

## Marine Technology Special Collection, Newcastle University

**Periodicals Histories N:** (only trade and industry technical magazines, research journals)

Listed in the same sequence as the Collection's holdings shown on the Collection's website for **Search Collection** then **Periodicals**.

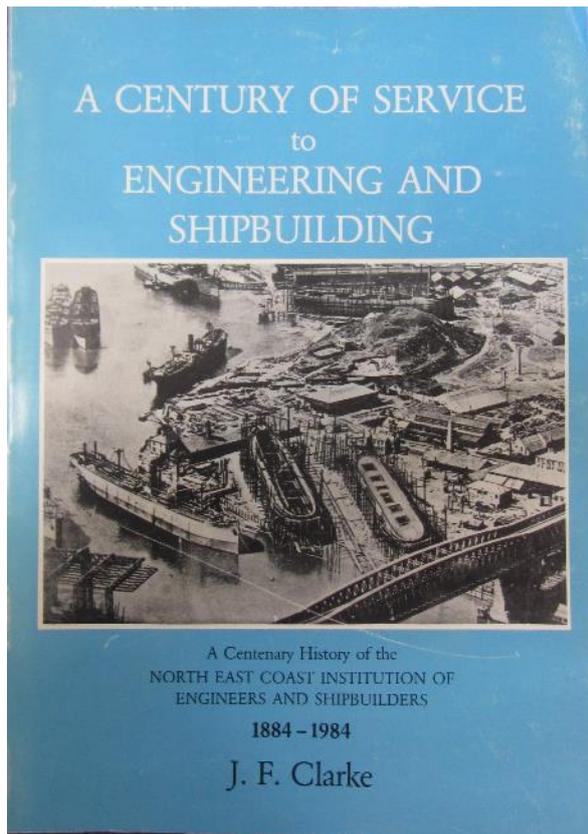
**The Nautical Magazine.** Brown, Son, & Ferguson, England, 1832 - 2013. A UK-based shipping magazine with substantial technical papers. Initially aimed primarily at seafarers, but professionals rather than deckhands, and the UK merchant navy. Sections included hydrography, voyages, navigation, and nautical miscellany. Early years contain illustrations including fold-out plans and drawings. Refs: Wikipedia [https://en.wikipedia.org/wiki/The\\_Nautical\\_Magazine](https://en.wikipedia.org/wiki/The_Nautical_Magazine) . Example pages: [under construction]

**Transactions. North East Coast Institution of Engineers and Shipbuilders**, v1=1884 – v108=1993, Newcastle upon Tyne, England. Abbreviated as **Trans NECIES** or **TNECIES**. Was based in Newcastle upon Tyne but serving the North East of England. It was one of the leading UK regional professional engineering societies. Subjects mainly naval architecture, shipbuilding, marine engineering but included all other aspects of engineering. Coverage was mainly NE England but also some UK national and international coverage. In the early volumes papers were typically 5 to 10 pages but occasionally very long up to 60 pages. Some early papers contain lengthy discussions, sometimes with bitter disputes between rivals. Continued to publish papers of international repute until closure in 1993 when its role had been superseded by UK national professional learned societies such as RINA and IMarE now IMarEST. A comprehensive final index was published when the society closed **Index to the Publications of the North East Coast Institution of Engineers and Shipbuilders 1984 to 1993** which is a free download, please visit the Collection's website for **Search Collection** then [NECIES-Index-to-Publications-1884-to-1993](#).

**Example pages: Trans NECIES**, vol.1 1884/85 [title page]; [contents page]; pp.21-36 [only pp.21 scanned] W. H. White "*On the speed-trials of steamships*";; plate 1 opp pp.36 "*Whitley measured mile course*". A typical technical paper. It explains sea-going trials for ships after their launching to prove, amongst other requirements, that the new ship is actually as fast as the contract agreed between the shipbuilder and the prospective shipowner by sailing over the measured mile course off Whitley Bay, Northumberland; pp.173-? [only pp 173 scanned] "*List of honorary members, members, associates and graduates*" of the Institution.

