

COPY.

PORT OF BRISTOL.

Our ref. BRJ/AW.
Works Dept.

31st December, 1936

Lloyd's Register of Shipping,
49, Queen Square,
BRISTOL.

Dear Sirs,

Two 4-JP Engines for Auxiliary Generator
Sets for Coaster Vessel No. 746 being built
by Messrs. Vickers-Armstrong.

We have just received from Lloyd's Proving House
Cardiff, their report No. E641/36 giving the results of the
tests on the Test Pieces taken from the crankshafts of the
above engines, the results are as follows -

MARK	ULTIMATE STRENGTH.	REDUCTION OF AREA.	ELONGATION.
3841	32.0	58.4	36.0
3842.	32.0	58.4	35.0

It is noted that the tensile strength is in each case
32 tons per square inch instead of the 34 tons per square
inch specified in your letter of the 31st May, 1935.
We would be very grateful if you would accept these
crankshafts as a special concession in this instance.
The crankshaft material is identical with that which we are
using as standard for this class of engine with every
success, notwithstanding the fact that in many cases the
crankshaft has to stand a very heavy belt pull, in addition
to the stresses which will be encountered in the cases
of the two engines under consideration. The material is
a .25 to .35% Carbon Steel to the British Standard
Specification S71C and is in the normalised condition,
which is a very good condition for the particular duties
which a crankshaft has to perform.

We will in future, for engines of this class,
coming under your survey, subject the shaft to a special
hardening and tempering treatment which will raise the
tensile strength to a figure not below the 34 tons per
square inch specified by you.

Our customer is very urgently requiring these
engines and it will not be possible to make any alteration
to the existing shafts to increase their tensile strength.

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To prepare entirely new shafts would involve very serious delay. We would, therefore, in view of the satisfactory experience we have had with this material in identical engines, respectfully submit that you give the question of the acceptance of these tests as they stand your favourable consideration.

Apologising for giving you this trouble,
We are,
Yours faithfully,

pp R.A. LISTER & CO. LIMITED.

(signed) B.R. JONES.



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Foundation