

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 6 JUL 1951

Date of writing Report **26.6.51** 19..... When handed in at Local Office..... 19..... Port of **Sunderland**

No. in Survey held at **Sunderland** Date, First Survey **4.1.51** Last Survey **23.6.51** 19.....
 Reg. Book. (No. of Visits **10**)

91180 on the **m.v. "CALLISTO"** Tons { Gross **5844**
 Net **3373**

Built at **Sunderland** By whom built **Short Bros.Ltd** Yard No. **506** When built **1951**

Owners **Hudig & Veder N.V.** Port belonging to **Rotterdam, Netherland**

Installation fitted by **Sunderland Forge & Engineering Co.Ltd** When fitted **1951**

Is vessel equipped for carrying Petroleum in bulk **no** Is vessel equipped with D.F. **yes** E.S.D. **yes** Gy.C. **yes** Sub.Stg. **no** Radar **yes**

Plans, have they been submitted and approved **yes** System of Distribution **2-wire ins.** Voltage of Lighting **110**

Heating..... Power **110** 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**, if not compound wound state distance between generators..... and from switchboard..... Are the generators arranged to run in parallel **no**, are shunt field regulators provided **yes** Is the compound winding connected to the negative or positive pole **negative** 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** and the results found as per Rule **yes**

Position of Generators **engine room floor level, on raised stools, starboard side.** 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 **on angle iron framework adjacent to 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 **Ebony "Sindanyo"**, 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 **a double-pole, air-break circuit-breaker fitted with O/L tripping devices on each pole.**

and the switch and fuse gear (or circuit breakers) for each outgoing circuit **a double-pole knife switch and fuses.**

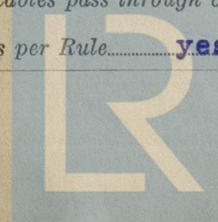
Are compartments containing switchboards composed of fire-resisting material or lined as per Rule **yes** Instruments on main switchboard **2** ammeters **2** voltmeters..... synchronising devices. For compound machines in parallel are the ammeters and reversed current protection devices connected on the pole opposite to the equaliser connection..... Earth Testing, state means provided **E.lamps**

Switches, Circuit Breakers and Fuses, are they as per Rule **yes**, are the fuses an Approved Type **yes**, make of fuses **G.E.C.**, are all fuses labelled **yes** If circuit breakers are provided for the generators, at what overload do they operate **15%**, and at what current do the reversed current protective devices operate..... -

Joint Boxes, Section Boards and Distribution Boards, is the construction as per Rule **yes**

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 v.** are the ends of all cables having a sectional area of 0.01 square inch and above provided with soldering sockets **yes** 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 **no**, if so, are they adequately protected..... Are cables in machinery spaces, galleys, laundries, etc., lead covered..... or run in conduit **yes** or of the "HR" type..... State how the cables are supported or protected **Main feeders: V.I.R. cables in heavy guage steel conduit run through 'tweendecks for and aft, fastened to underside of main deck. In accommodation, L.C. cables on the surface and protected where required by wood or metal guards.**

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**



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

Skeleton lighting system in machy spaces on failure of supply or E.R.fuses

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**

Secondary Batteries, are they constructed and fitted as per Rule... **yes**, are they adequately ventilated... **yes** state battery capacity in ampere hours... **57 A.H.**

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof... **yes** Are any 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... Are all fittings suitably ventilated... **yes** and where are the controlling switches fitted... Are all fittings suitably ventilated... **yes**

Searchlight Lamps, No. of... whether fixed or portable... are they of the carbon arc or of the filament type... are the frames effectually earthed... 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... 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... **yes**

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 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 the cables lead covered as per Rule... E.S.D., if fitted state maker... **Hughes** location of transmitter... **frame, 139/40 P.** and receiver... **ditto S.** 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				TYPE.	PRIME MOVER.
			Kilowatts per Generator.	Volts.	Ampères.	Revs. per Min.		
MAIN	2	S.F.&E.Co.Ltd Nos. 44989 & 44991	45	110	409	640	Steam	S.F.&E.Co.Ltd Nos. 44988 & 44990
EMERGENCY ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	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	No.1. 45	2	37/.072	409	520	64	V.C.	L.C.
" " EQUALISER	No.2. 45	2	37/.072	409	520	84	V.C.	L.C.
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