[under construction]

**A century of service to shipbuilding and engineering: a centenary history of the North East Coast Institution of Engineers and Shipbuilders 1884-1984.** By J. F. Clarke. Example Pages:



**CONTENTS**

Chapter		Page
1	The Foundation and Early Years of the Institution . . . . .	1
2	The Institution Progresses . . . . .	14
3	The Shipbuilding Industry . . . . .	33
4	Education, Research and Development . . . . .	46
5	Production Techniques in Shipyard and Workshop . . . . .	60
6	Prime Movers and Ship Propulsion . . . . .	81
7	Ship Design . . . . .	110
8	Materials and Other Matters . . . . .	126
9	By the Way of a Short Conclusion . . . . .	137
	Presidents of the Institution . . . . .	140
	Institution Scholars . . . . .	141
	Papers Read to the Institution . . . . .	142
	Notes and References . . . . .	143
	Index . . . . .	153

**Front Cover**

*Edinburgh's shipyard on the River Tyne about 1920, looking west, with Blackburn's yard below. Both are now incorporated in Austin & Pridgen's, Sunderland, and, in the foreground is the Queen Alexandra Bridge, Britain's largest. Above, some Sunderland shipbuilders' Railway Ship Factory. Top left are ships fitting out at sea.*

**Back Cover**

**TOP** The 5,000-ton *Swallowtail* tanker Manchester built by Armstrong Whitworth at Walsby in 1925. Tankers were a core North East specialty, building over three quarters of the world's 100 tankers by the late of the century.

**LEFT CENTRE** The 6th of May steamer *Viking* in drydock at Hebburn in 1925, one of the earliest welded-steel ships, built by Armstrong Whitworth, owned by Parsons Marine Steam Turbine Company.

**LEFT LOWER** The 15,000-ton cargo vessel *Norfolk* launched in 1934. One 200 of the Austin & Pridgen SD14 design have been built worldwide, 126 in the West.

**RIGHT UPPER** In *North World Wars*, the *Admiralty* moved to the North East for cost control. The *Flint* class carries 5,000 tons built by Austin's Dock on Tyne in 1941, based on their *Archie* (left) design.

**EIGHT CENTRE** The *ering* ship of one of the region's most prolific engine builders, North Eastern Marine at Walsby in 1910, showing steam reciprocating engines in the foreground and K&M-Waterbury *Archie* in the background. The work is some part of British Shipbuilders' engine building group Clark-Ross.

**RIGHT LOWER** The *Admiralty* were strong supporters of the Parsons steam turbine. Here the *Admiralty* *Admiralty*'s first high pressure and low pressure turbines and gears are seen in 1925 at the Walsby Slipway & Engineering works.

**The Newcomen Society. Transactions**, v1=1920 – to date, continuing as **Transactions of the Newcomen Society**. A leading UK-based learned engineering historical research society. The Society was founded in 1920 and is the oldest society in the world specialising in the history of engineering and technology. The Society takes its name from Thomas Newcomen (ca.1664-1729) who invented the first practical working steam engine, but its interests are broad and international, embracing all aspects of engineering from ancient times and the great inventions of the 18th and 19th centuries through to the sophisticated technologies of the 20th century and into the digital age. The Transactions is a research journal. Refs: Newcomen Society <http://newcomen.com> by subscription, MTSC does not subscribe. Newcomen Society on Wikipedia [https://en.wikipedia.org/wiki/Newcomen\\_Society](https://en.wikipedia.org/wiki/Newcomen_Society)

Example pages: [reference to be confirmed]

# The Centenary of Naval Engineering

A REVIEW OF THE EARLY HISTORY OF OUR STEAM NAVY.

By Eng. Capt. Edgar C. Smith, O.B.E., R.N.

(Read at the Institute of Marine Engineers, Minorities, E., March 30th, 1922.)

