

Thrust Shaft of the S.S. "STETTIN"

This vessel had a new thrust shaft made in Lisbon, turned out of an old shaft of large diameter.

The Owners were informed that owing to this shaft having been turned out of the heart of a large forging, the material could not be considered to be reliable, and that the shaft could only be looked upon as being a temporary repair.

The Owners had a cross section of the large shaft sent them when the new shaft was made and they submitted this section for inspection shewing that the material was perfectly sound.

They have now had five tests out from this section, two being taken as near as possible to the outer surface of the original shaft, two from the part which corresponds to the section of the new shaft and one from the centre of the disc.

The results of tests cut cross ways from a shaft cannot be expected to <sup>be</sup> <sup>to</sup> equal those cut longitudinally and therefore cannot be considered to properly represent the quality of the material, but tests made as these were may be taken to give comparative results.

As would be expected these made from near the surface of the original forging give results considerably above those taken from nearer the heart of the forging.

The usual standard of good quality is that the sum of the tensile strength in tons per square inch and the elongation per cent on a standard test piece should be 57. In this case the figures for the outer and inner test pieces respectively are 58.7 and 54.4.

In view of the test pieces being made from a cross section, it is considered that these results shew the material to be remarkably good, although the figures representing the present shaft do not quite come up to the standard which is required from longitudinal test pieces of new shafts

it is submitted that they should be considered to be  
satisfactory and the shaft should be approved of as a per-  
manent repair.

J.M.

A.P.S.K.

27/4/16.

noted