

No. 2102

(Received at London Office,

15 AUG. 88

TESTS OF BOILER STEEL

Tests of 144 Steel Bars manufactured by Wardale Iron & Coal Co. of Spennymore for Boiler No. 868 to be constructed by L. Richardson & Sons of Hartlepool for

Date first visit July 27<sup>th</sup> 88 last visit - No. of visits one

The Stub Bars specified in the accompanying copy of Advice Notes were rolled from six charges. The tensile test has been applied to 17 samples as set forth below, and the temper and bending tests have proved satisfactory.

When a second test is applied, the result should be recorded immediately below the record of the original test. The number of plates or bars included in a rejection must be clearly stated.

| No. | Purpose.       | Charge Mark. | No. of plates or bars in same charge | Mark on plate and test piece. | Dimensions. |        |       | Ultimate Stress. |          | Exten. in 8 ins. | Remarks.          |
|-----|----------------|--------------|--------------------------------------|-------------------------------|-------------|--------|-------|------------------|----------|------------------|-------------------|
|     |                |              |                                      |                               | Thickn.     | Brlth. | Area. | Total            | Sq. Inch |                  |                   |
|     |                |              |                                      |                               | Ins.        | Ins.   | Ins.  | T. ns.           | Tons.    | %                |                   |
|     | Stays 1 1/2"   | 5760         |                                      | 13                            | 1.57        | dia    | 1.79  | 50.44            | 28.10    | 30.00            |                   |
|     | " "            | " "          |                                      | 12                            | 1.51        | " "    | 1.79  | 47.76            | 26.60    | 26.00            |                   |
|     | " "            | " "          |                                      | 11                            | 1.50        | " "    | 1.79  | 50.68            | 28.30    | 31.00            |                   |
|     | " "            | " "          | 38                                   | 3                             | 1.50        | " "    | 1.76  | 49.54            | 28.10    | 29.00            |                   |
|     | Rivets 1 3/16" | 5897         |                                      | 9                             | 1.21        | dia    | 1.15  | 31.46            | 27.30    | 27.00            |                   |
|     | " "            | " "          |                                      | 1                             | 1.21        | " "    | 1.15  | 31.92            | 27.70    | 27.00            |                   |
|     | " "            | " "          |                                      | 5                             | 1.19        | " "    | 1.11  | 30.35            | 27.30    | 31.00            |                   |
|     | " "            | " "          | 78                                   | 2                             | 1.19        | " "    | 1.11  | 30.12            | 27.10    | 31.00            |                   |
|     | " "            | " "          |                                      | 4                             | 1.20        | " "    | 1.13  | 30.58            | 27.00    | 30.00            |                   |
|     | " "            | " "          |                                      | 6                             | 1.19        | " "    | 1.11  | 29.91            | 26.90    | 32.00            |                   |
|     | " "            | " "          |                                      | 3                             | 1.20        | " "    | 1.13  | 29.91            | 26.40    | 31.00            |                   |
|     | " "            | " "          |                                      | 11                            | 1.20        | " "    | 1.13  | 30.80            | 27.30    | 27.00            |                   |
|     | " "            | 5892         | 2                                    | 3                             | 1.19        | " "    | 1.11  | 30.80            | 27.70    | 29.00            |                   |
|     | " "            | 5887         | 2                                    | 2                             | 1.22        | " "    | 1.17  | 29.91            | 25.50    | 32.00            | Rejected two Bars |
|     | " "            | 5881         | 2                                    | 4                             | 1.19        | " "    | 1.11  | 30.58            | 27.50    | 28.00            |                   |
|     | Rivets 1"      | 5350         |                                      | 1                             | 1.01        | dia    | .801  | 21.87            | 27.30    | 31.00            |                   |
|     | " "            | " "          | 21                                   | 4                             | 1.01        | " "    | .801  | 21.65            | 27.00    | 31.00            |                   |

Ad

Fee ..... £ : :

Expenses £ : :

£ : :

To be paid by

Herri Willmanson

Surveyor, Lloyd's Register

Hartlepool