

SHIP BUILDING YARD & GRAVING DOCK, NORTH SHIELDS.
ST. LAWRENCE ROPERY, NEWCASTLE UPON TYNE.
AGENTS FOR THE ORIGINAL MUNTZ'S METAL COMPANY LIMITED, BIRMINGHAM.

JOSEPH & WM. SMITH.

LONDON OFFICE,
LEADENHALL STREET, E.C.

1, Queen Street.

Newcastle upon Tyne 2 June 1881

Certificate for Steel Hawser

We hereby certify that the ninety fathoms of $2\frac{1}{2}$ inch circumference galvanized Steel Wire Hawser supplied to Messrs Wigham and Richardson & Co for their #4 42/28 is composed of 72 wires (number 16 $\frac{1}{2}$ Birmingham Wire Gauge) and that the several wires, after being galvanized, have been subjected to, and have successfully withstood the following tests viz:—

Each wire has withstood a tensile strain of 5 cwt.

It has withstood being twisted 27 times round itself in a length of eight inches.

It has been doubled and twisted eight times round itself as a core and untwisted again without fracture.

We guarantee that the Steel Wire Hawser of $2\frac{1}{2}$ inches in circumference above described will bear a strain of 11 $\frac{1}{2}$ Tons without breaking.

FOR THOS. & WM. SMITH.



12219
Manufacturers

Lloyd's Register
Foundation

NWC-178-0039

Edges of Main Sheerstrake, double or single riveted.

Upper Sheerstrake, double or single riveted.

Butts of Main Sheerstrake, treble riveted for $\frac{1}{16}$ length amidships. Butts of Upper or Spar Sheerstrake, treble riveted

Butts of Main Stringer Plate, treble riveted for $\frac{1}{16}$ length amidships. Butts of Upper or Spar Stringer Plate, treble riveted