

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

6 JUL 1959

Date of writing Report 5-6-1959 When handed in at Local Office 18-6-1959 Port of NANTES
 No. in Survey held at BREST Date, First Survey 16/10/1958 Last Survey 28/4/59
 Reg. Book. (No. of Visits 19) 23997

on the S/T "ESSO-NORWICH" Tons { Gross 23997
 Net —
 Built at ARSENAL DE BREST By whom built ATELIERS & Ch. DE FRANCE Yard No. 227 When built 1959
 Owners ESSO-PETROLEUM C° Port belonging to LONDON
 Installation fitted by ATELIERS & CHANTIERS DE FRANCE - DUNKERQUE When fitted 1959
 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. — Radar YES

Plans, have they been submitted and approved YES System of Distribution 3 PHASE - 3 WIRE INSULATED Voltage of Lighting 115V
 Heating — Power 440V D.C. or A.C., Lighting AC Power AC If A.C. state frequency 60 Hz
 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 TURBO ALTERNATORS STBD SIDE
ENGINE ROOM FLAT - OIL ENGINE DRIVEN ALTERNATOR
 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 S.S. FWD ALTERNATORS

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 3 POLE LINKED CIRCUIT BREAKER WITH OVERLOAD TRIPS AND UNDER LOW VOLTAGE RELEASE, ACTUATED BY REVERSE POWER RELAY

and the switch and fuse gear (or circuit breakers) for each outgoing circuit 3 POLE LINKED CIRCUIT BREAKER WITH OVERLOAD TRIPS

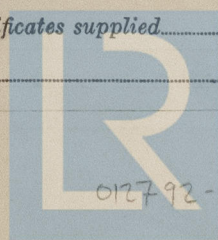
Are compartments containing switchboards composed of fire-resisting material or lined as per Rule YES Instruments on main switchboard 3
 ammeters 3 voltmeters 2 synchronising devices. For compound machines in parallel are the ammeters and reverse current protection devices connected on the pole opposite to the equaliser connection YES Earth Testing, state means provided LAMPS
 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 ARTIC, are all fuses labelled YES If circuit breakers are provided for the generators, at what overload do they operate 150% OVERLOAD, and at what current do the reverse current protective devices operate 3% IN 15 SEC. 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 < 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 ARMoured LEAD COV. V.C., galleys PYROTEXAX and laundries — State how the cables are supported or protected MAIN LC & MB SUPPORTED BY CLEATS SECURED TO STEEL CHANEL UNDER GANGWAY. MACHY SPACE LC & MB CLIPPED TO STEEL PERFORATED PLATE SUPPORTS & CLIPPED ON SUPPORTS ATTACHED TO STRUCTURE. ACCOMMODATION LC & MB CLIPPED TO SUPPORTS

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 DOMESTIC YES
 Have refrigeration fan motors been constructed under survey — and test certificates supplied —
 Are the motors accessible for maintenance at all times YES



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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 DIESEL GENERATOR

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 YES

GENERAL ALARM SYSTEM BATTERIES
Secondary Batteries, are they constructed, fitted and adequately ventilated as per Rule YES state battery capacity in ampere hours 100 AMP/HRS. Where required to do so does it comply with 1948 International Convention YES

Lighting, is fluorescent lighting fitted YES If so, state nominal lamp voltage 115V and compartments where lamps are fitted ALLEYWAYS - OFFICERS & CREW'S MESS ROOMS - ENGINE ROOM

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 1, whether fixed or portable FIXED, are they of the carbon arc or of the filament type CARBON ARC

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 YES 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 YES

Have certificates of test for motors under 100 BHP intended for essential sea services been supplied and the results found as per Rule YES

Lightning Conductors, where required are they fitted as per Rule YES

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 YES, are all fuses of an Approved Cartridge Type YES, make of fuse ARTIC Are the fittings for pump rooms, 'tween deck spaces, etc., in accordance with the special requirements for such ships YES Are all cables lead covered as per Rule YES

E.S.D., if fitted state maker YES Location of transmitter and receiver FR. 113 - 114

