Marine Technology Special Collection, Newcastle University

Periodicals Histories: (only trade and industry technical magazines & research journals)

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

American Society of Naval Engineers. Journal, 1=1889 - v79=1967, continues as **Naval Engineers Journal** - to date, ANSE, USA. A technical research journal by a leading US learned professional engineering society. Covering all aspects of naval vessel and warship design, construction, operation, and related topics with US and international developments. Refs: ASNE https://www.navalengineers.org [accessed 14-02-2017] members only, the Collection is not a member and does not subscribe.

[images, none, under construction]

Bulletin de L'Association Technique Maritime, n1=1890 – n29=1925. Continues as **Bulletin de L'Association Technique Maritime et Aeronautique,** n30=1926 – to date. [In French = Bulletin of the Maritime and Aeronautical Technical Association], G. Balitout, Paris, France. A French-based professional engineering learned society publishing a research journal about all aspects of shipbuilding, maritime topics, and aeronautical engineering. Refs: ATMA http://www.atma.asso.fr members only, the Collection is not a member and does not subscribe.

[images, none, under construction]

Barrow Association of Engineers (BAE), 1908 - to date, Barrow-in-Furness, Lancashire/ Cumberland/ Cumbria, England. Published **Barrow Association of Engineers. Transactions**, v1=1909 – tbc. A UK regional professional engineering society. A technical research journal. Covered all aspects of engineering including papers on shipbuilding, shiprepairing, and related topics. Refs: BAE/BDAE http://www.bdae.org.uk [accessed 14-02-2017], the Collection is not a member and does not subscribe.

[images, none, under construction]

BSRA Journal of Abstracts, v1=1946 – v40=1985, monthly, BSRA (British Ship Research Association), Wallsend, Northumberland, England. An abstracting journal founded to provide a technical information service to the UK industry about world develops by summarising recent papers and articles published worldwide in journals, magazines, and report series. BSRA was one of a series of industry specific research associations established by the British government after WWII to help improve research and development for British industries in an increasingly competitive international market place. Subjects included shipbuilding, marine engine building, shiprepairing, shipbreaking. Although useful as a search tool its coverage of technical publications (such as journals, magazines, conferences, etc) is inconsistent and the annual indices of subjects and authors are not easy to use. Refs: none.

[images, none, under construction]

Cassier's Magazine: an Engineering Monthly. Including occasional special numbers called ***Marine Number.*** Louis Cassier Co, New York, USA & London, UK, vol.1=1891 – vol.? tbc=1913. A technical magazine with substantial engineering papers, mainly US but some UK. Some parts also included ***Cassier's Engineering Abstracts***. The Marine Number of 1897 contains general papers about marine engineering, shipbuilding, naval architecture, and related topics.

Example pages: Cassier's Magazine, vol.XII[vol.12] No.4, 1897 Aug The Marine Number, pp.393-406 [only pp.393, 395-396 scanned]. "*The design and building of a steamship*". By Archibald Denny. A technical paper about shipbuilding in a yard and the accurate calculation of steel mass and other materials which is essential for an efficient build without wastage. With pictures and illustrations.

THE DESIGN AND BUILDING OF A STEAMSHIP.

By Archibald Denny, M. Inst. N. A.

TO correctly design a steamship the naval architect must draw from a store of information gradually accumulated either by himself or by his predecessors. In a well organised office the technical data of vessels built is most carefully tabulated in an easily accessible form for such items as weights, cubic capacities, stability and speed; these data are generally put in the form of co-efficients of the principal dimensions, so that rough approximations may, in the first instance, be arrived at, before the final design is taken in hand.

The process of design can perhaps best be described by taking a concrete case. We will assume that a shipbuilder has been asked by a prospective owner to design a cargo ship, about 320 feet in length, to carry a dead weight of at least 4500 tons, on a draft of about 23 feet 3 inches, at a speed of 10 knots at sea. From his previous experience the designer chooses, let us assume, dimensions 320 feet by 40 feet by 29 feet 6 inches, and he must now, by rough calculation, see if these dimensions approximately meet the conditions.

The first thing is to calculate the weight of the hull. For convenience the hull weight is usually divided into two parts,—first, the steel work proper; and, second, what is generally called "wood and outfit." This latter comprises all the remainder, such as decks, cabin fittings, anchors and chains, cement in the bottom, rigging, small

FIG. 1. SHAPING A SHIP'S FRAME.

efficient varies, according to type of vessel, between large limits, say, 0.32 to 0.55. In such a steamer as this, it may be taken at 0.40; thus $3775 \times 0.4 = 1500$ tons. In a similar way the "wood and outfit" co-efficient is found to vary between 0.05 and 0.25. In such a steamer as this it would be about 0.1; then $3775 \times 0.1 = 377.5$, say, 380 tons.

sult of the calculation is then as follows:—

Invoiced steel	=	1500
Less 12 per cent	=	180
Net steel	=	1320
Wood and outfit	=	380
		1700

We have, then, 1700 tons as the weight of hull.

