

"CONTE ROSSO"

Throttle Valve and Pipe Flanges for Loeffler Boiler.  
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IT IS SUBMITTED the Firm be informed that the plans of throttle valve and flanges merit approval 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 Surveyor's satisfaction.

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 480°C and 500°C the flanges should be made of Loeffler Normal steel and the thickness should be increased by 5mm.

With reference to the plan of throttle valve it is considered that the size of the studs securing the cover should be not less than  $R\frac{5}{8}$ " and for steam temperatures exceeding 430°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.

It is desired 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.



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

W.G.F.  
6.9.35.



Return 4 plans  
Retain copies and reference plan.

Copies of the plans now approved should be forwarded in duplicate for the use of the Surveyors.

The Trieste and Vienna Surveyors should be advised.

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