

S.S. "KORANTON".

The Newcastle Surveyors reported in August last that on account of damage the lower portion of the cast steel stern frame was found fractured on the heel underneath the propeller post, and it was subsequently renewed.

As the original post was manufactured in the Newcastle district, the Society's Inspector of Forgings at that port, Mr. Campbell, was asked to report what he considered the cause of the failure.

From a report now received/^{he} considers the reason of the original defects was that the header on this part of the frame had been too small to feed the casting to a sound finish, and that as the material cooled the amount of contraction was such as to cause slight separation of the material in parts, but not of sufficient entity as to tear the parts asunder, though it would leave the frame in rather a porous condition which could only be ascertained if the frame should break and reveal the defect.

Mr. Campbell puts forward a suggestion that in order to minimise the stresses set up as the material is cooling, where sections are of unequal area, a hole might be cast in the large section, which would be eventually plugged up.

This subject was brought under the notice of the Technical Committee by the Chief Surveyors in December 1910, and after having learned the views of all the Principal Surveyors in the chief centres where steel castings were manufactured, both at home and on the continent, the Rules were amended so that in the case of large steel castings the Surveyors were instructed to supplement the normal tests by drilling holes at such parts of



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the castings as experience had shewn that cracks or cavities were likely to occur, and at positions agreed upon between the surveyor and the Manufacturer, in order to determine the soundness or otherwise of the casting.

It is submitted in these circumstances that Mr. Campbell might be informed that his suggestions have been considered, but as the Rules were amended so as to allow the testing Surveyor power to drill castings in order to ascertain that the flow of material was uniform, no further action is therefore considered necessary at the present time.

J.R.

BH

8.10.21

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