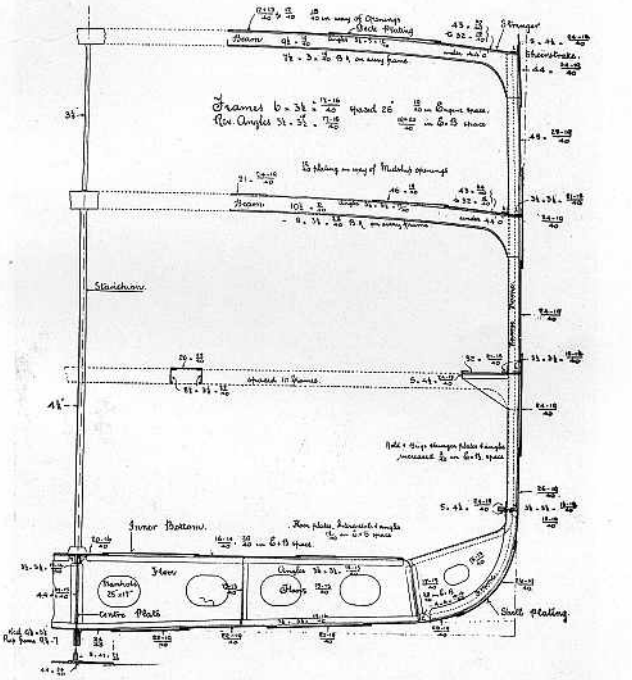


FIG. 3. A MIDSHIP SECTION, SHOWING THE MAIN SCANTLINGS OF A SHIP.

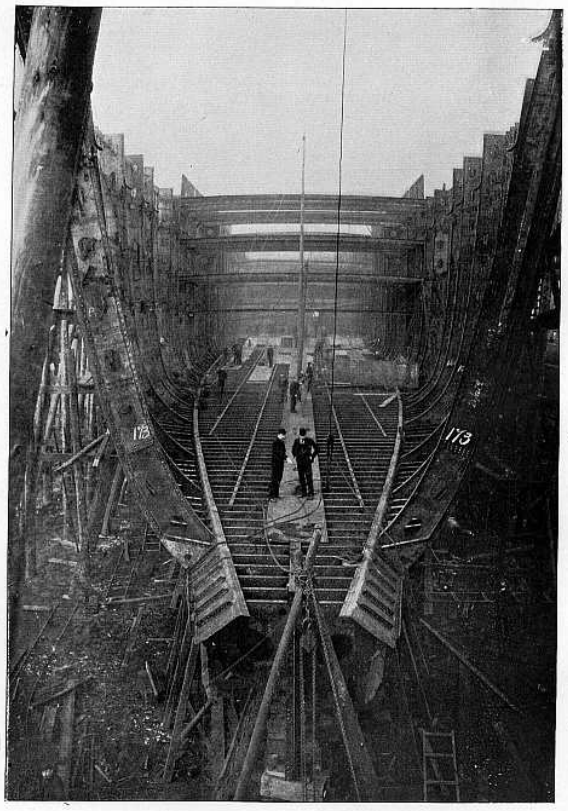


FIG. 4. THE FRAME NEARLY FINISHED.

Proceedings of the Cleveland Institution of Engineers, 1864 – 1941/42, annual?, CIE, Middlesbrough, North Yorkshire/Cleveland, England. A UK regional professional engineering learned society published a learned society technical research journal. Contents mainly steel industry, railways, and general engineering with occasional maritime content. Refs: CIE on wikipedia https://en.wikipedia.org/wiki/Cleveland_Institution_of_Engineers [accessed 14-02-2017] members only, the Collection is not a member and does not subscribe.

[examples under construction]

Atti del Collegio degli Ingegneri Navali e Meccanici in Italia [in Italian = Proceedings of the Italian Committee of Naval Architects and Mechanical Engineers], aI[vol.1]=ca.1902 – tbc but including aXXIV[vol.24]=1920. An Italian-based professional engineering learned society (?) or a government body (?) publishing a technical research journal with papers about mechanical engineering and naval architecture. Refs: none.

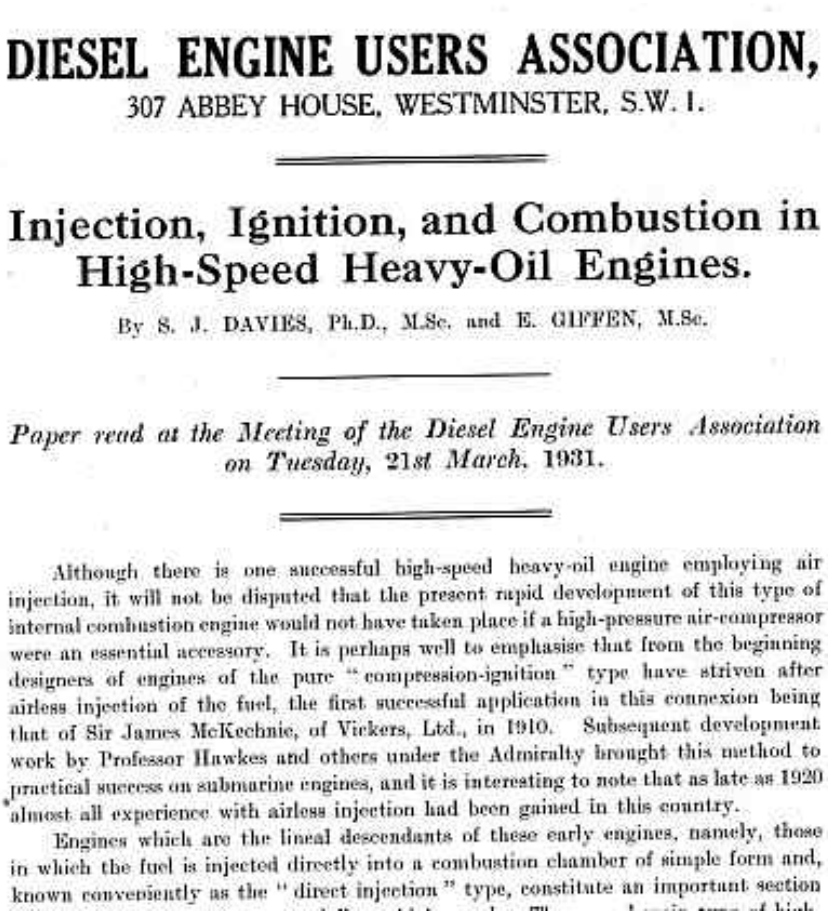
[examples under construction]

