

LLOYD'S REGISTER OF SHIPPING.

PORT OF MELBOURNE.

15th August, 1932.

THIS IS TO CERTIFY that

----- A. J. McCOWAN -----

the undersigned Surveyor to this Society, did, at the request of Captain Norregaard, the Master and Messrs. Gibbs Bright & Co. Agents, attend upon the Danish Motorship "ASTORIA" - 4454 tons gross of Copenhagen, afloat at Yarraville on the 5th inst. and subsequently when in Duke & Orr's dry dock from 7th to 12th inst. and make an examination of the Vessel for damage - stated to have been caused by stress of weather (A) when on the voyage from Port. Chalmers N.Z. to Ocean Island in ballast 22/12/31 to 24/12/31 and (B) when on the voyage from Geraldton W.A. to Nauru in ballast 26/6/32 to 4/7/32.

For further particulars, see Ship's Log Books - translated extracts of which were submitted in support of this claim.

REPORT AS FOLLOWS:-

An examination made of the vessel, as far as possible afloat, at Yarraville on the evening of the 5th inst. whilst discharging phosphate cargo prior to dry docking. The No.1 ballast tank was full at the time and, as it was stated to be leaking, it was recommended that it be left full for examination of the extent of leakage in dry dock. The No.2 tank was empty and an internal examination was made. The leakage, if any, was slight, as the tank did not appear to be making water, but a number of internal



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rivets were found slack in the intercostal angles and brackets and six rivets had been replaced by bolts in the centre keelson top angle and four through the tank top. There was a considerable amount of gas fumes from the oil fuel residue in this tank and it was recommended that the tank be steamed out in readiness for repairs in dry dock.

ENGINE SEATINGS:

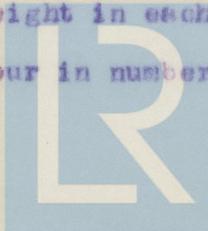
An examination made of the port and starboard engine seatings which were stated to be working considerably as the result of (B) heavy weather experienced 26/6/32 to 4/7/32.

ON EXAMINATION FOUND:

The rivets of the top angles of these seatings very slack, about the middle of the engine bed, both in the angles of the longitudinal girders and in the angles of the thwartship brackets. These rivets, most of which could be turned by the fingers, were marked for renewal where practicable, but in top angles of the longitudinal girders it was not possible to fit rivets and it was therefore recommended that outer angles of these seatings be electrically welded to the girders at their bottom edge and that three rivets in each section between the brackets be removed and replaced with fitted bolts to secure the inner angles.

IS RECOMMENDED AND HOW DONE:-

Ninety-six slack rivets renewed in the double angles attaching the base plate ^{to} of the four thwartship brackets about the middle of the seating on each side of each engine bed, and sixty rivets renewed in these double angles where attached to the brackets. The fore and aft angles forming the top member of the longitudinal girder under engine bed were electrically welded at their bottom edges to the vertical plate for six spaces on the out-board side of each engine and for five spaces on the inboard side of each engine (approx. forty-seven feet of welding) As the outer angle only was accessible for welding, three rivets of the eight in each space were removed and replaced by fitted bolts (fifty-four in number) securing the inner



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angles of these longitudinal girders. Other rivets in the engine
plant were hammer tested and found tight and the repairs as now
inspected are sound and efficient.

DOCKING & REPAIRS:-

The vessel was placed in Duke & Orr's dry dock on Sunday the 7th
inst. and an examination made of the bottom and rudder etc.

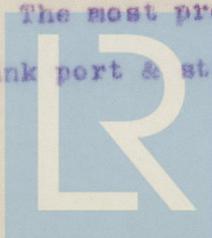
The No.1 tank was full and tested with a head of water, when
leakage was apparent at the forward end of No.1 tank; a considerable
number of shell rivets being slack in keel plates, also "A" & "B"
brackets port and starboard sides, for the first ten frame spaces
from collision bulkhead. About a dozen rivets had been replaced
with bolts (stated to have been done by Ship's crew at Ocean Island)
and slack and leaky rivets were noted and the tank emptied for
external examination and repairs.

There were only a few shell rivets showing signs of leakage from
No.2 tank about the middle of its length port and starboard, but
this tank was empty at the time.

An internal examination was made of No.1 tank, when a number of
rivets were found slack in floors, intercostals, intermediate
floors and brackets at the forward end of the tank.

An internal examination made of the No.2 tank - About sixty-four
rivets in the starboard side and fifty-eight on the port side were
found slack and working in the intercostals and internal connections
of this tank. In addition, a number of defective shell rivets were
found in intercostals and a few frames between intercostals and
centre keelson. These shell rivets had the heads practically eaten
off by pitting, and the frame and intercostal angles were working
over them; although they appeared tight in the shell, several, when
given a light tap with a hammer, dropped into the dock.

In account of this pitting in No.2 tank which is affecting the
shell plating in addition to the rivet-heads, a critical examination
was made of Nos.1 & 2 tanks. The most pronounced parts affected by
pitting being found in No.2 tank port & starboard sides at the



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intercostals and between the intercostals and centre keelson. All rivets in this vicinity were hammer tested and any which appeared inefficient were now renewed. Four angle lugs to shell from intercostal at the after end of No.2 tank port side were also renewed on account of the rivet holes in same being eaten away by pitting to a diameter too large for the rivets.

REPAIRS AS RECOMMENDED have now been carried out:- All slack and leaky rivets in the forward end of No.1 double bottom tank now renewed - Approx. 850 shell rivets in keel plate and "A" & "B" strakes port and starboard, Approx. 230 rivets renewed in intercostals, floors and brackets internally. Thirty-four rivet holes which were much enlarged at the countersinks were built up with electric welding before reaming and recountersinking the holes for riveting. Approx. twenty-four feet of shell plate landings - were built up by electric welding, where pitted too deeply for caulking and seventy feet of shell plate landings caulked.

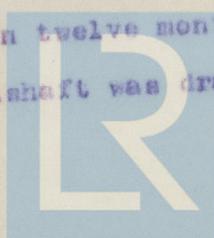
In effecting these repairs, six dock blocks were removed and additional shores fitted to the vessel.

In No.2 tank - Approx. one hundred and twenty ^{five} rivets were renewed in internal connections of intercostals port and starboard, six rivets renewed through centre keelson and four through tank top.

Approx. two hundred and thirty-five rivets (48 starbd. & 187 port) were renewed in the shell through frames and intercostal lugs, four intercostal lugs to shell renewed at after end of No.2 port side tank. On completion of these repairs the No.2 tank was tested by partly filling with water and No.1 tank tested with a head of water to shelter deck when all appeared sound and efficient.

On account of this internal pitting of shell in way of double bottom ballast tanks used intermittently with fuel oil and sea water, and the pitting being still active, especially in way of No.2 tank, it is recommended that the ballast tanks of vessel be examined on arrival at a Home Port or within twelve months.

When in dry dock, the port tailshaft was drawn and examined, stern



tern bush drawn and bottem half rewooded with lignum vitae.
propellers and all under water fittings and fastenings examined,
otton and rudder examined, cleaned and coated with the usual
anti-corrosive anti-fouling composition - all now in good
condition.

(Sgd.) A.J.McCOWAN.

MELBOURNE, 15th August, 1932.

Surveyor to Lloyd's Register



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