

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

28 FEB 1944

Escorted at London Office.....

Date of writing Report. 25-1-44 When handed in at Local Office. 20 FEB 1944 Port of Newcastle-upon-Tyne

No. in Survey held at Blyth Date, First Survey 8-6-43 Last Survey 24-1-1944
Reg. Book. (Number of Visits.....)

23818 on the M/V. "ERODONA" Tons { Gross 6356
Net 3588

Built at KRIMPEN By whom built NYC. VAN DER GLESSEN ZONEN'S SCHIPS. Yard No. - When built 1937

Owners Anglo-Saxon Petroleum Co. Ltd Port belonging to London

Electrical Installation fitted by Sundeland Forge & Engineering Ltd Contract No. 225 When fitted 1943-4

Is vessel fitted for carrying Petroleum in bulk 40 Is vessel equipped with D.F. 40 E.S.D. 40 Gy.C. 40 Sub.Sig. No.

Have plans been submitted and approved 40 System of Distribution Two-Wire insulated Voltage of supply for Lighting 110

Heating - Power 110 Direct or Alternating Current, Lighting 40 Power 40 If Alternating Current state periodicity - Prime Movers,

has the governing been tested and found as per Rule when full load is suddenly thrown on and off 40 Are turbine emergency governors fitted with a

trip switch as per Rule - Generators, are they compound wound 40, are they level compounded under working conditions 40,

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 40 Is the compound winding connected to the negative or positive pole

positive Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing 40 Have certificates of

test for machines under 100 kw. been supplied 40 and the results found as per rule 40 Are the lubricating arrangements and the construction

of the generators as per rule 40 Position of Generators engine room floor level starboard side

is the ventilation in way of generators satisfactory 40 are they clear of inflammable material 40, 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 40, are the bedplates and frames earthed 40 and the prime movers and generators in metallic

contact 40 Switchboards, where are main switchboards placed engine room, adjacent to main generators

are they in accessible positions, free from inflammable gases and acid fumes 40, are they protected from mechanical injury and damage from water, steam

and oil 40, if situated near unprotected combustible material state distance from same horizontally - and vertically - what insulation

material is used for the panels. Ebon "Sindango" if of synthetic insulating material is it an Approved Type 40, if of

semi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule - Is the frame effectually earthed 40

Is the construction as per Rule 40, including accessibility of parts 40, absence of fuses on the back of the board 40, individual fuses

to pilot and earth lamps, voltmeters, etc. 40 locking of screws and nuts 40, labelling of apparatus and fuses 40, fuses on the "dead"

side of switches 40 Description of Main Switchgear for each generator and arrangement of equaliser switches a double-pole single-

throw quick-break knife switch and double-pole fuse: a double-pole quick-break knife

switch for supplying D.F. from either generator.

and for each outgoing circuit a double-pole, double-throw quick-break knife switch and double-

pole fuse.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule 40 Instruments on main switchboard Two

ammeters Two 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 E lamps coupled to E through bus & fuses

Switches, Circuit Breakers and Fuses, are they as per Rule 40, are the fuses an approved type 40, are all fuses labelled as

per Rule 40 If circuit breakers are provided for the generators, at what overload current did they open when tested - are the reversed current

protection devices connected on the pole opposite to the equaliser connection - have they been tested under working conditions, and at what current

did they operate - Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule 40

Cables, are they insulated and protected as per the appropriate Tables of the Rules 40, 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 > 6.6 V. are the ends of all cables having a sectional area of 0.02

square inch and above provided with soldering sockets 40 Are paper insulated and varnished cambric insulated cables sealed at the ends 40



with insulating compound — or waterproof insulating tape 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 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. In machinery spaces, drop deck runways etc. V.C.L.R. cables clipped to the surface of beams or steel trussings perforated metal trays. In accommodation L.C. cables clipped to the surface and protected where necessary with metal guards.

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. —

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. —, are they adequately ventilated. —

what is the battery capacity in ampere hours. —

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. yes, if so, how are they protected. In combustible "Wigan" flammings of lighting fittings installed

and where are the controlling switches fitted. on Workshop panel in Officers Quarters, 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. —. Are motors coupled to oil fuel transfer and unit pressure pumps capable of being stopped from a position accessible in the event of fire in the pump compartment. modified

Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing. none fitted. 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. none fitted. 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. yes, are all fuses of the cartridge type. yes

are they of an approved type. yes. Are the fittings for pump rooms, tween deck spaces, etc., in accordance with the special requirements for such ships. yes. Are the cables lead covered as per Rule. yes. 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 tested and found satisfactory. yes.