Transactions of the Canadian Society of Civil Engineers, 1888 – 1918, John Lovell & Son, Montreal, Canada. A Canadian-based professional learned engineering society publishing a technical research journal. Contents includes all engineering topics with occasional marine / shipping papers. Changed name and continued as a different title not held by our Special Collection. Refs: CSCE https://csce.ca [accessed 14-02-2017] members only, the Collection is not a member and does not subscribe.

[examples under construction]

The Diesel Engine Users' Association (DEUA). [papers?]. DEUA, UK, 1915 – 1955. A British trade association or a professional society? Title uncertain as yet but an annual research journal / transactions / proceedings of this professional engineering society's reports and meetings. Includes some marine engine-building.

Example pages: DEUA, 1931-32, pp.1-39 [only pp.1 scanned]. "*Injection, ignition and combustion high-speed heavy-oil engines"*. By S. J. Davies & E. Giffen. A detailed technical paper with illustrations and tables, including discussions and author's replies.



DIESEL ENGINE USERS ASSOCIATION,
307 ABBEY HOUSE, WESTMINSTER, S.W. 1.

Injection, Ignition, and Combustion in High-Speed Heavy-Oil Engines.

By S. J. DAVIES, Ph.D., M.Sc. and E. GIFFEN, M.Sc.

Paper read at the Meeting of the Diesel Engine Users Association on Tuesday, 21st March, 1931.

Although there is one successful high-speed heavy-oil engine employing air injection, it will not be disputed that the present rapid development of this type of internal combustion engine would not have taken place if a high-pressure air-compressor were an essential accessory. It is perhaps well to emphasise that from the beginning designers of engines of the pure "compression-ignition" type have striven after airless injection of the fuel, the first successful application in this connexion being that of Sir James McKechnie, of Vickers, Ltd., in 1910. Subsequent development work by Professor Hawkes and others under the Admiralty brought this method to practical success on submarine engines, and it is interesting to note that as late as 1920 almost all experience with airless injection had been gained in this country.

Engines which are the lineal descendants of these early engines, namely, those in which the fuel is injected directly into a combustion chamber of simple form and, known conveniently as the "direct injection" type, constitute an important section

Transactions of the Engineers Association of New South Wales, vol.I[vol.1]=1885/6 – ceased ca.1919?. Continued as **The Institution of Engineers, Australia**. An Australian regional professional engineering learned society. Published a technical research journal but with very little ship or marine content. Refs: none.

[examples under construction]

The Engineer, v1=1856 - to date, started as weekly, London, England. An illustrated technical magazine for engineers including inventions and patents. Has some ship and marine engineering content especially in the 19th century. An invaluable historical resource for the study of British technical and economic history. Now has a very wide subject coverage. Refs: The Engineer http://www.theengineer.co.uk [accessed 14-02-2017] by subscription only, our Collection is not a member and does not subscribe. The Engineer (magazine) https://en.wikipedia.org/wiki/The_Engineer_(magazine) [accessed 14-02-2017]

[examples under construction but many examples available on the web]

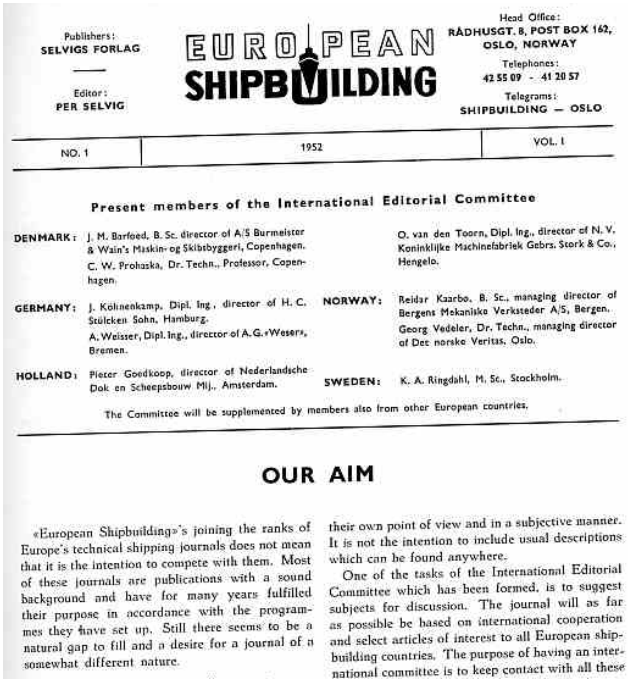
Engineering: an Illustrated Weekly Journal, v1=1866 - to date, weekly, Engineering, London, England. Set up as a rival to The Engineer. An illustrated technical magazine for engineers. Has some ship and marine engineering content, especially in the 19th century. An invaluable historical resource for the study of British technical history. Refs: http://www.engineeringmagazine.co.uk [accessed 14-02-2017] by subscription, our Collection is not a member and does not subscribe. Engineering (magazine) on Wikipedia https://en.wikipedia.org/wiki/Engineering_(magazine) [accessed 14-02-2017].