Some explanation is perhaps necessary for the title given to this paper. It is found in the fact that on May 23rd, 1822, just a hundred years ago, the first steam vessel constructed in either of H.M. Dockyards was launched. This was H.M.S. "Comet." Yet the "Comet" was not the first steam vessel in the Navy. That distinction belongs to H.M.S. "Monkey," which, built by Evans of Rotherhithe, had been purchased in 1821. Though the "Monkey" was slightly the smaller of the two vessels, their engines, by Boulton Watt & Co., were practically identical; and with these begins the history of Naval Engineering.

It was not for want of advocates, however, that steam vessels had not found their way into the Navy earlier, for in the ten years that had passed since Bell had launched his "Comet" on the Clyde, many persons, including Bell himself, had pointed out to the Navy Board the advantages of steam. Through Sir Joseph Banks, steps had been taken in 1816 to fit out Captain Tuckey's exploring vessel the "Congo" as a steamer, but that attempt had ended in failure, and the engine ordered for the "Congo" was installed in Chatham Dockyard.<sup>1</sup> A Navy that had emerged victorious from the Napoleonic wars knew nothing of steam and the time was not ripe for innovations. That the barriers of inertia were at last broken down was largely due to Brunel and to Rennie, who first instituted towing trials, and it was also owing to Rennie that Oliver Lang was ordered to lay down the "Comet" at Deptford in November 1821.

While much has been written regarding the progress of naval machinery during the last sixty years, the same cannot be said of the first forty years. The present occasion therefore seems a suitable one for placing before this Society, a brief account of our earlier steam warships, of their machinery, and of the Engineers who built their engines or who had charge of them. This history, it is submitted, has more than a passing interest. The "Hood" with her 150,000 horse power, the "Tiger" and "Lion" with their engine room complements of 600, the great engineering branch of H.M. Navy with its distinguished record, all had their beginning in the insignificant "dirty old smoke-jacks," the engine

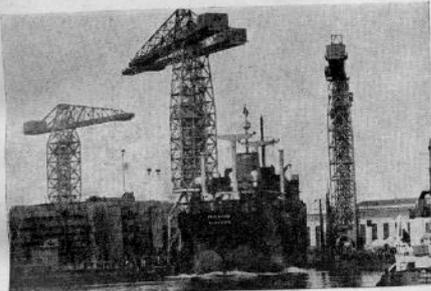
<sup>1</sup>Narrative of an Expedition in 1816 to explore the River Zaire (i.e., Congo). By Captain J. K. Tuckey, R.N., 1818, p. xxiii.

**New Construction: Shipbuilding in British & Overseas Yards / : Merchant Shipbuilding in British and Overseas Yards**, dates tbc but including n?=Q? 1961 – n140=4Q 1980, quarterly, JOCAST Ltd, Liverpool, England, then continues as a monthly supplement to Journal of Commerce, Liverpool, England. A directory but only an alphabetical list of ships on order worldwide, and by country and by yard. Giving only Yard No., Owners, Tons dw (or gross), Type, Engine (make), about each ship. Refs: none.

**Example pages:** *New Construction: Merchant Shipbuilding in British and Overseas Yards*, no.77, 1964 Last Quarter, pp.1, pp.3, pp.32-33. "Title page", "Contents page", & two example pages showing an advertisement page and a page of ships on order giving only very brief details.

# New Construction

No. 77      LAST QUARTER, 1964      5/-



Merchant Shipbuilding in British and Overseas Yards



*Hempel's Marine Paints*  
**are seaworthy**

# New Construction

Published by  
**THE JOURNAL OF COMMERCE**  
and Shipping Telegraph

17 James Street LIVERPOOL 2      6/8 Fenchurch Buildings LONDON, E.C.3

(Copyright)

## Contents

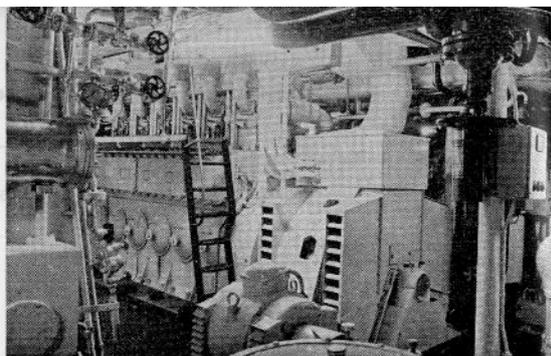
Alphabetical list of British companies with ships on order

