

Rpt. 13.

/E.

No. 114638

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 11 SEP 1957

Date of writing Report 30th July, 1957 When handed in at Local Office 9/8/1957 Port of NEWCASTLE-ON-TYNE

No. in Survey held at South Shields Date, First Survey 18th June Last Survey 30th July, 1957
Reg. Book. (No. of Visits 9)

on the M.V. "SEISTAN" Tons Gross 7440 Net 4334

Built at South Shields By whom built John Readhead & Sons Ltd Yard No. 592 When built 1957

Owners Strick Line Ltd. Port belonging to London (British).

Installation fitted by John Readhead & Sons Ltd. When fitted 1957

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. No Radar Yes

Plans, have they been submitted and approved Yes System of Distribution Two wire Voltage of Lighting 220V.

Heating - Power 220V. D.C. or A.C., Lighting D.C. Power D.C. If A.C. state frequency -

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 Yes, and level compounded under working conditions Yes

Are the generators arranged to run in parallel Yes Is the compound winding connected to the negative or positive pole Negative

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

under 100 kw. been supplied and the results found as per Rule Yes Position of Generators Engine Room Floor

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 Raised platform above

generators.

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 Interohm, 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 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 circuit breaker fitted with overload & reverse current trips and no volt release.

and the switch and fuse gear (or circuit breakers) for each outgoing circuit Double pole circuit breakers fitted with overload trips or double pole switches and fuses.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard 3

ammeters 3 voltmeters - synchronising devices. For compound machines in parallel are the ammeters and reverse current

protection devices connected on the pole opposite to the equaliser connection Yes Earth Testing, state means provided

Earth lamps. Preference Tripping, state if provided Yes, and tested Yes

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

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

overload do they operate Tested at 100% F.L. set at 150% F.L., and at what current do the reverse current protective-

devices operate 15% F.L. 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 Less than 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 V.C.L.C.B. & V.I.R. L.C.B., galleys V.I.R. L.C.B.

and laundries V.I.R. L.C.B. State how the cables are supported or protected Cables fwd. & aft through galv.

pipes on deck with cable change boxes in mids., acc. passage. Accom., & machinery spaces

cables clipped to galv., tray metal work or woodwork and protected where 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 Yes

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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Lloyd's Register
Foundation

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Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule Yes Emergency Supply, state position -

Navigation Lamps, are they separately wired Yes controlled by separate double pole switches 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 Is an alternative supply provided -

Secondary Batteries, are they constructed, fitted and adequately ventilated as per Rule - state battery capacity in ampere hours - Where required to do so does it comply with 1948 International Convention -

Lighting, is fluorescent lighting fitted No If so, state nominal lamp voltage - and compartments where lamps are fitted -

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof Yes

Searchlights, No. of - whether fixed or portable - are they of the carbon arc or of the filament type -

Heating and Cooking, is the general construction as per Rule Yes are the frames effectually earthed Yes are heaters in the accommodation of the convection type - Motors, are all motors constructed and installed as per Rule and placed in well-ventilated compartments in which inflammable gases cannot accumulate and protected from damage from water, steam and oil Yes

Are motors coupled to oil fuel transfer and pressure pumps capable of being stopped from a position accessible in the event of fire in the pump compartment Yes 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 sea services been supplied and the results found as per Rule -

Lightning Conductors, where required are they fitted as per Rule Steel masts & topmasts.

Ships carrying Oil having a Flash Point of less than 150° F. Have all the special requirements of the Rules for such ships been complied with - are all fuses of an Approved Cartridge Type - make of fuse - Are the fittings for pump rooms, 'tween deck spaces, etc., in accordance with the special requirements for such ships - Are all cables lead covered as per Rule -

E.S.D., if fitted state maker Kelvin Hughes location of transmitter and receiver Aft end No.1 Hold Frs. 155-156.

Spare Gear, if the vessel is for open sea service have spares been provided as per Rule and suitably stored in dry situations Yes

Insulation Tests, has the insulation resistance of all circuits and apparatus been tested and found satisfactory Yes

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	MAKER.	RATED AT				PRIME MOVER.	
			Kw. per Generator.	Volts.	Ampères.	Revs. per Min.	TYPE.	MAKER.
MAIN	3	Clarke, Chapman & Co. Ltd.,	80	220	364	500	Steam	Clarke, Chapman & Co. Ltd.
EMERGENCY ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	No. of	Kw.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
			No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR	3	80	1	37/.103	364	✓ 408	84	V.C.	L.C.B.
" " EQUALISER				37/.072	-	✓ 260	84	V.C.	L.C.B.
EMERGENCY GENERATOR									
ROTARY TRANSFORMER: MOTOR									
" " GENERATOR									

MAIN DISTRIBUTION CABLES (to Auxiliary Switchboards, etc.).

