

COPY

D. LIDGETT
AND ENGINEER SURVEYOR
OFFICE NO. 43-624
RESIDENCE NO. 63-605

ES AND TELEGRAMS:
DGE," WELLINGTON

CODES:
PHRASE & SECOND PHRASE
LLOYD'S PRIVATE

I.P.O. Box 996

Lloyd's Register of Shipping

NATHAN'S BUILDINGS,

GREY STREET,

WELLINGTON C.1., N.Z.

28th September, 1938

REFERENCE GDL/JG.

A. J. McCOWAN, ESQ.,
PRINCIPAL SURVEYOR TO LLOYD'S REGISTER,
4 BRIDGE STREET,
SYDNEY, N.S.W.

Dear Mr. McCowan,

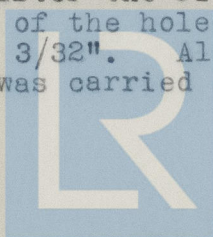
FERRY STEAMER "MURITAI"

I have to thank you for your letter of the 22nd inst. with reference to defective boiler seams of the Forward Boiler of the above vessel.

I am of the opinion (which I duly stressed in my report to the Committee) that the defective rivet points as found in the forward circumferential seam and odd rivets in the longitudinal seams of this boiler are not due to intercrystalline cracking due to chemical action of the feed water used. It is my considered opinion that the trouble, in this case, is due to initial faulty workmanship as all these rivets removed indicated that they had been very much overstressed during the process of hydraulic rivetting, inasmuch as the points or bats were squeezed into the shell plate - as I indicated in my report, as much as 1/8" at the shank and in some cases 1/64" at the outer edge of the point. Also some rivets of the outer row of the circumferential were so squeezed as to bulge the end of the plate as much as 1.32" to 1/16".

I did note and appreciate the pamphlet from London by Dr. Dorey "Note on the chemical intercrystalline fracture of riveted joints in boilers" and during my examination of boilers where rivet points may have cracked from the seams, the contents of the pamphlet have always been borne in mind.

With reference to the defective rivets in this forward boiler of the "Muritai", after the rivets were removed I did make a critical examination of the holes which, in some cases, were stepped from 1/64" to 3/32". Also after these holes were reamed out an examination was carried out by the ultra lens



Lloyd's Register
Foundation

008097-008095-0030 1/2

COPY

Lloyd's Register of Shipping

NATHAN'S BUILDINGS,

GREY STREET,

WELLINGTON C.1., N.Z.

28th September, 1938

REFERENCE

-2-

A. J. McCowan, Esq.

as far as could be applied but there was no evidence of intercrystalline cracking either in the shell of the circumferential seams or the butt straps of the longitudinal seams - from the latter of which very few rivets were removed.

The after boiler of this vessel has always received the same treatment as the forward one; although in this boiler all seams were stripped and subjected to a close examination, no faults whatever were discovered which, in my mind, debars any evidence of the trouble being caused by feed water, and no boiler compounds are used.

If, on receipt of this letter, you consider that a chemical analysis of the water used in these boilers is necessary, I should be only too pleased to procure this for you. I am giving into the charge of Mr. MacGregor, Chief Engineer of the "Wanganella", 4 rivets which are a fair sample of those removed from the forward circumferential seam and from these you will see that the whole question is initial bad workmanship.

I appreciate your last paragraph in respect to impressing on the Owners the possibility of a very serious condition of this boiler but the repairs as executed by myself I consider adequate, although in view of the condition of the rivets removed, it is possible that the whole of the rivets in this seam should have been renewed at the time.

I now await a further communication from you in respect to this boiler.

Yours faithfully,

(Sgd) GEORGE D. LIDGETT.



© 2021

Lloyd's Register
Foundation

0030 2/2