In the United Kingdom	5
United Kingdom Shipyards	11
U.K. Marine Engine-builders	53

Argentina	71	India	122
Australia	71	Israel	122
Belgium	74	Italy	123
Brazil	76	Japan	127
Bulgaria	77	New Zealand	142
Canada	78	Norway	143
Czechoslovakia	81	Pakistan	150
Denmark	82	Philippines	151
Egypt	85	Poland	151
Eire	87	Portugal	153
Finland	87	Rumania	153
France	89	Singapore	153
Germany (West)	95	Spain	154
Germany (East)	108	Sweden	160
Greece	109	Turkey	166
Holland	110	United States	167
Hong Kong	120	U.S.S.R.	170
Hungary	121	Yugoslavia	171

[Cover photo: Launch of the IRISBANK by Harland & Wolff, Belfast, for Andrew Weir & Co. She is the first large vessel to be launched at Belfast with both engine and funnel already installed]

3



### Auxiliary Power Generators for Ships

**Synchronous Generators Type SC** 3 phase, 50 and 60 c/s, 20—1250 kVA, 380—525 V, number of poles 4—20, available for different erection arrangements and cooling forms, and provided with static-type exciters either of the built-on type or for separate erection in control cubicle. Operation in parallel of two or more generators can easily be arranged.

**Synchronous Generators Type SB** 3 phase, 50 and 60 c/s, 20—200 kVA, 380—525 V, number of poles 4 (a special generator series) to be directly flange-mounted to the diesel engine. Generators are fitted with flange bearing brackets with SAE dimensions on the driving journal side. Direct coupling and flanging with the diesel engine guarantees perfect alignment between the units, and the set is most compact. Built-on static type exciters. Operation in parallel of two or more generators can easily be arranged.

Standards: Type SC and SB Generators comply with Lloyds Register of Shipping and Det Norske Veritas for unrestricted service.

# ESAB

BOX 850, GÖTEBORG 8, SWEDEN



## "Torpedo Supermarine White" BRITISH PAINTS LIMITED

### HAWTHORN LESLIE (SHIPBUILDERS) LTD, HEBBURN-ON-TYNE

745	Anchor Line (Elysia)	11,200	Cargo	Diesel (Fairfield-Rowan Stork)	— 65
749	BP (British Hawthorn)	19,000	Tanker	Diesel (Sulzer)	due
755, 756	Min. of Defence (Royal Navy) (Olynthus)	—	Tankers	Turbine	Nov 64 May 65
757	British Railways [Holyhead-Dun Laoghaire]	800	Pass & car ferry	Turbine	June 65

Also a Leander-class frigate

<b>HERD &amp; MACKENZIE, BUCKIE</b>					
204, 5	R.N.L.I.	—	Lifeboats (Oakley type)	Diesel (Parsons)	early 65
208	John J. McKee	70	Wooden trawler	Diesel (Gardner)	due

### CHARLES HILL & SONS LTD, BRISTOL

448	Isle of Scilly SS Co (Queen of the Isles)	—	Pass & car ferry	Diesel (Ruston Hornsby)	Feb 65
—	Costain, U.K.	—	Dredger	Diesel (Ruston Hornsby)	Spring 65
—	Ready Mixed Concrete	—	Dredger	Diesel (Ruston Hornsby)	Spring 65
—	Port of Bristol Auth.	—	Dredger	Diesel (Ruston)	Oct 65

33

**New Ships / Die Neubauten: Marine Engine Developments, International Shipbuilding,** tbc confirmed but including 1966 – v24=1979. A directory then technical trade and industry magazine. It started by publishing ca.40 ship general arrangement plans of new merchant ships but eventually expanded to include trade and industry news articles about marine engineering, shipbuilding, & related topics. Refs: none. Example pages: [under construction]