[examples under construction but many examples available on the web]

European Shipbuilding: Journal of the Ship Technological Society, Oslo, v1=1952 – vXV[v15]=1966, monthly, Selvigs Forlag A/S, Oslo, Norway. A technical research journal about shipbuilding, naval architecture, and related topics with a European emphasis initially. Contains high quality papers with excellent diagrams and photographs. Refs: none.

Example pages: European Shipbuilding, vol.1 no.1, 1952, pp.1. "*Our aim*". By the Editor. Explains the reason for launching a new journal.

European Shipbuilding, vol.1 no.1, 1952, pp.56-62 [pp.56-57 parts scanned]. "*The super liberty ship 'Bocccadasse': an interesting operation within 'ship surgery' carried out by means of arc-welding*". By Angelo Cassanello. Explains an unusual shiprepair and the technical problems overcome to join together two halves from two different ship wrecks to create a new ship.



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EUROPEAN SHIPBUILDING

Head Office:
RÅDHUSGT. 8, POST BOX 162,
OSLO, NORWAY

Telephones:
42 55 09 - 41 20 57

Telegrams:
SHIPBUILDING — OSLO

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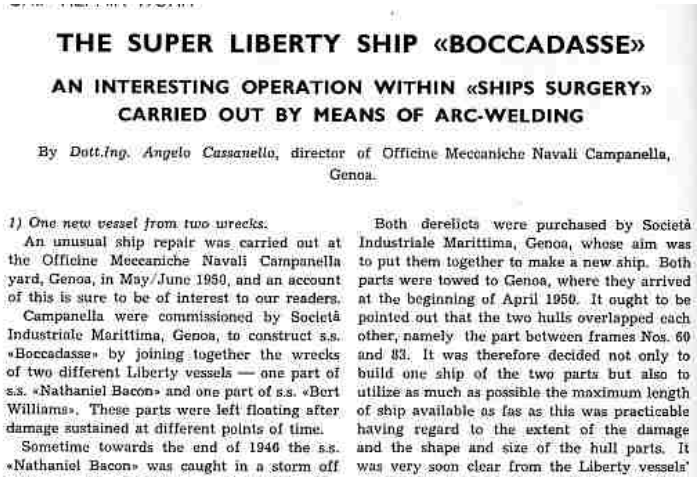
The Committee will be supplemented by members also from other European countries.

OUR AIM

«European Shipbuilding»'s joining the ranks of Europe's technical shipping journals does not mean that it is the intention to compete with them. Most of these journals are publications with a sound background and have for many years fulfilled their purpose in accordance with the programmes they have set up. Still there seems to be a natural gap to fill and a desire for a journal of a somewhat different nature.

their own point of view and in a subjective manner. It is not the intention to include usual descriptions which can be found anywhere.

One of the tasks of the International Editorial Committee which has been formed, is to suggest subjects for discussion. The journal will as far as possible be based on international cooperation and select articles of interest to all European shipbuilding countries. The purpose of having an international committee is to keep contact with all these



THE SUPER LIBERTY SHIP «BOCCADASSE»

AN INTERESTING OPERATION WITHIN «SHIPS SURGERY» CARRIED OUT BY MEANS OF ARC-WELDING

By *Dott.Ing. Angelo Cassanello*, director of Officine Meccaniche Navali Campanella, Genoa.

1) One new vessel from two wrecks.

An unusual ship repair was carried out at the Officine Meccaniche Navali Campanella yard, Genoa, in May/June 1950, and an account of this is sure to be of interest to our readers.

Campanella were commissioned by Società Industriale Marittima, Genoa, to construct s.s. «Boccadasse» by joining together the wrecks of two different Liberty vessels — one part of s.s. «Nathaniel Bacon» and one part of s.s. «Bert Williams». These parts were left floating after damage sustained at different points of time.

