

"S. S. Birma"

The machinery of this vessel was built under Special Survey. The screw shaft originally made for the vessel was 15 inches in diameter & was fitted with a continuous liner & the propeller was fitted to it. The vessel was sold before completion & the new owners required a linerless shaft fitted on the Cedarval principle in which the stern tube is kept full of oil. A new shaft was accordingly fitted 16 inches in diameter at the bearings reduced to  $15\frac{7}{8}$ " for a short distance between the bearings. The rule requirement for a shaft without liners is  $16\frac{3}{8}$ ".

In the parts of the shaft which are subject to the most strain, viz at the bearings this shaft is larger than the Rule requirements and at the part where it is slightly smaller it is still larger than would be fitted if the shaft were arranged with a continuous liner. Also as the stern tube is arranged to be used full of oil there is no corrosion likely to occur. In the circumstances it is submitted that the shaft made to the owners requirements might be approved of & The record of + LMC 3.12 be assigned

JM 1/4/12

JRL

F.D



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Pitch across wide water spaces  $1\frac{3}{4}$ " Working pressures by rules 204.5 lbs Girders to Chamber tops:

Thickness of girder at centre  $8\frac{3}{4}$ " x  $1\frac{1}{2}$ " Length as per rule  $33\frac{1}{2}$ " Distance apart  $7\frac{3}{4}$ " Number and pitch of