**Transactions of the Institution of Naval Architects** [MTSC-Pers-Rina], v1=1860 – v101=1959, abbreviated as 'TINA' or 'Trans INA', later called **Transactions of the Royal Institution of Naval** [http://www.ncl.ac.uk/media/wwwnclacuk/marinescienceandtechnology/files/mtsc/Periodicals\\_Histories\\_N.pdf](http://www.ncl.ac.uk/media/wwwnclacuk/marinescienceandtechnology/files/mtsc/Periodicals_Histories_N.pdf)

**Architects**, v102=1960 – to date, abbreviated as 'TRINA' or 'Trans RINA', RINA, London, UK. A leading UK national professional engineering learned society, as opposed to the once equally important UK regional societies. Now an international society. Subjects include all aspects naval architecture, shipbuilding, and shiprepairing, ship design, ship construction, ship operation, offshore engineering, small craft, & related topics. Coverage was originally mainly UK but with some international content. In 1959 it received its Royal chartership. "Transactions" contained technical research papers and also news of the society but also much later published monthly / quarterly magazines with current news of the society and also trade and industry, such as **The Naval Architect** [MTSC-Pers-Rina], 1971-to date. Refs: RINA <http://www.rina.org.uk> by subscription, MTSC does the subscribe. RINA on Wikipedia [https://en.wikipedia.org/wiki/Royal\\_Institution\\_of\\_Naval\\_Architects](https://en.wikipedia.org/wiki/Royal_Institution_of_Naval_Architects)

**Shiprepair And Conversion Technology**, no.1, 1989 – to date. A trade and industry technical magazine published as a supplement to The Naval Architect to serve the growing market in shiprepairing and ship conversions. Refs: RINA SCT <http://www.rina.org.uk/srct.html> by subscription, MTSC does not subscribe.

**Significant Ships**, 1990 – to date, annual, RINA, London, UK. Contains descriptions of about 50 newly-built ships with general arrangement plans each year covering a broad variety of merchant ship types. Refs: RINA Significant Ships <http://www.rina.org.uk/sigships.html> by subscription, MTSC does not subscribe.

**Significant Small Vessels** continues as **Significant Small Craft** continues as **Significant Small Ships**, 1991, 1998(?) – to date, various similar titles, annual, RINA, London, UK. Containing descriptions of about 50 newly-built small ships with general arrangement plans each year covering a broad variety of small ship types including fishing vessels, fast ferries, tugs, workboats, offshore patrol, etc. Refs: RINA Significant Small Ships <http://www.rina.org.uk/sigsmallships.html> by subscription, MTSC does not subscribe.

**Small Craft**, ca.1981 – 1989, quarterly, RINA, London, England. Continued incorporated into **Ship and Boat International**, ca.1990. A UK-based trade and industry technical magazine including the design, construction, and operation of commercial and military small marine craft including fast ferries, yachts, fishing vessels, tugs, etc, and related topics. Includes ship general arrangement plans. Refs: none.

**Warship Technology**, no.1=May 1989 – 1999, quarterly, RINA, London, UK. A trade and industry technical magazine published as a supplement to The Naval Architect to serve the growing market in warships and naval vessels. Refs: RINA Warship Technology <http://www.rina.org.uk/wt.html> by subscription, MTSC does not subscribe.

**The Naval Architect**, 1971 – to date, bimonthly then monthly, RINA, London, England. A trade and industry technical magazine containing British and international trade and industry news articles and

Example pages: [under construction]

**Transactions of the Institution of Naval Architects:-**

TRANSACTIONS  
OF THE  
INSTITUTION OF NAVAL ARCHITECTS.

VOLUME I.



EDITED BY E. J. REED, M.I.N.A.  
SECRETARY TO THE INSTITUTION.

---

1860.

SECRETARY'S OFFICE, 166 FLEET STREET, LONDON.

ENTERED AT STATIONERS' HALL

*[The right of Translation is reserved.]*



## I N T R O D U C T I O N .

THE Council of the Institution of Naval Architects, deeming it desirable that a brief account of the origin and progress of the Institution should appear in the First Volume of its Transactions, have instructed me to furnish such an account, and publish it here.

