

REPORT ON ELECTRICAL EQUIPMENT

[OTHER THAN FOR THE PROPULSION OF THE VESSEL]

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(Number of Visits 10)

on the TWIN SCREW MOTOR SHIP "CHELMER"

Tons { Gross 209.64
Net 112.05

Built at PORT KEMBLA By whom built A.E. GOODWIN LTD Yard No. 76 When built 1947

Owners THE ANGLO SAXON PETROLEUM CO. LTD. Port belonging to SYDNEY NSW.

Electrical Installation fitted by A.E. GOODWIN LTD. Contract No. When fitted 1947

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

THIS IS A DUPLICATE OF M.S. BUCKIE, SYD Rpt. 20830 FOR WHICH PLANS WERE SUBMITTED.

Have plans been submitted and approved System of Distribution TWO WIRE Voltage of supply for Lighting 110Heating Power 110 Direct or Alternating Current, Lighting D.C. Power D.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 ^{WINCH GEN. - YES.} ~~NO.~~ _{+ CRUISING " - NO.} are they level compounded under working conditions ^{WINCH GEN. YES.} ~~NO.~~ _{+ BATTERY CHARGING GENERATORS.}

if not compound wound, state distance between generators 10 FT. and from switchboard 10 & 6 FT. 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. TYPE TESTS and the results found as per rule AS PER SYD. Rpt. 20830 ON M.S. BUCKIE Are the lubricating arrangements and the construction

of the generators as per rule YES Position of Generators WINCH GEN. DRIVEN BY DIESEL ENGINE AFT END OF E.R.; CRUISING GEN. BELT DRIVEN FROM MAIN ENGINE SHAFT; AUX. GEN. DRIVEN BY AUXY. DIESEL ENGINE AF FORWD END OF E.R. (ALL IN E.R.) 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.

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 MISCOLITE, if of synthetic 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

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 arrangements of equaliser switches WINCH GEN. 20 KW. 300 A.

NO-VOLT-OVERLOAD AIR CIRCUIT BREAKER. OTHER GENERATORS (USED FOR BATTERY CHARGING)

PROTECTED BY CUT-OUTS AND AIR BREAKERS.

and for each outgoing circuit LIGHTING, NAVIGATION & BATTERY CIRCUITS PROTECTED BY D.P. BREAKERS AND

FUSE ON EACH POLE. EACH WINCH & WINDLASS CIRCUIT HAS D.P. KNIFE SWITCH WITH FUSE ON EACH POLE.

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

ammeters 2 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 EARTH 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 ✓. 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 NL, 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 LEAD SHEATHED CABLES SUPPORTED BY CLIPS TO PERFORATED METAL TRAYS, METAL COVERS FITTED WHERE EXPOSED TO RISK OF DAMAGE. CABLES IN EXPOSED POSITIONS ON DECK, FORWARD OF ENGINE ROOM, LED IN SCREWED WATERTIGHT PIPING ADEQUATELY SUPPORTED.

Are all lead sheaths, armoring 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 BUSHES. Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule YES. Emergency Supply, state position 110 VOLT BATTERIES IN STEEL CASINGS ON SIDES OF AFTER DECK HOUSE and method of control D.P. SWITCHES WITH AUTOMATIC CUT OUTS AND D.P. FUSES. 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 NO. 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 ✓ 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 WINDLASS MOTOR IS A DUPLICATE OF THAT IN TUG SAGOP (SDR 20801) WITH WHICH TEST CERT. WAS FORWARDED. 100 BHP intended for essential services been supplied and the results found as per Rule ✓. Control Gear and Resistances, are they constructed and fitted as per Rule YES. Lightning Conductors, where required are they fitted as per Rule YES. 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	Amperes	Revs. per Min.		Fuel Used	Flash Point of Fuel
MAIN CRUISING	1	4	120	33.3	1000	BUILT FROM MAIN ENGINE SHAFT		
WINCH	1	20	110	181.8	1200	SOUTHERN CROSS DIESEL ENG.	DIESEL OIL 215° F.	
AUX.	1	4	110	37.0	1800	HEALEY & LEWIS DIESEL ENG.		
EMERGENCY								
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			
WINCH								
GENERATOR	20	1	37/072	182	152	12	V.I.R.	W.T. FLEXIBLE CONDUIT
EQUALISER								
CRUISING GENERATOR	4	1	7/064	33	46	15	V.I.R.	
AUXILIARY	4	1	7/064	37	46	90	V.I.R.	
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
GENERATOR								

MAIN DISTRIBUTION CABLES.