Sometime towards the end of 1946 the s.s. «Nathaniel Bacon» was caught in a storm off

Both derelicts were purchased by Società Industriale Marittima, Genoa, whose aim was to put them together to make a new ship. Both parts were towed to Genoa, where they arrived at the beginning of April 1950. It ought to be pointed out that the two hulls overlapped each other, namely the part between frames Nos. 60 and 83. It was therefore decided not only to build one ship of the two parts but also to utilize as much as possible the maximum length of ship available as fas as this was practicable having regard to the extent of the damage and the shape and size of the hull parts. It was very soon clear from the Liberty vessels'

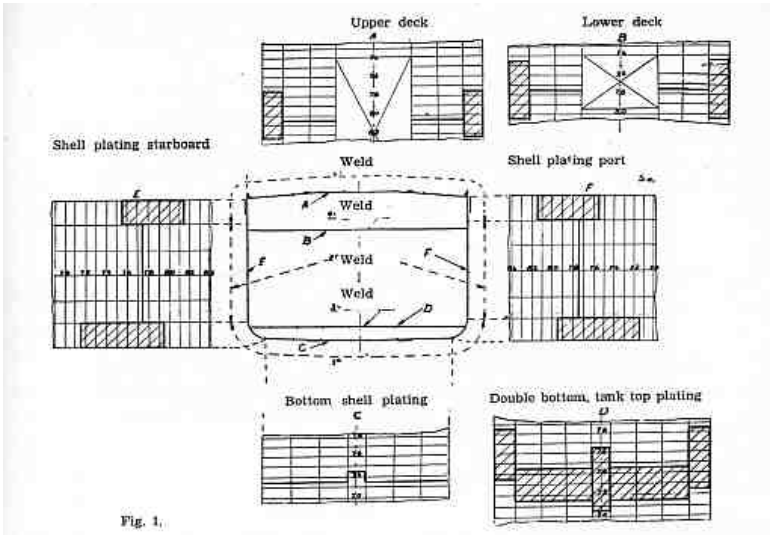


Fig. 1.

of so-called «crack arrestors» and they were now extended over to the stern. This precautionary measure was taken on most of the Liberty type vessels after some of the first vessels had sustained serious damage. A double crack arrestor on each side, such as the one on the vessel mentioned here, is less frequent.

As regards the details of the principal structures midships, improvements were carried out in order to eliminate strain concentrations. Further, various other alterations and improvements were carried out, including the loading and discharging arrangements.

Fairplay: Shipping Journal continues as ***Fairplay Shipping Weekly*** with various supplements including ***Newbuildings*** and later ***Solutions***, weekly, v1=1883 – to date, Fairplay Ltd, London, England, later by IHS Maritime. A weekly UK-based shipping and industry magazine about all aspects of the international merchant shipping industry – shipbuilding, operations, etc. Refs: Fairplay on Wikipedia https://en.wikipedia.org/wiki/Fairplay_(magazine). IHS Maritime www.ihsmaritime360.com subscribers only but news headlines free.

Example pages: Fairplay: Shipping Journal, vol.217 no.4297, 1965 Dec 30 Thursday, pp.[part of Front Cover scanned]. *"[Advert for C. F. Sharp & Company, Inc. Sharp Travel Service*]". [By the Editor]. Based in the Philippines. Interesting to note that adverts dominate the front cover of many magazine and journals. Also of note that the magazine is published every week including the Xmas and New Year period – would this happen today? Fairplay: Shipping Journal, vol.217 no.4297, 1965 Dec 30 Thursday, pp.5. *"Shipbuilding shake-up*" [only part of this page]. By The Look-Out Man. A brief editorial article about the impending publication of the UK government's Geddes Report. Yet another report about the urgent need for a major shake-up and restructuring of the British shipbuilding industry for it to remain commercially competitive in the global market. Particularly changes and improvements in labour relations between the workforce, unions, and management to reduce production costs. Fairfield (Glasgow) Ltd was already in the news having emerged from mergers including the failed company Fairfield Shipbuilding and Engineering Co., Ltd.

Fairplay Shipping Journal

THURSDAY, 30th DECEMBER, 1965

THE LOOK-OUT MAN

Shipbuilding Shake-up

THAT British shipbuilding (or some sections of the industry, at least) is unable to wait even for the publication of the Geddes Report is evidenced by the announcement, reported on p. 24, that the Greenock Dockyard Co., Ltd., and Scotts' Shipbuilding & Engineering Co., Ltd., are to merge their interests next March. Further up the Clyde, the future of the Govan yard of the Fairfield Shipbuilding & Engineering Co., Ltd., has also been settled without reference to Geddes. Speaking in the House of Commons last week, the First Secretary of State, Mr. George Brown, was able to state that arrangements had been made for a Government-private enterprise-union partnership to operate the yard. The private enterprise partners will consist of Mr. Iain Stewart (chairman of Thermotank, Ltd.) and his associates; Lord Thomson of Fleet; Sir Isaac Wolfson; and others with whom the Government is discussing the situation. In addition, two of the major trade unions have expressed their intention of participating and, at the time

ference/Shipbuilding Employers' Federation alternative plan for Fairfield's (*Fairplay* of 23rd December, p. 23). Mr. Brown said that they had not been willing to fulfil any of the receiver's requirements for keeping the yard in operation—*i.e.*, provide money to keep the yard going, or buy the fixed assets, or "acquire" the work in progress.

Reaction to the Government's plan came quickly from the British shipbuilding industry. A statement from the Shipbuilding Conference said that the decision would inevitably place the yard in a privileged position over other shipbuilders, at a time when the Geddes Committee was about to report. Fairfield's had fallen victim to the general inflation and serious increases in labour costs with which the entire industry was having to contend. Apart from the immediate advantage gained from being saved from the effects of normal commercial failure, it seemed not unlikely that where public funds were involved special favourable treatment might be given to Fairfield's in naval and other public contracts. It was, therefore, absolutely essential that future opera-

Feilden's Magazine: The Word's Record of Industrial Progress, v1=1899 - 1903, Feilden Publishing Company, London, England. A technical magazine launched in response to a growing challenge to British dominance of the world's engineering market. It covered all aspects of engineering but very few shipbuilding articles. Refs: none.

