

Rpt. 9A REPORT OF MACHINERY SURVEYS AND REPAIRS (ENGINES AND AUXILIARIES)

FOR CONSIDERATION BY THE COMMITTEE OF LLOYD'S REGISTER OF SHIPPING

Received London

-5. JUL. 1966

Ship's Name SS/MS "PORT WYNDHAM"

LR528271 Port of

Gross tons 8702 Registry London

Port Wellington, N.Z.

Date of build 1-1-1935 Is there a rpt. 8? Yes

Rpt. No. 11,230

No. of visits 19

First date 13-5-66

Last date 23-6-66

Interim Cert. issued
& copy herewith? YesDamage rpt. issued To
& copy herewith? Follow Last rpt. (H.Q. only)Date of
completing rpt. 28-6-66Surveyed at, if different from Port above New Plymouth &
Wellington.Is a rpt. 9B
attached? No

MN 1880

Nature of survey Fire Damage & S.R.L.

Survey fees

Damage fee £247-0-0

Expenses £57-13-0

S.A. fee £15-0-0

MAIN ENGINES, RECIP., STEAM OR I.C. (State Port—P or Starboard—S)

1 Cyls., covers,
pistons & rods

2 Valves & gears

3 Con. rods, cross-
heads, bearings
& guides centre

Side

4 Crankpins &
bearings centre

Side

5 Journals &
bearings

MAIN ENGINE DRIVEN AIR COMPRESSORS (State Port—P or Starboard—S)

6 Cyls., covers,
pistons & rods7 Con. rods, cross-
heads & bearings8 Crankpins &
bearings9 Journals &
bearings10 Coolers &
safety devices

MAIN ENGINE DRIVEN SCAVENGE PUMPS (State Port—P or Starboard—S)

11 Cyls., covers,
pistons & rods12 Con. rods, cross-
heads & bearings13 Crankpins &
bearings14 Journals &
bearings

MAIN TURBINES (State Port—P or Starboard—S)

16 Casings, rotors,
blading, bearings
& thrusts

15 Levers

17 Reduction
gearing18 Scavenge
blowers

19 Superchargers

I recommend that the machinery of this ship remain as classed with/without fresh record of

survey, and without special condition respecting the port forward auxiliary engine entablature, but subject to temporary electric power and lighting leads in Engine Room being specially examined and dealt with as considered necessary upon the vessel's return to the United Kingdom; to the condenser S.W. cooling overboard discharge valve chest being renewed at the next drydocking; to the repaired oil end casting of the aft oil fuel transfer pump being re-examined by 6/67 (12 mos), and to all other outstanding conditions of class being dealt with as previously recommended.

(Where conditions of class are recommended to be retained, imposed, amended or deleted, particulars must be stated above and on the interim certificate.)

Surveyor to Lloyd's Register of Shipping

Date of Committee

Minute

ALSO FOR

SPL FOR

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SRL

POSTING

HEADER

CERT

At part or complete Special Surveys those items which are not applicable to the ship are to be cancelled; this need not be done when the machinery is on a continuous survey basis. When any part has been subjected to pressure test this should be stated. Engine parts when referred to by numbers should be counted from forward.

considered that re-examination or repairs should be made before that date a distinguishing mark thrust should be inserted against the item and the circumstances and action taken or recommended described fully under "defects and repairs".

The condition of any item is to be described as "good" only when it has been examined, found or placed in good condition, and is considered to be acceptable until the due date of the next Periodical Examination. Where repairs have been effected or it is

TUESDAY 26 JUL 1966
Deferred for ABS
Subject

Exhaust steam turbines (with recip. eng.)	20	Thrust blocks	21	shafts & bearings
Steam compressors	22	Intermediate shafts & bearings	23	
Clutches & hydraulic couplings	24	Condensers (main & aux.)	25	
Steam re-heaters	26	Air ejectors (main & aux.)	27	
De-superheaters	28	Forced &/or induced draught fans	29	
Stop & manoeuvring valves	30	Holding down bolts & chocks	31	
Main engine driven pumps	33			Detuner or vibration damper

State
Port P. or
Starboard S.