The meeting at which the Institution of Naval Architects was established was held on the evening of the 16th of January, 1860, at the Hall of the Society for the Encouragement of Arts, Manufactures, and Commerce, Adelphi, London, by permission of the Council of that Society, who—I take this early opportunity of saying—from the moment at which the establishment of the Institution was first spoken of, have uniformly afforded its founders their utmost assistance, in the kindest possible manner. About forty gentlemen were invited to attend this meeting, but as many of them resided at remote parts of the country, and as others had official duties to perform at considerable distances from town, a large attendance was not anticipated. No less than eighteen, however, attended, and as these really became the Founders of the Institution it may be well to record their names here with distinctness and prominence. The following were the persons present :—

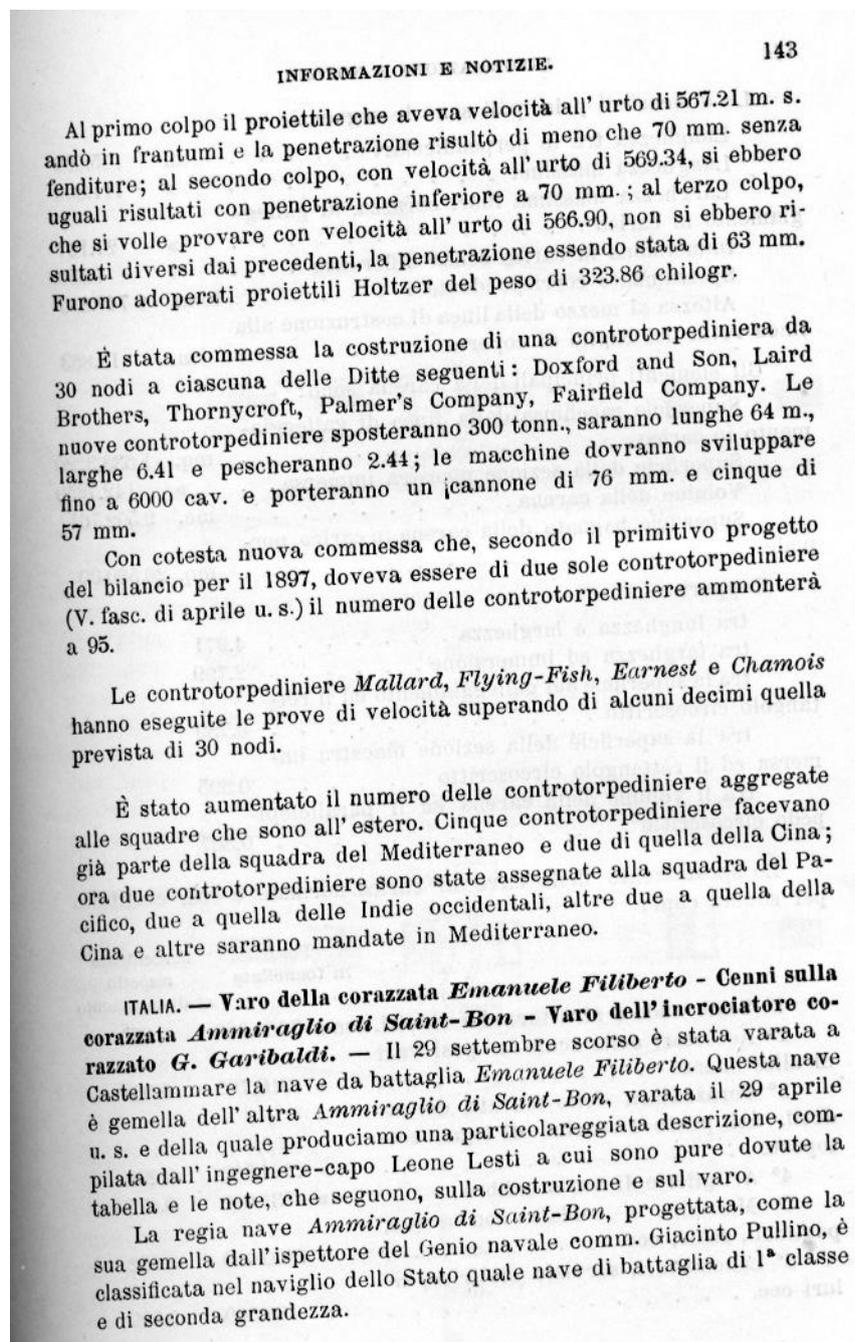
THE REV. JOSEPH WOOLLEY, M.A., LL.D., F.R.A.S., late Principal of the School of Mathematics and Naval Construction, Portsmouth.  
 JOHN SCOTT RUSSELL, Esq., F.R.S., Shipbuilder and Engineer, Millwall; and Vice-President of the Institution of Civil Engineers.  
 JOHN PENN, Esq., Engineer, Greenwich, President of the Institution of Mechanical Engineers.  
 HENRY CHATFIELD, Esq., late Master Shipwright of the Royal Victoria Dockyard, Deptford; and late Member of the School of Naval Architecture, Portsmouth.  
 JOHN GRANTHAM, Esq., Consulting Naval Architect, London.  
 OLIVER LANG, Esq., Master Shipwright of H. M. Dockyard, Chatham.  
 JAMES MARTIN, Esq., Surveyor to Lloyd's Register Office, London.  
 ALEXANDER MOORE, Esq., Assistant Master Shipwright, H. M. Dockyard, Chatham.  
 J. HORATIO RITCHIE, Esq., Surveyor to Lloyd's Register Office, London.  
 W. BRAHAM ROBINSON, Esq., Assistant Master Shipwright, H. M. Dockyard, Sheerness.  
 PHILIP THORNTON, Esq., Assistant Master Shipwright, H. M. Dockyard, Woolwich.  
 GEORGE TURNER, Esq., Master Shipwright of H. M. Dockyard, Woolwich.  
 JOHN WHITE, Esq., Shipbuilder, West Cowes, Isle of Wight.  
 JOHN MACGREGOR, Esq., Barrister-at-Law, the Temple, London.  
 NATHANIEL BARNABY, Esq., of the Department of the Controller of the Navy, Admiralty, Whitehall; late Member of the School of Mathematics and Naval Construction, Portsmouth.  
 F. KYNASTON BARNES, Esq., do. do. do.  
 J. B. CHESSELL CROSSLAND, Esq., do. do. do.  
 E. J. REED, Esq., late Member of the School of Mathematics and Naval Construction, Portsmouth.