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	RATED AT				Revs. per Min.	DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Ampères.	Revs. per Min.			Fuel Used.	Flash Point of Fuel.
MAIN	1	30	110	273	675	Angle Cylinder Vertical Steam Engine			
	1	30	110	273	675	Cylinder Horizontal-Horizontal Port Diesel	oil	about 150°	
EMERGENCY						Diesel Engine			
ROTARY TRANSFORMER									

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
		No. in Parallel Per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR	30	1	37/083	273	296	40	V.C.	L.C.A.
" " Diesel	30	1	37/083	273	296	32	V.C.	L.C.A.
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

MAIN DISTRIBUTION CABLES.

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
	No. in Parallel Per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
AUX. SWITCHBOARDS AND SECTION BOARDS							
Workshop Section Board	1	37/103	30	385	468	V.C.	L.C.A.+B.
Engine Room Lighting S.B.	1	19/064	25	135	60	"	L.C.A.
Upper Deck aft S.B.	1	7/044	15	42	144	"	"
Engine Room Power S.B.	1	37/083	68	296	60	"	"
Store Connection Box	1	19/064	-	135	144	"	"

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS (off Main Switchboard)	1	19/064	-	135	626	V.C.	L.C.A.
NAVIGATION LIGHTS	1						
" " Main	1						
" " alternative - off Main Sec. Board	1	7/044	12	42		V.C.	L.C.
LIGHTING AND HEATING							
aft Cargo Lighting S.B.	1	7/044	25	42	144	"	L.C.A.
Emergency W/T. Supply (off Main Panel)	1	19/064	-	135	198	"	"
H.E.D.F. Supply	1	19/064	-	135	240	"	"
Workshop Motor S.B.	1	19/064	56	135	270	"	"
Boiler Charging Circuit	1	7/036	-	27	240	"	"

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.						
Main Oil Pump (off ER Power S.B.)	1	2	1	7/036	19	28	36	V.C. L.C.A.
Tank "	1	2	1	7/036	17	28	74	" "
Fuel Priming Pump	1	1.5	1	7/036	13.5	28	74	" "
Vulcan Cooling Pump	1	2	1	7/036	19	28	66	" "
Lathe W/T (off Workshop M. S.B.)	1	2	1	7/044	17.7	42	66	" "
Drilling W/T	1	3	1	7/044	26	42	74	" "
Grinder W/T	1	2	1	7/044	17	42	94	" "
Crane Motor	1	3	1	7/044	26	42	102	" "

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.

P. PRO THE SUNDERLAND FORGE & ENGINEERING CO., LTD.

A. S. Gurney

Electrical Engineers.

Date 26-1-1944

COMPASSES.

Minimum distance between electric generators or motors and standard compass 26'

Minimum distance between electric generators or motors and steering compass 34'

The nearest cables to the compasses are as follows:—

A cable carrying 14 Ampères 7 feet from standard compass or 7 1/2 feet from steering compass.

A cable carrying 14 Ampères on 7 1/2 feet from standard compass 7 feet from steering compass.

A cable carrying _____ Ampères _____ feet from standard compass _____ feet from steering compass.

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 any course in the case of the standard compass, and nil degrees on FOR ANY COURSE course in the case of the steering compass.

ELTHAM DRY DOCKS & SHIPBUILDING CO., LTD.

W. W. Turnbull

Builder's Signature.

Date 29-1-1944

Reconstructed Tanker

Director & General Manager.

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

Plans. Are approved plans forwarded herewith no If not, state date of approval 22-3-43

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

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

The electrical equipment of this vessel has been reviewed throughout in accordance with the approved plans for the reconstruction of the vessel. The materials used are of good quality and design and the workmanship is good. On completion the equipment was operated on load to satisfactory results and the insulation resistance was measured and found good. This equipment is now in my opinion in good order and safe working condition.

Total Capacity of Generators (2x30) 60 Kilowatts.

The amount of Fee ...	£ 28. 10. 0	} When applied for,19.....
Travelling Expenses (if any) £	:	

D. X. Ward
 Surveyor to Lloyd's Register of Shipping.

TUES. 28 MAR 1944

Committee's Minute _____

Assigned See minute on machinery

SM.4.38.—Transfer. (MADE AND PRINTED IN ENGLAND.)
 (The Surveyors are requested not to write on or below the space for Committee's Minutes.)



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