Crankcase doors & explosion relief devices	34	Have main engines been tested working & manoeuvring? (To be done on completion of ES or CS cycle)	35
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36 Essential independent pumps

Bilge, ballast & oil fuel suction lines, fittings & controls	37	Have the remaining piping arrangements & fittings in the machinery space been examined as considered necessary?	38
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Fresh water coolers	39	Lub. oil coolers	40
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Heaters (state service)	41	Feed water filters	42
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Auxiliary air receivers & safety devices	43	Starting air pipes	44
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Main air receivers & safety devices	45		
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Independent air compressors coolers & safety devices	46		
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Oil fuel tanks (not forming part of the hull structure)	47		
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Have all evaporators safety valves been tested under steam?	48	Evaporators 49 HP & LP	50 Distillers
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Fire extinguishing arrangements	51	Steering 52 machinery	53 Windlass
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Identify
by
position

AUXILIARY ENGINES

PARTICULARS OF DEFECTS, REPAIRS, ALTERATIONS, ETC.

Attended vessel consequent upon damage alleged to have been sustained by a serious fire which broke out in the E.R. at 1810 hrs. on 12th May, 1966 whilst the vessel lay afloat at New Plymouth.

It was stated that a flash back from the lower auxiliary boiler situated on the tank top at the port forward corner of the E.R. occurred and ignited waste oil floating on the water in the port bilge. It was further stated that the fire got out of control at 1820 hrs when the E.R. was evacuated, the general fire alarm sounded, and the New Plymouth Fire Brigade called. The Fire was finally extinguished at 2215 hrs. by the use of CO₂ gas, foam and water.

Upon examination, the undersigned found the damage directly attributable to the fire to be mainly confined to buckled bulkhead plating in the vicinity of the boiler, major electrical damage to power and lighting cables, motors and equipment mostly port side. The reason for repairs must be stated and those on account of damage, the alleged cause of which must be given, should be detailed separately from wear and tear repairs. State what action has been taken regarding items which are subjects of class. State also where appropriate, for the information of the Technical Records Dept., the material of the defective item and whether it is a forging, casting or welded fabrication. Any alterations in existing particulars in the Register Book should also be reported above.

Ship's Name ~~SS~~MS "PORT WYNDDHAM"
LR528271

Sheet Two

Port Wellington, NZ. Rpt. No. 11,230

numerous leaking pipe line and valve chest joints port side, leaky cylinder liners on No.1 (port forward) generator engine, condenser S.W. cooling overboard discharge valve chest holed and various other damages to pumps, pressure gauges, lubricators, floor plates and bearers, etc. A considerable area of paint work was burned and the whole of the exposed surfaces of the engine room and its contents up to skylight level was blackened by soot.

Damage attributable to extinguishing operations was mainly confined to low resistance readings of the port forward and port after generators, and contamination of the M.E. lubricating oil due to a starboard M.E. cylinder and a port M.E. crankcase door being open at the time of the fire.

The following repairs were recommended and have been satisfactorily carried out:-

PERMANENT REPAIRS DIRECTLY ATTRIBUTABLE TO THE
FIRE

- (1) No.1 (port forward) generator engine - All cylinder liners to draw, re-rubber and refit; Pedestal bearing to remetal; crankcase and sump to thoroughly clean and change lubricating oil; 1st two lengths of exhaust pipe lagging to renew.
- (2) Bilge pump, including air pump to open up for survey and steady bearing to remetal.
- (3) Lower Auxiliary boiler - Ruptured copper scum pipe to renew; flexible oil burner pipes to renew in copper; fractured blower casing to repair by bronze welding; boiler blower air failure fuel shut-off device to open up for examination and rubber diaphragm and valve spring to renew; "Radio Visor" flame failure device to open up and repair with part new components as found necessary; all damaged lagging on boiler to remove and renew.
- (4) All defective pipe line and valve chest joints, condenser door joints, port forward generator crankcase door joints, etc., to remake. (Note: This damage was extensive and widespread both below and above the floor plates, port side).
- (5) Leaking main outlet valve at bottom of the port forward oil fuel side bunker to make tight.
- (6) Port M.E. mechanical cylinder lubricators to overhaul with part new glasses and joints as necessary.
- (7) Various pressure gauges to renew.
- (8) Buckled floor plates and bearers, port side, in way of No.1 generator engine to remove, fair and refit.
- (9) Six broken E.R. skylight glasses to renew.