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.	Amps.	Revs. per Min.	TYPE.	MAKER.
MAIN	2	S ^{TE} ALSTHOM BELFORT	750	450	1230	1200	ST. TURB.	S ^{TE} ALSTHOM BELFORT
EMERGENCY ROTARY TRANSFORMER	1	SÜDDEUTSCHE BREMSEN AG MÜNCHEN	140	450	230		D.O. ENG.	SÜDDEUTSCHE BREMSEN AG MÜNCHEN

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	2	750	6//	3 x 200 ⁰	1230	6 x 293		VC	LC & MB
" EQUALISER									
EMERGENCY GENERATOR	1	140	2//	3 x 75	230	2 x 154			
ROTARY TRANSFORMER: MOTOR									
" GENERATOR									

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

DESCRIPTION.									
N ^o 1 st Boiler Room Power	From MAIN SWBD	1	3 x 14 ⁰	48	55	40	VC	LC & MB	
ENG. ROOM VENTILATION	"	1	3 x 50	76	118	20	"	"	
BLR ROOM VENTILATION	"	1	3 x 50	76	118	35	"	"	
SHORE CONNECTION	"	2//	3 x 150				"	"	
N ^o 1 P th Eng. Room Power	"	1	3 x 30	60	84		"	"	
N ^o 2 " " " "	"	1	3 x 22	46.4	68	30	"	"	
STEERING GEAR S th MOTOR STARTER	"	1	3 x 75	101	155	75	"	"	
" " " " " "	"	1	3 x 75	101	155	75	"	"	
N ^o 2 S th BLR ROOM POWER	"	1	3 x 60	89.4	133	40	"	"	
AFT ENG. ROOM POWER	"	1	3 x 22	43.6	68	35	"	"	
P th & S th AFT QUARTER AIR CONDIT.	"	1	3 x 95	130	180	60	"	"	
ENGINEER'S WORK SHOP	"	1	3 x 5.5	18	23	40	"	"	
REFRIGERATING PLANT	"	1	3 x 10	30	45	65	"	"	
P th & S th AFT QUARTER AIR CONDIT.	"	1	3 x 95	130	180		"	"	

Rpt. 13 (cont).

MAIN DISTRIBUTION CABLES (CONT)

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.			
END DISTRIB ⁿ PANEL FROM MAIN SWBD	1	3 x 60 ⁰	75	133		VC	LC & MB
3 x 15 th 440/115 th TRANSFO.	1	3 x 30	44	84	20	"	"
AIR CONDIT. FWD QUARTER	1	3 x 22	49	68		"	"
3 x 25 th 440/220 th TRANSFO.	1	3 x 60	75	133		"	"
3 x 20 th 440/115 th TRANSFO.	1	3 x 95	120	180	75	"	"
EMERG ^y FIRE, COND ^r & SAN. PP. FR. EMERG ^y SWBD.	1	3 x 22	47	68		"	"
STORE PANTRY	1	3 x 10	30	45	150	"	"
BOAT WINCHES	1	3 x 10	18	45	145	"	"
SUEZ CANAL SEARCH LIGHT	2//	3 x 5.5	14	23	7	"	"
EMERG ^y D.O. GENERATOR TO		3 x 75	230	250		"	"

MOTOR CABLES (CONT)

