

# REPORT ON ELECTRICAL EQUIPMENT

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report 28-11-1960, When handed in at Local Office 19... Port of ROTTERDAM.

No. in Survey held at Zaltbommel Date, First Survey 27-4-60 Last Survey 24.11.19 60  
Reg. Book (No. of Visits 10)

on the m.s. "GOLDEN COMET" Waal Tons { Gross 1279.52 Net 665.49

Built at Zaltbommel By whom built N.V. Scheepswerf "De Yard No. 670 When built 1960

Owners Bonny Shipping Co. Ltd. Port belonging to Guernsey

Installation fitted by H.G. Fekels N.V., Hoogezand When fitted 1960.

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

Plans, have they been submitted and approved yes System of Distribution 3 phase 3 wire Voltage of Lighting 220

Heating 220 Power 440 D.C. or A.C. Lighting A.C. Power A.C. If A.C. state frequency 60 cycles

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 --- Have certificates of test for machines under 100 kw. been supplied and the results found as per Rule yes Position of Generators PS & stbd. side E.R.

and 1 generator on platform E.R. stbd. - harbour generator in top E.R.

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 ps & stbd. side E.R.

1st platform forward

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 type, 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. triple pole C/B's with thermal O.L. & U.V. relays

and the switch and fuse gear (or circuit breakers) for each outgoing circuit. triple pole switches & fuses for power & double pole switches and fuses on lighting distr. fuse boxes.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule yes Instruments on main switchboard 7 ammmeters 3 voltmeters 2 synchronising devices. For compound machines in parallel are the ammmeters and reverse current protection devices connected on the pole opposite to the equaliser connection --- Earth Testing, state means provided earth lamps Preference Tripping, state if provided 110 % nom. KW, and tested yes

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

make of fuses Weber, are all fuses labelled yes If circuit breakers are provided for the generators, at what overload do they operate thermal O/I relay + 125 % & direct magn. relay, and at what current do the reverse protective devices operate - 10 % Nom. KW 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 under 6 % volts. Are all paper insulated and varnished cambric insulated cables sealed at the ends ---

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 Butyl insulated HR type Bi. HR type and laundries --- State how the cables are supported or protected.

Machinery spaces: clipped to steel trays by steel plates protected or in pipe.

Accomm. spaces: clipped to wooden grounds or in P.V.C. conduit

Are all lead sheaths, armouring and conduits effectually bonded and earthed --- 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 yes and test certificates supplied yes

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 emergency generator top engine room.

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, fitted and adequately ventilated as per Rule yes, state battery capacity in ampere hours 2 each 24 V. - 60 Ah Where required to do so does it comply with 1948 International Convention --

Lighting, is fluorescent lighting fitted -- 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 one, whether fixed or portable fixed, are they of the carbon arc or of the filament type filament

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 --

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 --

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 Behm location of transmitter and receiver frame space 29

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	MAKER
			Kw. per Generator	Volts	Ampères	Revs. per Min.			
MAIN	3	Garbe Lahmeyer	96	460	151	1200	diesel	M.A.N.	
Harbour gen.	1	Heemaf	12	440	19	1200	"	Samofa	
EMERGENCY ROTARY TRANSFORMER									

GENERATOR CABLES

DESCRIPTION	No. of	Kw.	CONDUCTORS		MAXIMUM CURRENT IN AMPERES		APPROX. LENGTH (feet) <u>3 phase</u>	INSULATION	PROTECTIVE COVERING
			No. in Parallel per Pole	Sectional Area or No. and Dia. of Strands <u>37 x 0.35 sq. mm.</u>	In the Circuit	Per Cable			
MAIN GENERATOR	3	96	2	50	158	236	7	BI	HR type protected
" EQUALISER									
Harbour generator	1	12	1	6	19	29	4	BI	" " "
EMERGENCY GENERATOR									
ROTARY TRANSFORMER: MOTOR									
" GENERATOR									

MAIN DISTRIBUTION CABLES (to Auxiliary Switchboards, etc.)

DESCRIPTION	No. of	No. in Parallel per Pole	Sectional Area or No. and Dia. of Strands	In the Circuit	Per Cable	INSULATION	PROTECTIVE COVERING
Mainswitchb.----Harbourswitchb. (HB)	1	6	19	29	20	V BI	HR type protected.
Harbourswitchboard----Em. Switchb. (N)	1	2.5	10	13	16	" " "	" " "

