Some Documentary Highlights

The Collection has some original company documents, some of which are unique, in addition to publications which describe the building, launching, operation, and scrapping of this famous passenger liner. The Collection is open to visitors by appointment where these materials can be consulted.

The liner MAURETANIA was the most famous ship built on Tyneside. She was the largest, fastest and most expensive passenger ship when she entered service in 1907. She and her sister LUSITANIA built at Clydebank allowed Cunard to regain supremacy on the prestigious North Atlantic route. She held the Blue Riband for the fastest crossing for much of her 28 year life, with a speed of around 26 knots (30 mph). She achieved this high speed by adopting Parsons' new steam turbine machinery, which when ordered was many times more powerful than the previous highest powered turbine.

Abbreviations used below:- SHWR = Swan, Hunter & Wigham Richardson Co. Ltd, Wallsend, near Newcastle upon Tyne, Northumberland, UK . MI = Metal Industries Co. Ltd., Rosyth and Charlestown, near Dunfermline, Fife, Scotland, UK.

The Collection has a selection of material, some unique, on her building and her breaking in 1935.

- **DOCUMENTS 1 & 2.** MAURETANIA technical particulars by her builders SHWR 1907.
- **DOCUMENTS 3.** MAURETANIA speed trial results conducted by her builders SHWR in November 1907.
- **DOCUMENTS 4.** MAURETANIA machinery building contract with Wallsend Slipway and Engineering Co. Ltd 1905.
- **DOCUMENTS 5.** MAURETANIA construction and on-board photographs by SHWR 1905-1907.
- **DOCUMENTS 6.** MAURETANIA construction in Souvenir Number of the ‘The Shipbuilder’ magazine November 1907.
- **DOCUMENTS 7.** MAURETANIA construction published in the leading engineering magazine ‘Engineering’ November 1907.
- **DOCUMENTS 8.** MAURETANIA auction catalogue of fittings for shipbreakers MI by auctioneers Hampton & Sons in 1935.
- **DOCUMENTS 9.** MAURETANIA photographs of breaking by MI at Rosyth ca.1935-1936.
- **DOCUMENTS 10.** MAURETANIA describing her breaking in the company history of MI shipbreaking at Rosyth and Charlestown by Ian Buxton, 1992.
- **DOCUMENTS 11.** MAURETANIA outturn record of material recycled by MI 1935.
- **DOCUMENTS 12.** MAURETANIA breaking described in Max Wilkinson’s paper to the Manchester Association of Engineers 1940.

- **OTHER RESOURCES 1.** Ian Buxton’s article “MAURETANIA and her Builders” in the journal Mariner’s Mirror, 1996.
- **OTHER RESOURCES 2.** Tyne & Wear Museums & Archives ship model of ‘MAURETANIA’.
Her builders, ‘Swan, Hunter & Wigham Richardson’ (SHWR) had been formed by the merger in 1903 of two companies ‘Swan, Hunter’ and ‘Wigham Richardson’ so that they could compete for Cunard’s ‘express liners’. They extended their Wallsend yard with two covered berths to permit the construction of what would be their largest ship to date at 787 ft long and 88 ft breadth. Builders compiled the technical particulars of ships they had built, both as a record and as a reference for future designs. The Collection holds some of the technical data records by senior SHWR staff.

Reference: ‘R.M.S."Mauretania" Finished Weight summary’. Swan Hunter & Wigham Richardson Limited, 1 sheet, 1907. Below is part of the page:-

![Image of technical particulars]

A more detailed ledger of technical particulars was kept by the Drawing Office of SHWR – below is the draft entry page in pencil; the finished copy was inked up and recorded in a large ledger.

Reference: Reference: ““Mauretania””. Swan Hunter & Wigham Richardson Limited, [unpublished ledger], 1907, pp. Entry No.73 Mauretania, 2 pages. Part of the first page is shown:-
**DOCUMENTS 3.** MAURETANIA speed trial results conducted by her builders SHWR in November 1907.