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

DESCRIPTION.	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
Navigation Section Panel 'A'	I	7/.064	24	80 280	V.I.R.	in pipe
Midship Ltg. " " 'B'	I	19/.083	82	118 140	"	"
Ventilation " " 'C'	I	19/.083	98	118 140	"	"
Cargo Lighting " " 'D'	I	7/.064	41	46 140	"	"
Aft Lighting " " 'F'	I	19/.064	32	83 566	"	"
Refrigeration " " 'E'	I	7/.064	39	46 200	"	"
Engine Rm. " " 'G'	I	19/.052	59	64 300	"	"
" " " " 'H'	I	19/.052	61	64 150	"	"

LIGHTING, HEATING, WIRELESS, NAVIGATION LIGHTS, ETC., CABLES.

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.			
Navigation - main supply from 'A'	I	3/.0366	2	10	2	V.I.R.	L.C.
" alt supply " 'B'	I	3/.036	-	10	120	"	in pipe
Upper Bridge Lighting D.2	I	7/.044	14	31	60	"	L.C.
Shelter Deck " P.D.3	I	7/.036	20	24	100	"	L.C.
" " " S.D.4	I	7/.036	19	24	28	"	L.C.
Forecastle Ltg. D.5	I	7/.064	4.5	46	452	"	in pipe
Cargo Lighting D.6 Fwd.	I	7/.064	23	46	360	"	"
" " D.7 Aft.	I	7/.064	18	46	344	"	"
Upper Deck Ltg. D.8 Port	I	7/.036	16	24	32	"	L.C.
" " " D.9 Star.	I	7/.036	16	24	20	"	L.C.
Engine Rm.Ltg. D.10 Port	I	7/.036	22	24	150	"	in pipe
" " " D.11 Star.	I	7/.036	20	24	300	"	in pipe
Midship Cargo D.12 Star.	I	7/.044	22	31	24	"	L.C.
Galley Power D.13 Star.	I	7/.064	45	36	120	"	L.C.
W/T Supply	I	7/.064	10	46	260	"	in pipe & L.C.
Radar Supply	I	19/.064	40	83	260	"	"
Emergency Ltg Feeds	I	7/.029	4	15	280	"	"

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	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.			
Oil Purifiers	2	2.5	I	7/.036	23	24	2/50	V.I.R.	in pipe
Priming Pump Motor	I	1.5	I	7/.036	15	24	40	"	"
Hydrofor Motor	I	0.75	I	7/.029	8	15	140	"	"
Workshop Motors	2	1.5	I	7/.036	15	24	2/40	"	"
" " "	I	I	I	7/.036	10	24	160	"	"
Boiler Room Fan Motor	I	3	I	7/.044	20	31	100	"	"
Crane Motor	I	3	I	7/.044	20	31	160	"	"
F.W.Pump Motor	I	1.5	I	7/.036	15	24	60	"	"
No.1. Vent Fan	I	2.5	I	7/.044	23	31	52	"	L.C.
" 2. " "	I	2.5	I	7/.044	23	31	240	"	"
" 3. " "	I	2.5	I	7/.044	23	31	204	"	"
Galley Exhaust Fan	I	0.6	I	3/.036	6	10	60	"	V.I.R. in pipe
Fridge Exhaust Fan	I	0.25	I	3/.036	3	10	24	"	"
No. 4 Vent Fan	I	2.5	I	7/.064	23	46	440	"	"
Fridge Compressor	I	3	I	7/.064	26	46	20	"	"
" Circ. Pump	I	I	I	7/.036	10	24	220	"	"
Mono Pump Motor	I	1.5	I	7/.036	15	24	36	"	"
Potato Peeler	I	0.5	I	3/.036	5	10	36	"	"
Saloon Frig.	I	0.5	I	3/.036	5	10	28	"	L.C.