Example pages: Feilden's Magazine, vol.1 no.1, 1899 August, pp.2. "No apology" By Theo/Thos(?) Feilden. Editorial comment on the need for another new magazine.; pp.3-4 "Lest we forget" More editorial comments about the foreign threat to, and decline of, British industry and trade.; pp.5-6. "Facts about our ships and shipbuilding" contains a verbose explanation of world shipbuilding statistics which could be summarised, and understood clearly, in 1 table with 1 supporting paragraph of text.; pp.8-9 "The Americanising our railways" contains a jingoistic article about the ignominy of a British company the *Midland Railway Company* that was ordering American-built rolling stock instead of from a British supplier!

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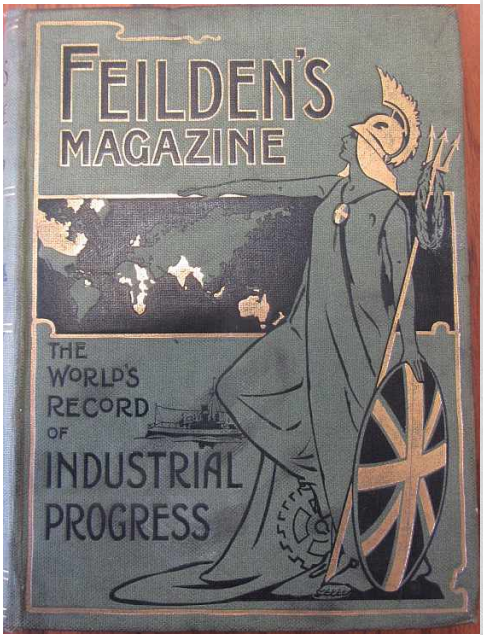
Feilden's Magazine, vol.7 no.37, 1902 August, pp.95-105. [only parts of p95-96 scanned] "Floating graving docks" by S. F. Staples. Discuses at length (without any engineering/mathematical calculations), the pros and cons of a new design of floating dock for lifting and repairing Spanish warships of up to 10,000 tons.



Facts about our Ships and Shipbuilding.

THERE is little doubt in the average thoughtful and investigating British mind that the most pessimistic view of the general industrial situation of this country can embrace nothing which can reasonably suggest the remotest tendency towards a decline in our national resources in shipping, or in our capacity for shipbuilding. Some facts and figures, which are quoted in another part of this issue, present conclusive evidence in these particulars, and show that our old-time boast that "Britannia rules the waves" was never in the history of the nation more conclusively well founded than at the present moment. It seems that the entire tonnage of the world in ships amounts to a round total of 27,673,528 tons, of which enormous aggregate the United Kingdom and our

500,000 tons. The position occupied by Japan is worthy of note, as indicating the remarkable progress in shipping, as in other branches of industrial activity, for which the Oriental Britain is distinguishing itself since its emancipation from the crudeness and fanatic conservatism of its original Eastern civilisation. One other point is worthy of note, and that is the preponderance of steam tonnage as compared with that of sailing tonnage. The steam tonnage of this country amounts to 11,719,247 tons, and that of all the world besides is 9,000,000 tons. Germany and the United States take second and third place respectively.

The figures which relate to our shipbuilding are equally conclusive as to our national supremacy in maritime industry. Our new tonnage amounted to 1,303,894, represented by 690 vessels. The United States again secures second place with 169,196 tons for 140 vessels, and Germany third with 136,186 tons for 83 vessels. Next follow France, Italy, Norway, Japan,

"We are, in the vastness of our possessions, losing our grip on national sentiment. It is our duty to maintain intact, and to defend by sea and land, all that our empire builders have left us. The day that sees the defence of the British Empire sapped, sees the disintegration of the Nation's trade and the hands of civilization's timepiece put back 200 years."—RT. HON. LORD CHARLES BERESFORD, C.B.

Golden Opinions! . . .

AT the moment of going to press we are proud and happy to be able to chronicle the most wide-spread approval of the *entrée* of this Magazine into the ranks of contemporary engineering journalism. We can say with confidence that never before in the history of the trade press has such a storm of congratulatory and eulogistic comment been showered upon a new industrial publication. The conception and programme of FEILDEN'S MAGAZINE appear to have met with the universal approbation not only of the daily press throughout the United King-

compass the distance will fly the flag of the White Star Line. It is more than half a century since such smart and luxurious clippers as the *White Star* and the *Red Jacket* carried half-a-million gold seekers to the Australian El Dorado, and more than thirty years since the first of the lineal successors of these—iron ships of ever-increasing capacity—the *Explorer*, left Liverpool for Melbourne. Since then the youthful colonies have grown to vigorous maturity, and the White Star Line has just commenced a new monthly service with a fleet of five magnificent steamers, the two first of which to be launched were the *Afric*, of 12,000

The Americanising of our Railways . . .

