

Lloyd's Register of Shipping.

(Report on Machinery, No.

Port *Middlesbrough*)No *F1774S*: ENGINE FORGINGS OR CASTINGS.

I have to report that the ~~Iron or Steel Forgings or Castings~~, as herein described, manufactured by *John Spencer & Sons, Ltd.* of *Newburn* for the Engines No. *1875* being constructed by *Blair & Co. Ltd.* of *Stockton-on-Tees* for the Ship No. _____, being built by _____ of _____ have been inspected by me as set forth below, and found to be, so far as can be seen, *Sound*

Mark on Forgings or Castings.

Lloyd's

No. *5931N.**W.C.**W.M.**McCampbell**Newcastle*

	CRANK SHAFT.	STRAIGHT SHAFTING.		
		THRUST SHAFT.	INTERMEDIATE SHAFTS.	2 PROPELLER SHAFTS
Material* ...	<i>Ingot Steel</i>	<i>Ingot Steel</i>	<i>Ingot Steel</i>	<i>Ingot Steel</i>
How made ...	<i>Forged</i>	<i>Forged</i>	<i>Forged</i>	<i>Forged</i>
Dimensions ...	<i>15 3/4</i>	<i>15 3/4</i>	<i>14 3/4</i>	<i>17</i>
Progress on Inspection }	<i>Rough turned</i>	<i>Rough turned</i>	<i>Rough turned</i>	<i>Rough turned</i>
Tests on Standard Test Pieces.				
Tensile Test—				
Tons per square inch	<i>29.5 30.3 29.6 30.8 31.0 30.6</i>	<i>31.9</i>	<i>32.0 31.2 31.8 30.2 31.5 31.4 31.2</i>	<i>31.8 31.9</i>
Extension per cent	<i>35% 29% 33% 28% 32% 34%</i>	<i>28%</i>	<i>27% 29% 30% 34% 32% 30% 27%</i>	<i>28% 28%</i>
Cold Bending Test—				
Angle before fracture	<i>180° 180° 180° 180° 180° 180°</i>	<i>180°</i>	<i>180° 180° 180° 180° 180° 180°</i>	<i>180° 180°</i>
Dates when Inspected	<i>April 23, To July 27-1921</i>			

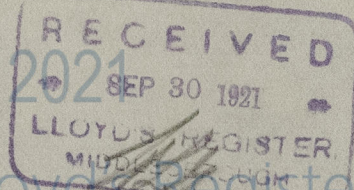
PARTICULARS OF OTHER TESTS APPLIED TO CASTINGS:—

continuous liners
Shafting examined under special survey while being machined & when finished and found so far as could be seen, sound and good. Shafts re-stamped as above

Wm Morrison

Fee (if any chargeable) £

To be paid at



* If of iron, state whether scrap or puddled iron. If of steel, state whether made on the Open Hearth process.