigbouw N.V.
 Engelen- en Dijkhuizen.

J. C. H. Smit
 Builder's Signature.

Builder's Signature.

Date

Is this installation a duplicate of a previous case **yes** If so, state name of vessel **ms. "SHELL SPIRIT I"**

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

The electrical equipment of 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
 H. J.
 18/3/39*

Total Capacity of Generators **19** Kilowatts.

The amount of Fee ... **£ 204,00** : When applied for, **8. 3. 39.**

Travelling Expenses (if any) **£ 3,00** : When received, **24. 3. 39/24/3**

H. P. van der Wijk

Surveyor to Lloyd's Register of Shipping.

Committee's Minute **TUE. 14 MAR 1939**

Assigned **See FE. made up**

2m. 12.38.—Transfer. The Surveyors are requested not to write on or below the space for Committee's Minute



© 2020

Lloyd's Register Foundation