DESCRIPTION.	N ^o	BHP	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.			
AIR COMPRESSOR	1	16	1	3 x 6.5 ⁰	21.7	23	15	VC	LC & MB
SANITARY PUMP	1	10	1	3 x 3.5	13	18	5	"	"
DRINK ^g WAT. PUMP	1	1.5	1	3 x 3.5	2.4	18	10	"	"
MAKE UP EVAP ^r FEED PUMP	1	1.8	1	3 x 3.5	2.9	18	15	"	"
WASH WAT. PUMP	1	1.5	1	3 x 3.5	2.4	18	5	"	"
HOT FRESH WAT. PUMP	1	0.75	1	3 x 3.5	1.25	18	10	"	"
EMERG ^y FIRE, COND ^r SANIT. PUMP	1	40	1	3 x 2.2	4.7	68	6	"	"
AIR COMPRESSOR	1	16	1	3 x 5.5	21.7	23	10	"	"
SANITARY PUMP	1	10	1	3 x 3.5	13	18	8	"	"
DRINK ^g WAT. PUMP	1	1.5	1	3 x 3.5	2.4	18	30	"	"
BOIL. COMP. PUMP	1	1.8	1	3 x 3.5	2.9	18	15	"	"
WASH WAT. PUMP	1	1.5	1	3 x 3.5	2.4	18	20	"	"
OFFICER'S QUARTER EXH. FAN	1	2	2	3 x 3.5	3	18	50	"	"
GALLEY EXH. FAN	1	2	2	3 x 3.5	12	18	8	"	"
P th AFT AIR CONDIT. UNIT	1	37	1	3 x 2.2	4.7	68	35	"	"
CONDIT. PLANT FRESH W. PUMP	2	3	1	3 x 3.5	4.2	18	20	"	"
S th SANIT. EXH. FAN	1	1.5	2	3 x 3.5	3	18	8	"	"
SUPPLY FAN	1	1.5	1	3 x 2.2	4.7	68	50	"	"
P th AFT AIR CONDIT. COMPRESSOR	1	37	1	3 x 3.5	12	18	8	"	"
S th AFT AIR CONDIT. UNIT	1	37	1	3 x 2.2	4.7	68		"	"
S th AFT AIR CONDIT. COMPRESSOR	1	37	1	3 x 3.2				"	"
FANS FOR REFRIG ^y PLANT	3	0.5	1	3 x 3.5			8	"	"
P th & S th REFRIG ^y COMPRESSORS	2	11	1	3 x 3.5	5.3	18	6	"	"
LATHE	1	4.5	1	3 x 3.5	4.2	18	5	"	"
SHAPING MACHINE	1	4	1	3 x 3.5	2.3	18	8	"	"
DRILLING MACHINE	1	1.5	1	3 x 3.5	3	18	6	"	"
GRINDER	1	3	1	3 x 10	33	45	6	"	"
FWD AIR CONDIT. COMPRESSOR	1	28	1	3 x 3.5	9	18	8	"	"
FWD AIR CONDIT. UNIT	1	6	2	3 x 3.5	3	18	6	"	"
EXHAUST FAN	1	2	2	3 x 3.5	1.65	18		"	"
CONDIT. PLANT WAT. PP.	2	1	1	3 x 3.5				"	"

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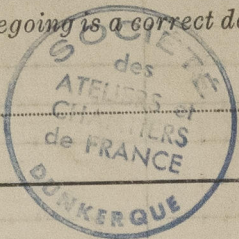
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The Electrical Equipment is installed in accordance with the approved plans and the requirements of the Rules.

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.



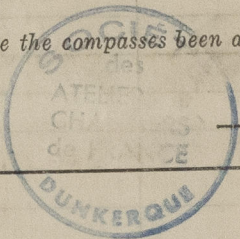
Electrical Contractors.

Date 15/6/59

COMPASSES.

Have the compasses been adjusted under working conditions.

YES



Builder's Signature.

Date 15/6/59

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

YES

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

Plans. Are approved plans forwarded herewith. YES If not, state date of approval. 23-6-58

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 installation of this vessel has been constructed & installed under Special Survey in accordance with approved plans, rule requirements & Secretary's letters.

The quality of material & workmanship is good.

The electrical installation has been examined under full working conditions (including insulation test) with satisfactory results.

The electrical installation is in my opinion eligible to be classed as part of the machinery installation with the notation + LMC 5-59

Total Capacity of Generators. 16.40 Kilowatts.

The amount of Fee ...
INSTALLATION

£394.375

When applied for,

19

When received,

19

Travelling Expenses (if any) £ 90.000 :

Surveyor to Lloyd's Register of Shipping.

Committee's Minute.

IFRIDAY 21 AUG 1959

Assigned

See Rpt. 1.