

MOB. RPT. NO. 2006

WAR SHIPPING ADMINISTRATION  
NEW YORK, N.Y.

April 6, 1943.

Mr. W. C. Dowe  
Local Manager  
Maintenance & Repair  
War Shipping Administration  
Federal Office Building  
Mobile, Alabama.

Subject: M.S. WILLIAM C McTARNAHAN  
Donkey Boiler

Dear Sir:

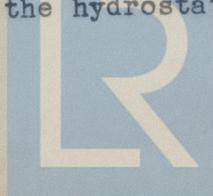
From your letter of March 27, 1943, it appears that the Chief objections against this boiler by Lloyds is the use of a girth weld in the wrapper or shell plate which has not been X-rayed or stress relieved, and that this boiler will have to meet the requirements of the M.M.I. in order to obtain a certificate.

We have endeavored to obtain all the necessary information you will need to have this boiler passed and find that some of the requirements will have to be waived. We have been told by the Boston Navy Yard that their usual standard practices were used in the construction of this boiler for boilers of this type, size and working pressure. They were rather surprised to find that the pressure was being drastically reduced by Lloyds and the M.M.I. when they themselves would use boilers similarly constructed for naval use without question.

It may be of interest to you to know that the longitudinal stress in the weld, excluding the staying effect of the fire tubes, amounts to approximately 3700 pounds per square inch, and if the tube staying effect is taken advantage of the stress is only a meagre 2166 lbs. per sq. inch. Assuming the tensile strength of the material used in the weld at 55,000 pounds per square inch the factors of safety figure out as 15.77 and 25.39 respectively. In our opinion such low stresses do not warrant relieving, and wherever regulations require stress relieving in this particular case you should endeavor to have them waived. Unfortunately, this welded girth joint was not stress relieved, nor was it X-rayed.

The Navy informs us that the weld was given a visual examination by their welding engineer, using a magnifying glass as an aid in detecting any imperfections. This examination disclosed the weld as satisfactory in their opinion.

The plates were not provided with test coupons for subsequent tests in the presence of the M.M.I. and Lloyds representatives. The above representatives did not witness the hydrostatic test on this boiler.



Lloyd's Register  
Foundation

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Mr. W. C. Doew

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April 6, 1943.

We have been told by representatives of the Navy that this boiler was constructed from steel plates manufactured in accordance with U.S. Navy Department specifications for Class B marine steel 48P-2, and that no tests were made by them at Boston. We are, however, writing the Worth Steel Company, making an effort to determine if any tests were conducted at the mill on this material prior to shipment.

If we obtain a certified test report on this material the same will be forwarded to you for presentation to Lloyds and the M.M.I.

Under the circumstances you will have to develop from the M.M.I. what they are going to demand, then give them the facts contained in this letter, together with a copy of the drawing of this boiler, and if they will not accept the boiler you request that they submit all the facts contained in this letter together with copy of the drawing to their Technical Division in Washington for final decision.

We suggest that you inform the M.M.I. and Lloyds representatives that we will hydrostatic test the boiler to 220 pounds, which is two times the normal working pressure of this boiler. If they insist we will agree to have this welded girth joint magnafluxed.

We have taken up the matter of accepting this boiler with Mr. John Heck of Lloyds Register of Shipping here in New York, and he has agreed that if we will magnaflux the girth weld and hydrostatic test the boiler to 220 pounds per square inch gauge pressure he would be willing to accept the boiler for 110 lbs. working pressure, waiving such conditions which have brought about the difficulty encountered in getting this boiler passed.

We appreciate the fact that there will be a few points which you will have to work out with the M.M.I. and Lloyds representatives, who are to pass on the work, as any waivers will have to come through them or be handled by them through their main offices.

In these days it is very difficult, or almost next to impossible, to obtain equipment needed, and we feel that this boiler should be accepted without question owing to the fact that it was built by the Boston Navy Yard, which unquestionably built boilers that have all the qualifications necessary to meet the stringent rules and regulations imposed by the various interested bureaus, but due to an unfortunate oversight we failed to comply with all the requirements, so that the working pressure is to be drastically reduced, making it unfit for the purpose for which it was originally purchased. Under normal conditions the boiler would have been built to meet all the requirements, but under the stress which we are passing through the details were not carried out, resulting in a condition such as we have in this particular case.

Please keep us advised so that we may give you any information which you may need.

We are enclosing herewith four (4) blueprints of this boiler.

Very truly yours,

R. T. Lemon  
Executive Manager

Maintenance & Repair Division

By: J. T. Welsh

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