

Rpt. 4c

Date of writing report 9.3.59

Received London

Port Hamburg

No. 7314

Survey held at Hamburg

No. of visits -

First date -

Last date see Rpt. 9

FIRST ENTRY REPORT ON AUXILIARY STEAM TURBINE OR STEAM
RECIPROCATING ENGINESName of Ship "TINA ONASSIS"
(Or Contract No. if name unknown)Owners Palmas Transportation Co.
(Or Consignees)

Ship Built at Hamburg

by Howaldtswerke AG.

when 1953

Yard No. 885

Auxiliary turbines ~~or engines~~ made at Hamburg

by Howaldtswerke AG.

when 1953

Eng. Nos. 350 112-1

Total No. of sets and description 2 sets, each consisting of 1 impulse-reaction-turbine with single reduction
gear, driving 1 alternator, each set having its own condenser.

STEAM TURBINES. No. of turbines per set 1 BHP per set 804 Steam pressure 586 lbs Steam temperature 830°F

Type of turbines impulse reaction turbines with 2 impulse stages and 17 reaction stages, Makers Type UK 5

Particulars of gearing single reduction gear

RPM of turbine shaft(s) 7500 rpm

PCD of pinion(s) 128.17 mm

PCD of wheel(s) 800.21 mm

Material of

pinion(s) Mn-Si-Steel

Material of wheel rim(s) Mn-Si-Steel

Has rotor been dynamically balanced? yes

Diameter of rotor

shaft at bearings 110 mm

Does the set include a steam condenser? yes

Is an emergency governor fitted? yes

No. and purpose of

attached pumps 1 lub. oil pump

Has the set been tested in the shop? on board If so, for how long at full

power? 6 hours

Was the governing tested and found satisfactory? yes

Was the set tested with driven machinery attached? yes

Identification marks Rotors: Pc 57-58-59 AB-WU 9.52

Particulars of driven machinery 1 alternator (each set)

Pc 61-62-63 AB-WU 9.52

Maker BBC, Type Wyk 236 a-spez.

Pinions: Lloyds FS 815 and 815 B 28.12.51

Nos. port M 34435, starb. M 34437

Wheelrims: Pc 42-AB-WU-3.52 and Pc 53-AB-WU-7.52

rating: 750 KVA at 1200 rpm, 450 Volts, 960 Amps, 60 Hz

STEAM RECIPROCATING ENGINES. BHP of each at RPM Steam pressure

Dia. of cylinders Stroke Dia. of crankshaft journals Pins Material of

crankshaft Is crankcase enclosed? If so, is the internal volume 20 cu. ft. or over? No. and total area of crankcase

explosion relief devices fitted? Are the bearings forced lubricated? No. and purpose of attached pumps

Is a Governor Fitted? none

Identification Marks

Particulars of Driven Machinery

ELECTRIC GENERATORS. Port and No. of Certificate for generators of 100 Kw. and over see El. FE Report

For generators under 100 Kw., has Makers' Certificate been obtained? Are Certificates attached?

The foregoing description is correct.

Manufacturer

Is this machinery duplicate of a previous case? yes If so, which? Howaldtswerke Standard Type of auxiliary engines

GENERAL REMARKS. State if the machinery has been constructed under special survey in accordance with the Rules, approved plans and Secretary's letters. State quality of materials and workmanship. Where existing machinery is submitted for classification the circumstances should be explained as fully as possible.

These auxiliary turbines have been built under the Survey of ABS. The turbines and gearings have now been examined, checked with the Makers' plans, the materials identified with the ABS certificates, so far as practicable, and the sets examined under working conditions on completion. Full load, overload, full speed and overspeed running and governor trials have been completed with good results.

Survey Fee see Rpt. 9

Expenses No. 7313

Date when a/c rendered

Engineer Surveyor to Lloyd's Register

Declaration to be signed by Surveyor at fitting-out Port:— The above described machinery has been fitted on board the "TINA ONASSIS"
at Hamburg in a proper manner and found satisfactory when tested on the (date) 6.3.59 under full working
conditions.

Engineer Surveyor to Lloyd's Register

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Independent Pumps.

Pumps	Capacity in m^3/h	How driven	Suction							Delivery									
			Bilge main	Bilge direct	Ballast main	Sea	Feed water	Condens. Extr.	Lub. oil	Oil fuel	Boiler feed	Feed water system	Main cond. cooling	Aux. cond. cooling	Oil fuel burners	Oil fuel tanks	Lub. oil	Fire main	Sea water cooling
No. off and position of each																			
2 main sea circ. pumps ER fwd. centre, p & s	2950	el.		X		X							X						
2 aux. sea circ. pumps ER aft, p & s	400	el.				X									aux. Cond.				
2 sea water service p/ps Blr. R. p. fwd. in- & outbd.	140	el.				X												X	
1 cargo p. cond. circ. p/p Blr. R. p. fwd.	700	el.				X									atm. Cond.			X	
2 main condensate pumps ER fwd. fwd. & aft	55	el.				X									atm. Cond.				
2 aux. condensate pumps ER aft, p & s	9	el.				X													
2 cond. transfer pumps Blr. R. aft, p & s	28	el.				X													
3 main feed water pumps Blr. R. p. centre-s	100	steam				X													
1 fire & gen. service pump ER port centre	100	el.	X			X												X	
1 fire & butterworth pump Blr. starbd. fwd.	100	el.				X												X	
1 eng. room bilge pump ER starbd. aft	23	el.	X	X		X													
1 blr. room bilge pump Blr. R. aft, centre	23	steam	X	X		X													
2 lub. oil service pumps ER aft. fwd. & aft	140	el.				X													
1 lub. oil service pump ER starbd. centre	130	steam				X													
2 oil fuel service pumps Blr. starbd., fwd. & aft	8	el.				X													
1 oil fuel transfer pump Blr. starbd. fwd.	51	el.				X													
2 LP feed water pumps Blr. R. port. in- & outbd.	23	steam				X													
1 fire pump steering gear room		diesel				X													
Forward pump room						X													
1 bilge-ballast- and fire pump	100	steam				X													
1 oil fuel transfer pump	65	steam				X													
<u>Main pump room</u>																			
4 cargo oil pumps turbines in ER.	970	steam				X													
1 ballast pump turbine in ER	970	steam				X													
4 stripping pumps in pump room	120	steam				X													

Electric Generator Engines

Position of each	Prime Mover	Maker	Cert.	Output KW	Volts	Amps
Eng. room lower 'tween deck p. aft	Imp. React. Turbine	Howaldtswerke	see Rpt.	600	450	960
Eng. room lower 'tween deck starbd. aft	Imp. React. Turbine	AG., Hamburg	4c	600	450	960
Eng. room casing, main deck level	4 SA Diesel Eng.	Südbremse, Munich	Cert. AB 53-ES-675x635	100	450	160

Fire extinguishing arrangements

- 2 hydrants 2 1/2", 2 hoses and 2 spray and jet nozzles in engine room
- 2 hydrants 2 1/2", 2 hoses and 2 spray and jet nozzles in boiler room
- CO₂ plant for engine- and boiler room with 103 receivers of 30 kg CO₂ each
- 2 - 50 ltr. foam extinguishers, 1 in boiler room, 1 in engine room, with hoses and nozzles
- 7 portable (6kg CO₂ or 10 ltr. foam) fire extinguishers (3 in boiler room, 5 in engine room)
- 2 sand boxes 0.5 m³ each, on firing platform
- 1 emergency diesel driven fire pump in steering gear room.