Ship's Name ~~SS~~/MS "PORT WYNDHAM"
LR528271Sheet ThreePort Wellington,
New Zealand. Rpt. No. 11,230

- (10) Damaged steam and exhaust pipe lagging to make good.
- (11) All foam extinguishers to test repair and/or renew as necessary and afterwards re-charge.
- (12) All CO₂ gas bottles to re-charge.

Other permanent repairs and renewals of a minor nature also effected.

PERMANENT ELECTRICAL REPAIRS DIRECTLY
ATTRIBUTABLE TO THE FIRE

- (1) Generator F.W. pump motor - Scorched leads from coils to commutator to lift and re-insulate and seized bearings to renew.
- (2) Generator F.W. pump starter - To completely rewire and hold-on coil to renew.
- (3) Boiler blower motor - To repair with Owner's new spare armature, field coils and other spares, interpoles to rewind and damaged armature to rewind as spare.
- (4) Boiler motor starter - To replace with Owner's spare purifier motor starter suitably modified to have the remote stop switch incorporated.
- (5) Bilge pump motor - To repair with Owner's spare armature, field coils, interpoles and other spares, and damaged armature to rewind as spare.
- (6) Bilge pump motor starter - To recondition with part new wiring.
- (7) "Radio Visor" lower boiler flame failure alarm - Automatic valve solenoid, amplifying valve and photo-electric cell to replace with Owner's spares, and solinoid valve and photo-electric cell wiring to renew.
- (8) Engine Room crane - auxiliary wiring, port side, to repair with part new.

Other permanent electrical repairs of a minor nature also effected.

Ship's Name ~~SS~~MS "PORT WYNDHAM"
LR528271Sheet Four

Port Wellington, NZ. Rpt. No. 11,230

TEMPORARY MECHANICAL REPAIRS ETC., DIRECTLY
ATTRIBUTABLE TO THE FIRE.

- (1) Cement box to fit over holed condenser S.W. overboard ship's side discharge valve chest bend. Chest to be renewed at next drydocking.
- (2) All loose and burnt felt in the port M.E. scavenge pump air intake to remove. To be made good on vessel's return to the U.K.
- (3) Ten broken portlight glasses on E.R. casing in way of the port and starboard accommodation alleyways to remove and replace with bolted steel plate blanks.

TEMPORARY ELECTRICAL REPAIRS DIRECTLY
ATTRIBUTABLE TO THE FIRE

The following severely burnt cables to replace with efficient temporary leads pending re-examination upon the vessels return to the United Kingdom:-

Nos. 1 & 2 generator mains, equalising and shunt cables
 Generator F.W. pump mains and shunt from board to starter
 Generator F.W. pump wiring between starter and motor.
 Boiler blower mains and shunt from board to starter and remote stop wiring
 Boiler blower wiring between starter and motor.
 Bilge pump mains and shunt from board.
 Bilge pump wiring between motor and starter
 E.R. Auxiliary board No.2 - mains from S.B. to panel (serving M.E. turning gear, F.O. Transfer pump and generator extractor fans).
 E.R. Auxiliary board No.3 - mains from S.B. to panel (serving purifiers, grinder and E.R. crane motor)
 Mains from heating section board, starboard, to engineer's and crew's heating distribution boards, port.
 Mains from port forward E.R. distribution board to aft distribution board (lighting).
 E.R. lighting cables and fittings generally about port side.
 Emergency lighting circuit on port side of E.R. (12 volts).

