

S.S. "VIVA".

Messrs. Fredriksstad Mek. Verksted.

High Lift Safety Valve.

IT IS SUBMITTED the Oslo Surveyors be informed the plans of high lift safety valve forwarded with their letter of the 16th instant have been examined and it is considered that valves of the type shown on plan No. 40171 could be accepted with a reduction of $33.1/3\%$ in the aggregate area required by Section 21 of the Rules for Engines and Boilers, provided:-

- (a) The valves in every case satisfactorily withstand the accumulation test prescribed by Sections 21 and 34 of the Rules for Engines and Boilers.
- (b) Provision be made to lift the valves, by means of the easing gear, a distance equal to one quarter of their diameter.
- (c) A locking arrangement be provided for the screwed outer ring on the valve seat.
- (d) Provision be made by means of escape holes to prevent accumulation of pressure in the spring casing.
- (e) Provision be made for draining the chest above the valves.

With reference to the remarks contained in the Firm's letter of the 12th ultimo, it should be explained that the usual practice in safety valve design is to provide an assembly which will permit the valve being lifted one quarter of its diameter by means of the easing gear in order to provide the maximum area for which the mounting is available for reducing pressure in the boiler in an emergency. Further, the capability of lifting one quarter of the diameter is a requirement of the British Board of Trade.

It is correct, as suggested by the Firm, that the area of safety valves determined by the Society's Rules is based on the area of the valve itself and not on the

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annular section given by a lift of one quarter of the diameter.

It may be added, however, that it has been shown by experiment that valves of the high lift type are raised, when under full discharge, to a much greater extent than that indicated by the theoretical calculations in the Firm's letter.

Retain 2 plans.
with Engineers. (4TH floor)

J. Mac.

[Signature]

[Signature]

26th August, 1938.

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