MAURETANIA's trials in the Clyde extended over four days 3rd-6th November 1907. The results are summarised in the graph below, showing a maximum speed of 26 knots, with 78,030 shp at 188 propeller rpm, burning 49.9 tons of coal per hour dated 6th November 1907:-

Reference: 'Q.T.S.S. “MAURETANIA”. Curves from data taken on official trials 10 runs on measured mile at Skelmorlie Nov 6th 1907’. Swan, Hunter & Wigham Richardson Limited, 1907, 1 folded sheet, linen. Part of the sheet is shown here:-

**DOCUMENTS 4.** MAURETANIA machinery building contract with Wallsend Slipway and Engineering Co. Ltd 1905.
The machinery building contract between Cunard and SHWR was ‘cost plus’ rather than fixed price, as there were so many unknowns from the new steam turbines to the lavish public rooms. Cunard agreed to pay the actual costs of materials and labour plus percentages for overheads and profit. There was thus a corresponding cost plus contract between SHWR and Wallsend Slipway & Engineering for her machinery. The legal agreement dated 14 July 1905 spells out the details, with the machinery to be ready for trials by 18 November 1907. Although ours is not the signed copy, it is an identical printed version.

Reference: ‘The Wallsend Slipway and Engineering Company Limited and Swan Hunter and Wigham Richardson Limited. Agreement.’ Ingledew & Fenwick, Newcastle-on-Tyne, 14th July 1905, 4 pages on 1 folded-sheet. Part of page 2 is shown here:-

An Agreement made the 14th day of July 1905 BETWEEN THE WALLSEND SLIPWAY AND ENGINEERING COMPANY LIMITED whose registered office is situate at Wallsend-on-Tyne, in the County of Northumberland (hereinafter referred to as “the Engine Builders”) of the one part and SWAN HUNTER AND WIGHAM RICHARDSON LIMITED whose registered office is also situate at Wallsend-on-Tyne aforesaid (hereinafter referred to as “the Shipbuilders”) of the other part.

WHEREAS the Shipbuilders have contracted to build launch complete and deliver to the Cunard Steamship Company Limited (hereinafter referred to as “the Owners”) and thereafter maintain a steamship with machinery and outfit in so far as is required by and in accordance with the terms conditions and requirements contained in an Agreement dated 18th May 1905 incorporating the general conditions set forth in the schedule thereto (a print whereof is annexed hereto) and in accordance with the specification for hull and machinery signed by the Shipbuilders and the Owners.

• DOCUMENTS 5. MAURETANIA construction and on-board photographs by SHWR 1905-1907.

The builders, SHWR, commissioned a series of construction progress photographs and on-board views of the completed ship. The Collection has a selection of these prints from the original glass negatives, although they are not our copyright.


• DOCUMENTS 6 & 7. MAURETANIA in ‘The Shipbuilder’ and ‘Engineering’ of 1907.

Some of these photographs were also reproduced in lavish commemorative books when MAURETANIA was completed. The Collection possesses two of those splendid publications from ‘The Shipbuilder’ and ‘Engineering’ of 1907 which contain comprehensive text and illustrations as described below:-
• DOCUMENTS 6. MAURETANIA construction in Souvenir Number of the ‘The Shipbuilder’ magazine November 1907.

The magazine ‘The Shipbuilder’ was a splendidly produced monthly with much information on the contemporary shipbuilding scene and recent ships. For notable liners, it also produced a hardback souvenir number, covering the design, construction and trials.

‘The Cunard Express Liner “Mauretania”’. The Shipbuilder: A Quarterly Magazine devoted to the Shipbuilding, Marine Engineering and Allied Industries, vol.II, Nov 1907, Special Number / Souvenir Number, 164 pp, 165 figs, 5 plates. Price 1 shilling (= 5 new pence – about £5 in today’s money). Three selected images are shown below:- Fig. 32 – View looking forward from after end of engine room. Fig. 44 – Sections through launching cradles. Plate i – The Cunard liner “Mauretania” passing down the River Tyne.:-

The workmen and guests show just how huge the vessel was.
• DOCUMENTS 7. MAURETANIA construction published in the leading engineering magazine 'Engineering' November 1907.
Containing high quality articles with illustrations and photographs which are similar to those in ‘The Shipbuilder’.

Reference: ‘The Cunard Turbine-Drive Quadruple-Screw Atlantic Liner “Mauretania” constructed by Messrs. Swan, Hunter, and Wigham Richardson, Limited, Wallsend-on-Tyne. Engined by The Wallsend Slipway and Engineering Company, Limited’. Reprinted from “Engineering”, Engineering, London, 1907, 56 pp, 38 plates. Price 4 shillings (£20 in today’s money). Two selected images are shown below:- Fig. 95 – Telephone switchboard. Fig. 103 – Chain-cable.