It seems only the other day that we were all startled by the announcement that the Midland Railway Company had decided to import Baldwin locomotives from America for service in connection with its express traffic. This was the most drastic departure from the conventional in British railway administration since the introduction of Pullman cars on this side. Now we find another of our most enterprising and far-seeing railway companies—the Great Eastern—going a step further in the Americanising of our railways by introducing a system of electro-pneumatic signalling and inter-

railway engineering. Both departures must, however, to justify their adoption, be measured by the requirements of an exacting standard of efficiency which nothing we can submit on this side can shake.

Gold-Mining in India . . .

In the estimation of many who are in a position to give an authoritative opinion on the subject, we shall have to look to India for the next great gold-mining "boom." Some go so far as to say that the prospective production of gold in our Indian Empire will transcend all the previous records of modern times. Those

Original Signed Articles

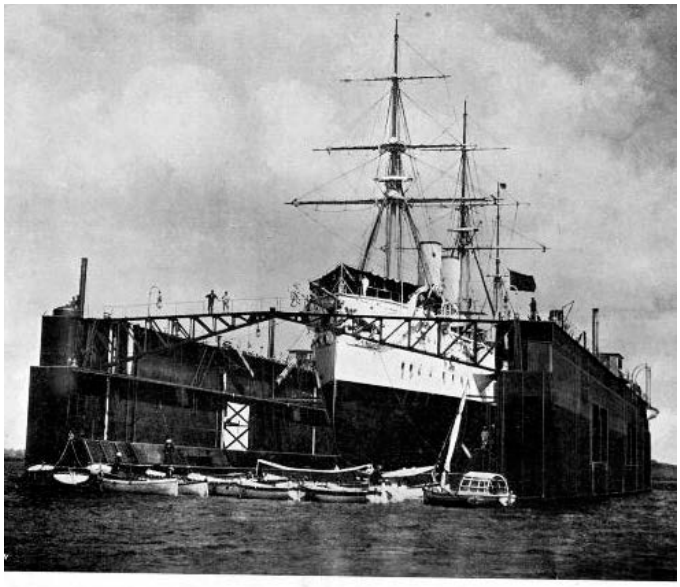
Floating Graving Docks.

By S. F. STAPLES.

Some time ago it was found imperative to supply at the port of Havana dry dock accommodation, and that as speedily as possible. As both time and money were important factors in the case, it was impossible to have a stone dock, owing to the time such a dock would take to construct and the unsuitability of the site; so, accordingly, tenders were called for for the design and construction of a steel floating dock.

this connection it may be of interest to follow out their line of reasoning, and incidentally to briefly examine some of the various forms of floating docks at that time existing, noting their separate advantages and disadvantages in connection with the problem we are now dealing with.

In very busy commercial ports, where quay space can be obtained for the necessary staging, a depositing dock is very economical, if the work to be done on



"ALFONSO XII." ON THE HAVANA FLOATING DOCK.

Hansa: Zeitschift fur Schiffahrt, Schiffbau, Hafen. [in German= Hansa: Magazine for Shipping, Shipbuilding, Harbours], 1864 – to date, monthly, Schiffahrts Verlag Hansa, Hamburg, Germany. Later continues as ***Hansa: International Maritime Journal***. A German-based trade and industry technical magazine with an international coverage of ships, shipping, and maritime news. Articles in German with some in English language. Refs: Hansa http://www.hansa-online.de [accessed 14-02-2017] subscribers only, the Collection is not a member and does not subscribe.

Example pages: Hansa, vol.86 no.52, 1949 Dec 24, pp1269-1272 [1269 only scanned]. *Im blickfled: Marshallplan-Gegenwertfords und Seesschiffart*. This issue is published on very poor quality paper and no colour as Germany recovers from the ravages of war. Headlines are the US-led "Marshall Plan" to pour money in to Germany to aid economic recovery and to try to stabilise a democratic government in the country. Thus minimising poverty, social unrest, and avoiding another decent in chaos and Nazism &/or totalitarianism that had followed WWI.

Hansa, vol.122 no.9, 1985 May, pp969-970 [1969 only scanned]. *Schiffsreparatur: Ro/Ro-Schiffe "Eyrafoss" und "Alafoss" bei HDW verlangert*. A typical article, about ship lengthening, indicating a flourishing German economy and perhaps vindication of the Marshall Plan 30+ years earlier!

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86. Jahrgang | 24. Dezember 1949 | Nummer 52