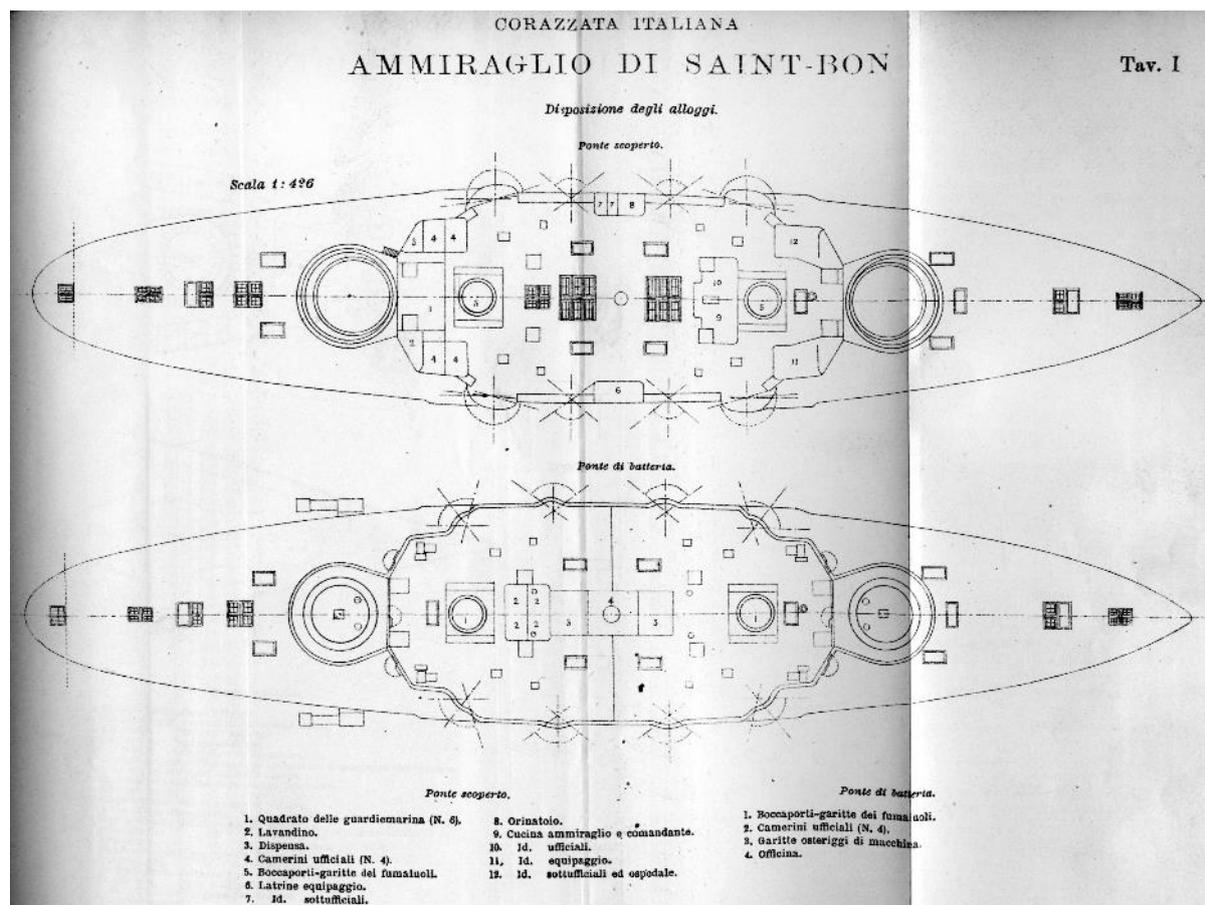
**La Rivista Marittima: Mensile della Marina Militare / Journal del Association Naval Engineering**, [in Italian = The Maritime Magazine], v1=1868 – tbc but including a.XLII[v42]=1909. Published by Forzoni E. C.; then later Office Poligrafica Italian, Roma, Italy; then later the Marina Militare [Italian Navy], Rome, Italy. An Italian-based technical research journal covering all aspects of naval engineering and related topics worldwide. Contains high quality articles, photographs, illustrations, including ship general arrangement plans. Refs: La Rivista Marittima on Wiki

