

Aktieselskabet
Burmeister & Wain's
Maskin-og Skibsbyggeri.

Telegrams: Burmeisters-Copenhagen.

Codes: Bentley's and Boe.

Telephones: Head Office: Central 9870.

Shipyards: Central 6282.

Your Ref.:

Our Ref.: OL/OF.

Copenhagen, K.

September 23rd, 1938.

Lloyd's Register of Shipping,

Sct. Annæ Plads 28,

K.-

Dear Sirs,

**TWO-STROKE SINGLE-ACTING ENGINES WITH
WELDED BEDPLATE AND FRAME.**

We refer to previous correspondence in this matter (our letter of 9th June 1938 and your reply of 23rd June 1938), from which we understand that you object to the use of Thomas steel for the cross girders of the bedplate.-

The design referred to is based on the use of broad-flanged Differdinger sections, and only by using these sections a satisfactory result is obtained in regard to technique as well as manufacture.-

It appears, however, that broadflanged Differdinger beams are manufactured of Thomas steel only, it being impossible to procure these sections made of Siemens Martin steel (open hearth steel) on the European market. As conditions thus prevent us from using the design in question, we take the liberty of enquiring whether the Register would consider granting us exemption from the decision set forth in their above letter.

In support of our request we would state the following:

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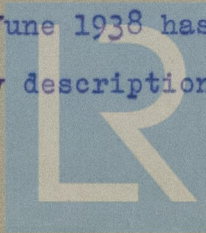
Lloyd's Register of Shipping, Sct. Annæ Plads 28, K.

- 1) In numerous cases the stresses in the cross girders of bedplates made of cast iron have been about 240 kilos per sq.cm. In the above design the corresponding stresses in the Differdinger beams will be 300 kilos per sq.cm., a figure which we can guarantee will not be exceeded in future designs.
- 2) A basic Bessemer steel (Thomas steel) is according to our experience not inferior to an acid Siemens Martin steel (open hearth process), the quality figures for the two steel types being very nearly the same.

We shall comply with any reasonable demand in respect of tests of the material, comprising tensile and impact values as well as analyses taken from both ends of each beam, if required. In this connection we would point out that the impact value of cast iron is nil, whereas for Thomas steel it lies around 8 metre-kilograms per sq.cm.

- 3) The Register does not demand tensile or other test carried out for bedplates of cast iron, and we cannot see that a cast design, in which defects may be hidden under an apparently faultless surface, should give more security than a bedplate made of rolled steel sections.

The 6-cylinder, two-stroke, single-acting main engine mentioned in our letter of 3rd June 1938 has now been testrun for 300 hours, and no defects of any description have been detected.-



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The tests will be continued during the coming winter months.

We have recently received an order for two engines of the type referred to, to be used in a twin-screw plant, and it is our intention to use the above mentioned experimental engine for this project.

We should therefore deem it a great favour if the Register would kindly reconsider this matter and let us have a decision at the earliest possible moment.-

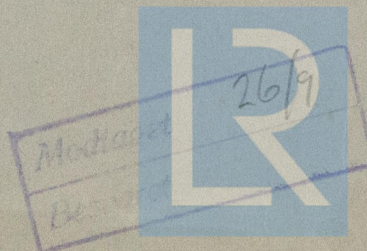
Yours faithfully,

AKTIESELSKABET
BURMEISTER & WAIN'S MASKIN- OG SKIBSBYGGERI

R. Hommoller *Chaiting*

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