DESCRIPTION.									
<u>FROM MAIN S.W. BOARD.</u>									
Air Conditioning Pumps			1	19/.064	91 ✓ 143	220	V.C.	L.C.B.	
Cargo Refrig. Machinery			1	19/.083	130 ✓ 202	240	V.C.	L.C.B.	
Shore Conn. Box			1	37/.083	300 / 314	170	V.C.	L.C.B.	

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

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands Sq. Ins. or sq. mm.	In the Circuit.	Rule.			
<u>FED FROM MAIN S.W. BOARD.</u>							
Cargo LTG. S.B. M.N.1.	1	19/.064	66 ✓	143	132	V.C.	L.C.B.
Dg. Emergency Supply.	1	19/.052	106 ✓	110	42	V.C.	L.C.B.
Laundry Power. D.B. N.G.1.	1	2c-7/.044	20 ✓	31	304	V.I.R.	L.C.B.
Power Passengers Accom.D.B. N.L.1.	1	19/.052	59 ✓	110	212	V.C.	L.C.B.
Power Boat Winches. S.B. N.H.1.	1	19/.044	42 ✓	92	260	V.C.	L.C.B.
Radar Supply.	1	2c-7/.036	15 ✓	24	206	V.I.R.	L.C.B.
Radio Supply.	1	2c-7/.064	12 ✓	46	372	V.I.R.	L.C.B.
Gyro Supply.	1	2c-7/.036	8 ✓	24	206	V.I.R.	L.C.B.
Engine Room Power. S.B. N.K.1.	1	7/.064	61 ✓	80	104	V.C.	L.C.B.
Accommodation VentilationS.B.N.B.1.	1	19/.052	87 ✓	110	260	V.C.	L.C.B.
Lighting Aft. S.B. N.S.	1	19/.052	41 ✓	110	680	V.C.	L.C.B.
Lighting Midships. S.B. N.T.	1	7/.064	50 ✓	80	270	V.C.	L.C.B.
Lighting Midships. S.B. N.Q.1.	1	19/.064	91 ✓	143	132	V.C.	L.C.B.
Lighting Engine&Blr.Rooms S.B.E.V.1.	1	2c-7/.064	46 ✓	46	104	V.I.R.	L.C.B.
Lighting Main Engine. D.B. E.R.1.	1	2c-7/.029	11 ✓	15	126	V.I.R.	L.C.B.
Diesel & Lub.Oil Purifiers.S.B.E.X.1.1	1	2c-7/.044	15 ✓	31	172	V.I.R.	L.C.B.
Navigation Supply. D.B. E.Q.1.	1	2c-7/.044	12 ✓	31	336	V.I.R.	L.C.B.
Water Press Pumps. D.B. E.S.1.	1	2c-7/.044	15 ✓	31	116	V.I.R.	L.C.B.
Engine Room VentilationD.B. E.W.1.	1	19/.044	74 ✓	92	104	V.C.	L.C.B.
Heavy Oil Purifiers. D.B. E.Y.1.	1	7/.064	75 ✓	80	178	V.C.	L.C.B.
Suez Canal Projector.	1	7/.044	15	31	550	V.I.R.	L.C.+V.I.R. in conduit.
Domestic Refrig.Machinery.S.B. N.R.1.1	1	7/.064	24 ✓	80	240	V.C.	L.C.B.
<u>FED FROM SECT.BOX. N.M.1.</u>							
Cargo LTG. D.B. N.M.2.	1	7/.036	13 ✓	24	514	V.I.R.	In Conduit.
Cargo LTG. D.B. N.M.3.	1	2c-7/.036	17 ✓	24	228	V.I.R.	L.C.B.
Cargo LTG. D.B. N.M.4.	1	2c-7/.044	16 ✓	31	232	V.I.R.	L.C.B.
Cargo LTG. D.B. N.M.5.	1	7/.044	20 ✓	31	416	V.I.R.	In Conduit.