<http://www.ncl.ac.uk/media/wwwnclacuk/marinescienceandtechnology/files/mtsc/Periodicals Histories N.pdf>

[https://it.wikipedia.org/wiki/Rivista\\_marittima](https://it.wikipedia.org/wiki/Rivista_marittima) . La Rivista marittima  
<http://www.marina.difesa.it/conosciamoci/editoria/marivista/Pagine>

Example pages: *La Rivista Marittima: Mensile della Marina Militare*, vol.XXX[30], 1897 Quarto Trimestre Oct, pp.140-157 & Plates I-VI [scanned only pp.140 and plate I]. "Italia: Cenni sulla corazzata *Ammiraglio di Saint-Bon*". A very detailed description with illustration plates showing general arrangement and launch plans of a new Italian 1<sup>st</sup> class battleship.





To see the history of more titles please visit the Collection's website for **Search Collection** then **Periodicals Histories**.

**How to contact the Collection:**

The Marine Technology Special Collection  
Newcastle University  
Room 3.32  
Armstrong Building  
Queen Victoria Road  
Newcastle upon Tyne  
NE1 7RU  
United Kingdom

**Email:** [marine.archive@newcastle.ac.uk](mailto:marine.archive@newcastle.ac.uk)

**Telephone:** +44 (0) 191 20 83522  
or 86718 (Enquiries)

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