

COPY.

# Lloyd's Register of Shipping,

71, Fenchurch Street, E.C. 3.

ENCLOSURES.

6th September, 1935.

Your Ref. 24/Kf.M.No. 7174/71.

Dear Sirs,

E.

I was duly favoured with your letter of the 23th ultimo, with enclosures advised therein, respecting the Loeffler Marine Boiler intended for the steamer "CONTE ROSSO", and with regard thereto I have the pleasure to inform you that the plans of throttle valve and flanges will be approved for a working pressure of 130 kg. per sq. cm. and a temperature not exceeding 500°C, provided the valve and flanges be constructed as shown and amended on the plans and the whole of the work be to the satisfaction of the Society's Surveyors.

It will be noted that the maximum temperatures for which the proposed flanges are considered suitable (if made of carbon steel) have been indicated on the plans. In the case of the 80 mm. bore flanges it is considered that, in order to avoid excessive deformation, the flanges should be made of Loeffler Normal Steel when the temperature of the steam exceeds 430°C, and for steam temperatures between 430°C and 500°C the flanges should be made of Loeffler Normal Steel and the thickness should be increased by 5 mm.

With reference to the plan of throttle valve it is considered that the size of the studs securing the cover should



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be not less than  $R\frac{3}{4}$ " and for steam temperatures exceeding  $430^{\circ}\text{C}$ , and in order to avoid excessive deformation, the cover should be made of a special heat resisting alloy, full particulars of which should be submitted.

It is noted that it is proposed to make the nuts of "C 50" steel and it is concluded that this material will be a plain carbon steel and therefore not possessing good creep resisting properties.

I think it well to point out that the evidence at present available indicates that nuts not made of special heat resisting steel add considerably to the total deformation of the nut and bolt combination. Further, after a lengthy exposure to high temperatures, the deformation of the nuts through shear renders it impossible for them to be turned on their bolts.

In the circumstances, it is suggested that the nuts should be made of a special heat resisting steel, e.g. a nickel chrome-molybdenum alloy.

It is also concluded that the materials of the stud bolts, viz:- "Cr. Nl. Steel 55" is a high nickel high chromium steel, but I shall be obliged if full particulars, including the limiting creep stress, will be forwarded.

Four copies of the plans sent by your goodselves are returned herewith and I shall be obliged if you will kindly arrange for two copies of each of these plans to be forwarded



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to this Office for the use of the Society's Surveyors concerned. I may add that the remaining copies are being retained in this Office for reference.

I am, Dear Sirs,

Yours faithfully,

Secretary.

The Vitkovice Mines, Steel- & Iron-Works Corporation,  
Moravska Ostrava 10,  
CZECHOSLOVAKIA.



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