DESCRIPTION	KILOWATTS	CONDUCTORS	MAXIMUM CURRENT IN AMPERES	APPROX. LENGTH (Lead plus return feet)	INSULATED WITH	HOW PROTECTED
AUX. SWITCHBOARDS AND SECTION BOARDS						
DIST. BOARD WITH MAIN SWITCHBOARD IN E.R.	1	7/064	30	46	10	V.I.R. LEAD ALLOY SHEATHED.
" " IN AFTER ACCOMMODATION	1	7/064	12	46	20	" " " "
" " ON BRIDGE	1	7/064	20	46	50	" " " "

LIGHTING AND HEATING, ETC., CABLES

DESCRIPTION	KILOWATTS	CONDUCTORS	MAXIMUM CURRENT IN AMPERES	APPROX. LENGTH (Lead plus return feet)	INSULATED WITH	HOW PROTECTED
WIRELESS		1	7/036	10	24	20 V.I.R. LEAD ALLOY SHEATHED.
NAVIGATION LIGHTS		1	3/036	3	10	50 " " " "
LIGHTING AND HEATING PORT ACCOMMODATION		1	3/036	6	10	80 " " " "
" " STARBOARD		1	3/036	7	10	80 " " " "
" " CREW		1	3/036	3	10	50 " " " "
" " ENGINE ROOM		1	3/036	6	10	40 " " " "
" " CLUSTER LIGHTS & STORES		1	3/036	6	10	200 " W.T. SCREWED PIPE.
" " WHEEL HOUSE		1	3/036	2	10	20 " LEAD ALLOY SHEATHED.
" " BRIDGE ACCOMMODATION		1	3/036	3	10	40 " " " "

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED	No.	B.H.P.	CONDUCTORS	MAXIMUM CURRENT IN AMPERES	APPROX. LENGTH (Lead plus return feet)	INSULATED WITH	HOW PROTECTED
TRANSFER PUMP	1	1 1/4	1	7/036	12	24	50 V.I.R. W.T. CONDUIT.
WINCHES	4	7 1/2	1	19/064	51	83	150 " W.T. SCREWED PIPE
WINDLASS	1	7 1/2	1	19/064	51	83	200 " " " "

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.

A. E. Goodwin Limited

Electrical Engineers.

Date 23rd Jan. 1948

Chas. R. Waberly

COMPASSES.

Minimum distance between electric generators or motors and standard compass 27 feet.

Minimum distance between electric generators or motors and steering compass 20 feet.

The nearest cables to the compasses are as follows:—

A cable carrying 0.4 Amperes led into ~~feet from~~ standard compass & led into ~~feet from~~ steering compass.

A cable carrying 2.0 Amperes 3 feet from standard compass 6 feet from steering compass.

A cable carrying _____ Amperes _____ 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 N/2 degrees on any course in the case of the standard compass, and N/2 degrees on any course in the case of the steering compass.

B. P. Zieeden Builder's Signature. Date _____

Is this installation a duplicate of a previous case YES If so, state name of vessel M.V. BUCKIE. (Svd Rpt 20830)

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

This electrical equipment has been installed under Special Survey in accordance with the requirements of the Rules and in accordance with plans submitted with Svd Report 20830 on the sister vessel BUCKIE. The materials and workmanship are of good quality. The insulation resistance tests and trials have been carried out in accordance with Rule requirements with good results and in our opinion the vessel, so far as electrical equipment is concerned, is eligible to be classed.

Noted
JP
24.3.48.

Total Capacity of Generators 28 Kilowatts.

The amount of Fee . . . £ 12: 0 :

When applied for,	<u>13/10/1947</u>
When received,	<u>19</u>

A. Gward & B. P. Zieeden
 Surveyors to Lloyd's Register of Shipping.

FRI. 8 APR 1948

Committee's Minute _____

Assigned See minute on F.E. rpt.

100-8/41-J. & O'S.—TRANSFER. (PRINTED IN AUSTRALIA) (The Surveyors are requested not to write on or below the space for Committee's Minute.)



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