Note another recent innovation - the shipboard telephone system:-

![Telephone switchboard](image1.png)
![Chain-cable](image2.png)

- DOCUMENTS 8. MAURETANIA auction catalogue of fittings for shipbreakers MI by auctioneers Hampton & Sons in 1935.

With the largest archive of the British shipbreaking industry, the Collection has a good selection of material on her breaking by Metal Industries Limited at Rosyth in 1935. Before she left Southampton, an auction of her fittings was held over eight days, which attracted great interest. Items included panelling, furniture, lights, carpets, bathroom fittings, lifeboats, flags and even coat hangers. Our copy of the catalogue uniquely has the prices and buyers pencilled in.

Reference: ‘The appointments, equipment and panelling of the “Mauretania”’. By direction of Metal Industries Limited, Glasgow. Hampton & Sons, Auctioneers, London, UK, 1935, 191 pp. Three selected images are shown below:- The Front Cover, part of page 51 (note hand-written sale prices of each lot on bottom LH corner), and part of an unnumbered summary page are shown here:-

![Front Cover](image3.png)
![Page 51](image4.png)
![Summary Page](image5.png)
The auction yielded £15,000, and visitors to her at Rosyth paid another £1000 at 1 shilling per head – donated to local charities. MI had paid £77,000 for the ship and had breaking costs on top, but overall made a healthy profit including sales of scrap steel, non-ferrous materials and timber. MI prepared the summary ‘outturn’ hand-written record of lots sold.

Part of the fourth page of four for the 7th and 8th auction days is shown here:


The Collection has the best collection of original photographs of her breaking at Rosyth, a few of which are also reproduced in Ian Buxton’s “Metal Industries” published by the World Ship Society in 1992.
References: ‘Metal Industries: Shipbreaking at Rosyth and Charlestown’ by Ian Buxton, World Ship Society, 1992, 104 p. An excellent account on shipbreaking at Rosyth and Charlestown including the German warships scuttled as Scapa Flow in 1919 and liners such as the Leviathan and Mauretania. The front cover is shown below.

‘[Photographs of shipbreaking by MI]’. Metal Industries Limited, Rosyth, Scotland, ca.1935-1936, 2 untitled volumes & many of the photos without captions or dates. Includes German warships scuttled as Scapa Flow in 1919 and liners such as the “Mauretania”, “Leviathan”, and others. The album is a unique general one of ships broken up by MI. One selected image is shown below for ‘Mauretania’:-

• DOCUMENTS 11. MAURETANIA outturn record of material recycled by MI 1935.

A summary page in a hand-written company ledger showing materials recycled, including ferrous metals (steel and iron), non-ferrous metals (bronze, copper, etc), together with sundry other materials (teak, firewood, glass, etc). It shows estimated and actual prices obtained.


- DOCUMENTS 12. MAURETANIA breaking described in Max Wilkinson’s paper to the Manchester Association of Engineers 1940.

Max Wilkinson was the manager of MI’s Rosyth yard in 1935.

Reference: ‘The Demolition of the “Mauretania”’. By M. Wilkinson. Read Friday 15th March 1940. Published in: Manchester Association of Engineers Transactions, Session 1939-40, paper no.6, pp 229-262. Part of pages 229, 243-244 are shown below:-
• **OTHER RESOURCES 1.** Ian Buxton’s article “MAURETANIA and her Builders” in the journal Mariner’s Mirror, 1996.

Gives details of how the builder was selected, progress, problems and costs – Cunard ended up paying £1.812M for their most successful ship.


• **OTHER RESOURCES 2.** Tyne & Wear Museums & Archives ship model of ‘MAURETANIA’.

The Museum has a splendid model of MAURETANIA in their Discovery Museum, Newcastle upon Tyne, and a number of artefacts from the ship.

**How to contact the Collection:**

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**URL:** [www.ncl.ac.uk/engineering/about/facilities/marineoffshoresubseatechnology/specialcollection](http://www.ncl.ac.uk/engineering/about/facilities/marineoffshoresubseatechnology/specialcollection)