Other temporary wiring repairs of a minor nature also effected.

NOTE:- No.1 (port forward) generator main cables have been replaced by a 65 ft run of aluminium sheathed P.V.C. covered 1,100 volt grade cables comprising 3 single core 0.3 sq. in. cables per pole, the equalising cable being replaced by one 0.3 sq.in. and one 0.2 sq.in. single core cables run in parallel. The continuous rating of these cables being 1,135 amps against the generator rating of 1,100 amps. The shunt regulator cable was replaced by one single core 7/064, P.V.C., insulated, copper armoured and P.V.C. oversheathed cable.

(Continued).....

Ship's Name ~~SS~~MS "PORT WYNNDHAM"
LR528271

Sheet Five

Port Wellington, NZ Rpt. No. 11,230

No.2 (port after) generator main cables have been replaced by a 95ft run of lead sheathed, steel tape armoured and braided cables of 4 core construction. These temporary cables are of the oil impregnated paper insulated type of 1,100 volt grade. Each pole is served by one of these cables having three cores of 0.3sq.in. section, and one core of 0.15 sq.in. section totalling 1.05 sq.in. per pole. The equalising cable has been replaced by a 4 core cable of similar construction but comprising four cores of 0.2 sq.in. totalling 0.8 sq.in. The continuous rating of the main cables being 1665 amps and that of the equalising cable 820 amps against the generator rating of 1700 amps. The shunt regulator cable was replaced by a single core 7/064 P.V.C. insulated, copper armoured and P.V.C. oversheathed cable.

All other power and lighting cables used were of equal or greater rating than those replaced, and were P.V.C. insulated, copper armoured, and P.V.C. oversheathed.

PERMANENT ELECTRICAL REPAIRS DIRECTLY ATTRIBUTABLE
TO EXTINGUISHING OPERATIONS

- (1) No.1 (port forward) generator - To clean & dry out in place by the application of hot air blowers. (insulation valve subsequently raised from 0.01 megohms to 4 megohms).
- (2) No.2 (port after) generator - Armature and upper field coils and interpoles to thoroughly clean & dry out in place by the application of hot air blowers, the three lower shunt field coils to replace by Owner's spares and the series coils to re-insulate.

NOTE: All-in insulation value subsequently raised to 6 megohms but after 8 hours satisfactory running on 500 amps load, the armature suffered a blow down necessitating a complete re-insulation of the coils and commutator. There being no facilities at New Plymouth for electrical work of this magnitude, the vessel was brought to Wellington where the repair was satisfactorily effected.

- (3) Port M.E. wrong-way alarm wiring to renew.
- (4) No.2 fuel valve cooling pump - wiring between starter and motor to renew.

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In addition to the foregoing, the port & starboard M.E. crank-cases and lubricating oil double bottom tanks were thoroughly cleaned out, and contaminated lubricating oil replaced by new.

The engine room and its contents were washed down, burnt paint-work roughly scaled off, and some temporary repainting carried out for brightening purposes only.

All remote control trips were tested and found in order.

Upon completion of repairs, the main & auxiliary machinery were examined under working conditions during mooring trials both at New Plymouth and Wellington and found in order.

NOTE: For structural & RMC damage sustained, please see accompanying Reports 8 & 18.

NOW DONE FOR S.R.L.:-

"p.fwd aux.eng.No.4 entab.(Metalock 10/64)*by 5/66"
Repair specially examined & found to continue efficient. It is recommended that this item be now removed from the S.R.L. and placed under Category 2 as an endorsement.

Ship's Name ~~SS~~MS "PORT WYNDHAM"
LR528271

Sheet Six

Port Wellington, NZ. Rpt. No. 11,230

Now Done for S.R.L. Continued:-

"Repd oil end casting of aft O.F. transfer pump*by 5/66"

Repair specially examined and found to continue efficient. It is recommended that it be again examined by 6/67 (12 mos).

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