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.						
<u>FED FROM MAIN S.W. BOARD.</u>								
Air Cond. Compressors.	2	40	1	19/.083	150 ✓	202	260	V.C. L.C.B.
Turning Gear Motor.	1	15	1	7/.064	59 ✓	80	254	V.C. L.C.B.
Fuel Valve Cooling Pumps.	2	3/4	1	2c-3/.036	5 ✓	10	190	V.I.R. L.C.B.
Forced Draught Fans.	2	5	1	2c-7/.044	21 ✓	31	300	V.I.R. L.C.B.
Steering Gear Motors.	2	25	1	19/.083	95 ✓	118	720	V.I.R. Conduit
Fuel Priming Pump.	1	1.5	1	2c-7/.029	8 ✓	15	210	V.I.R. Conduit
Piston Cooling Pumps.	2	25	1	19/.052	95 ✓	110	138	V.C. Conduit
<u>FED FROM SECT. BOX N.H.1.</u>								
Boat Winches.	4	5	1	2c-7/.044	21 ✓	31	178/76	V.I.R. L.C.B.
<u>FED FROM DIST. BOX N.K.3.</u>								
Engine Room Crane.	1	3	1	2c-7/.036	13 ✓	24	122	V.I.R. L.C.B.
Lathe.	1	1.5	1	2c-3/.036	8 ✓	10	70	V.I.R. L.C.B.
Drill.	1	1.5	1	2c-3/.036	8 ✓	10	80	V.I.R. L.C.B.
Grinder.	1	.75	1	2c-3/.036	5 ✓	10	80	V.I.R. L.C.B.
<u>FED FROM DIST.BOX N.K.2.</u>								
Heavy Oil Fuel Circ.Pump.	1	2	1	2c-3/.036	9 ✓	10	74	V.I.R. L.C.B.
Fresh Water Pumps.	2	.75	1	2c-3/.036	5 ✓	10	114	V.I.R. L.C.B.
Sanitary Pump.	1	1.5	1	2c-7/.036	8 ✓	24	400	V.I.R. L.C.B.
<u>FED FROM SECT. BOX N.B.1.</u>								
Air Cond. Fan Motors.	3	4.25	1	2c-7/.036	19 ✓	24	300	V.I.R. L.C.B.
Exhaust Fan.	1	3	1	2c-7/.029	13 ✓	15	220	V.I.R. L.C.B.
Thermotank Fan.	1	4.25	1	7/.064	19 ✓	46	500	V.I.R. L.C.B.+V.I.R. in conduit
<u>FED FROM SECT. BOX E.X.1.</u>								
Lub. Oil Purifier.	1	3.5	1	2c-7/.029	15 ✓	15	62	V.I.R. L.C.B.
Diesel Oil Purifier.	1	3.5	1	2c-7/.029	15 ✓	15	82	V.I.R. L.C.B.
<u>FED FROM DIST. BOX E.S.1.</u>								
Fresh & Salt Water Pumps.	3	1.5	1	3/.036	8 ✓	10	44	V.I.R. L.C.B.
<u>FED FROM E.R.VENT DIST.BOX E.W.1.</u>								
E.R. & B.R. Vent Fans.	6	2.5	1	2c-7/.036	12 ✓	15	340	V.I.R. L.C.B.
Purif.Room Exhaust Fan.	1	.5	1	2c-3/.036	3 ✓	10	110	V.I.R. L.C.B.
<u>FED FROM PURIFIER SECT.BOX E.Y.1.</u>								
Heavy Oil Purifiers.	3	3.75	1	2c-7/.036	17 ✓	24	126	V.I.R. L.C.B.
Heavy Oil Purifiers.	3	1.5	1	2c-3/.036	7 ✓	10	126	V.I.R. L.C.B.
<u>FED FROM AIR COND. MACH. SUB. S.W. BOARD.</u>								
Chilled Water Pumps.	2	5	2	2c-7/.036	42 ✓		90	V.I.R. L.C.B.

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.

For JOHN READHEAD & SONS, LTD.

[Signature]
MANAGING DIRECTOR

Electrical Contractors.

Date 8.8.57

COMPASSES.

Have the compasses been adjusted under working conditions.

YES

For JOHN READHEAD & SONS, LTD.

[Signature]
MANAGING DIRECTOR

Builder's Signature.

Date 8.8.57

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.)

Total Capacity of Generators 240 Kilowatts.

The amount of Fee ... £ 78 : 0 :

When applied for,

19.57

When received,

19.

Travelling Expenses (if any) £ :

[Signature]
Surveyor to Lloyd's Register of Shipping.

FRIDAY 27 SEP 1957

Committee's Minute

Assigned

[Signature]