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

DESCRIPTION	CONDUCTORS	MAXIMUM CURRENT IN AMPERES	APPROX. LENGTH (feet) <u>3 phase</u>	INSULATION	PROTECTIVE COVERING	
						No. in Parallel per Pole
From Main switchboard to						
Power distr. fuse box Vent. (V)	1	6	12.8	29	17 BI	HR type protected
" " " " Refr. Plant Prov. (K)	1	6	6.65	29	14 " " "	" " "
" " " " E.R. PS (AB)	1	50	71.3	118	6 " " "	" " "
" " " " E.R. SB (AC)	1	50	72.65	118	9 " " "	" " "
From Harbour generator switchb.						
Power Distr. fuse Box hydroph. (P)	1	2.5	4.1	13	25 " " "	" " "
" " " " workshop (W)	1	2.5	4.6	13	12 " " "	" " "
Radar	1	4	15	19	24 " " "	" " "
V. Lighting distr. fuse box amidsh. (C)	1	4	9.3	25	45 " " "	" " "
" " " " boatd. (D)	1	4	6.8	25	8 " " "	" " "
" " " " maind. (E)	1	4	12.5	25	5 " " "	" " "
" " " " 'tweend. (F)	1	4	4.1	25	10 " " "	" " "
Navigation (A)	1	2.5	0.9	15.5	20 " " "	" " "
Nautical instr. (B)	1	4	6	25	5 " " "	" " "
Radio	1	2.5	10	15.5	16 " " "	" " "
Power Distr. fuse boxes 220 V <sup>3</sup>						
Boatwinches	1	2.5	12	13	2 " " "	" " "
Heating H	1	6	22.8	29	5 " " "	" " "

MOTOR CABLES

ALL IMPORTANT MOTORS TO BE ENUMERATED	No.	B.H.P.	No. in Parallel per Pole	Sectional Area or No. and Dia. of Strands	In the Circuit	Per Cable	INSULATION	PROTECTIVE COVERING
Compressor	3	52	1	35	62	93	10 BI	HR type Protected
Coolingw. pump	1	10	1	4	12.5	19	6 " " "	" " "
Fans amidship	2	6.8	1	2.5	8	13	60 " " "	" " "
" " "	2	12.5	1	4	14.5	19	48 " " "	" " "
Steering engine	1	5	1	2.5	9.2	13	29 " " "	" " "
Hydraulic pumps	3	30	1	16	38	58	8 " " "	" " "
From Power D.F.B. AB								
Compressor (air)	1	18	1	6	26	29	10 " " "	" " "
Fuel and L.O. separator	2	1	1	1.5	1.65	7	14 " " "	" " "
Fuel oil transfer pump	1	5.5	1	2.5	7	13	14 " " "	" " "
Spare L.O. pump	1	15	1	6	19	29	16 " " "	" " "
From Power D.F.B. AC								
fresh coolingw. pump	1	7.5	1	4	9	19	8 " " "	" " "
Sea coolingw. pump + gen. service pump	2	15	1	6	19	29	12 " " "	" " "
Bilge pump	1	13	1	4	17	19	9 " " "	" " "
Turning gear	1	5	1	2.5	7	13	16 " " "	" " "
Spare cooling oil pump	1	1	1	1.5	1.65	7	12 " " "	" " "
From Power D.F.B. K								
Compressor refr. prov.	1	4	1	1.5	5.6	7	14 " " "	" " "
Coolingw. pump	1	0.5	1	1.5	0.8	7	14 " " "	" " "
From Power D.F.B. V								
Vent.-E.R.	2	1.7	1	1.5	2.6	7	10 " " "	" " "
" Acc.	1	3.45	1	1.5	5.2	7	8 " " "	" " "
" Acc. air cond.	1	0.75	1	1.5	1.5	7	8 " " "	" " "
From Power D.F.B. P								
freshw. and sea hydr. p.	3	0.33	1	1.5	0.65	7	12 " " "	" " "
Fan central heating	1	0.2	1	1.5	0.25	7	10 " " "	" " "
pump " "	1	0.6	1	1.5	1	7	10 " " "	" " "
freshw. pump centr. heating	1	0.5	1	1.5	0.9	7	8 " " "	" " "

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.

**HERMAN G. EEKELS N.V.**

Electrical Contractors. Date.....

**COMPASSES**

Have the compasses been adjusted under working conditions. yes

**SCHEEPSWERF "DE WAAL" N.V.**

Builder's Signature. Date.....

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. no If not, state date of approval. Secr. letter 29.8.1960

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 equipment of this ship has been installed under Special Survey in conformity with the Society's Rules and Regulations and in accordance with the Secretary's Letter and the approved plans or equivalent thereto.

The materials used are of a good quality and the design and workmanship are good.

On completion the equipment has been tried out under full working conditions and found satisfactory.

This equipment is in my opinion suitable for a classed ship.

5m.3.58—Transfer. (MADE AND PRINTED IN ENGLAND) (The Surveyors are requested not to write on or below the space for Committee Minute.)

Total Capacity of Generators 300 Kilowatts.

The amount of Fee ... £ F1.783 :-

When applied for,

14 DEC 1960

When received,

19

Travelling Expenses (if any) £ 233 :-

Surveyor to Lloyd's Register of Shipping  
**F.N. Nooteboom.**

**FRIDAY 17 FEB 1961**

Committee's Minute.....

Assigned See Rpt. 1.

H. R. S.  
23.12.60



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