Im Blickfeld

Marshallplan-Gegenwertfonds und Seeschiffahrt

Pressemeldungen zufolge sind in diesen Tagen insgesamt 1036 Millionen D-Mark aus den Marshallplangegenwertfonds zur Steigerung der westdeutschen Produktion freigegeben worden. In den an Seeschiffahrt und Schiffbau interessierten Kreisen erhebt sich die Frage, welchen Einfluß diese Freigabe von Mitteln auf die Seeschiffahrt hat, um so mehr, als der Seeschiffbau und der Erwerb von Seeschiffen im Ausland durch das Petersberg-Abkommen vom 22. November 1949 in den letzten Wochen stärker in den Mittelpunkt des öffentlichen Interesses gerückt sind. Die 1036 Millionen D-Mark, die von der Marshallplanverwaltung freigegeben worden sind, zerfallen in zwei Teile: 1. 600 Millionen sollen für genehmigte Investitionen im Rahmen des Investierungsprogramms sofort verwendet werden. 2. Für den Rest von 436 Millionen D-Mark erwartet die ERP-Mission ein weiteres Investierungsprogramm von der Bundesregierung. In den ersten 600 Millionen D-Mark sind 50 Millionen D-Mark für den Bau und die Reparatur von Seeschiffen enthalten. Wie den Lesern der „Hansa" erinnerlich sein wird, ist für das laufende Marshallplanjahr (1. 7. 1949 bis 30. 6. 1950) von den zuständigen deutschen Stellen ein Investierungsplan aufgestellt worden. In diesen Plan sind damals, also lange vor Abschluß des Petersberg-Abkommens, Neubauten von Dampfschiffen bis 1500 BRT und kleinen Motorseglern und Reparaturen von kriegsbeschädigten Seeschiffen aufgenommen worden. Der sogenannte Fremdfinanzbedarf für diese Vorhaben beträgt nach dem Plan insgesamt 100 Millionen D-Mark, der Bedarf für die erste Hälfte des Marshallplanjahres, also bis 31. Dezember dieses Jahres, 50 Millionen. Es war in dem Plan vorgesehen, daß diese 50 Millionen im ... aus den Marshallplangegenwertfonds fließen sollten.

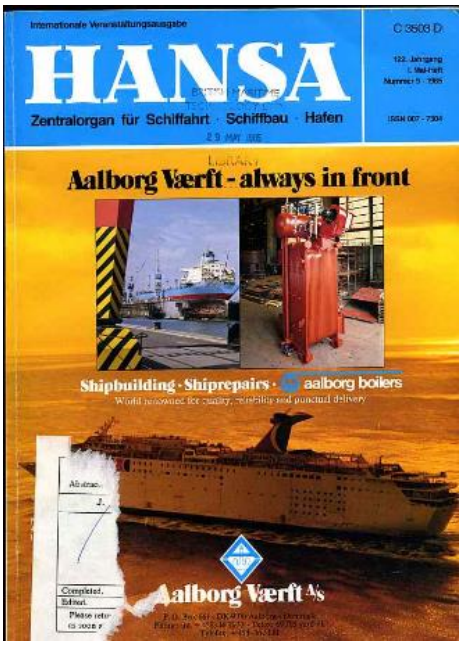
KURZ BERICHTET

Westdeutschland gleichberechtigter Partner im ERP — Einkommensteuer-Reform verzögert — Steigerung des Produktionsindex um 5 %; Zunahme der Arbeitslosigkeit — Freizügigkeit für deutsche Seeleute gefordert.

Weltmarkt: Chartertätigkeit etwas nachlassend, aber Raten steigend — Weitere Getreidebefrachtungen vom Schwarzen Meer nach UK — Höhere Raten für Erz und Phosphat von Mittelmeerhäfen — Stillstand in den Kohlebefrachtungen von England.

Nord-Ostsee: Weiterhin erfreuliche Tendenz — Auch Aussichten für deutsche Reeder günstig — Weizengeschäft von Schweden angelaufen; desgl. Superphosphatladungen von Belgien gesichert — Überfüllung in Häfen hindert Beladung.

AUS DEM INHALT



SCHIFFSREPARATUR

Ro/Ro-Schiffe „Eyrafoss" und „Alafoss" bei HDW verlängert

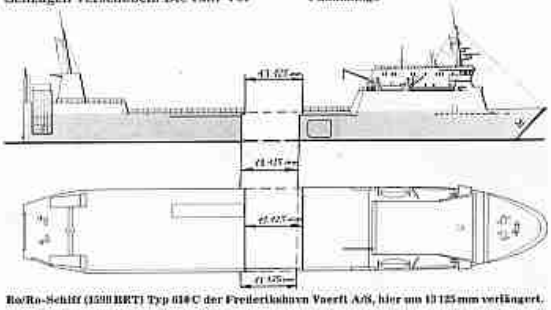
Die Howaldtswerke-Deutsche Werft AG (HDW), Hamburg und Kiel, verlängerte in ihrem Werk Ross in Hamburg im Dezember 1984 bzw. April 1985 die beiden Ro/Ro-Schiffe „Eyrafoss" und „Alafoss" der isländischen Reederei HF Eimskipafélagier Islands, Reykjavik, um jeweils 13,125 m. Beide Schiffe sind nahezu identisch. Sie gehören zu dem von der dänischen Werft Frederikshavn Vaerft A/S vorwiegend für die dänische Reederei Mercandia gebauten Schiffstyp FV 610 (ca. 3500 tdw, 870 m Trailerlänge, von den Reedern getauft: „The Money-Maker", bekannt auch als Multiflex-Typ). Die „Eyrafoss" wurde 1978 mit der Bau-Nr. 378 unter dem Namen „Mercandian Importer II" von der Werft abgeliefert, die „Alafoss" entstand ebenfalls 1978 unter der Bau-Nr. 377 als „Dana Atlas". Beide Schiffe wechselten ihre Namen 1980 zu den heute noch geltenden.

Die Reederei beabsichtigte, mit der Verlängerung der beiden Schiffe die Container-Kapazität deutlich zu erhöhen, ohne die übrigen Eigenschaften zu sehr zu verändern. Gedacht war an eine Verlängerung um eine 40'- bzw. 2 × 20'-Länge mit entsprechenden Stau- und Zurrzwischenräumen. Bei einem Spantabstand von 625 mm ergab sich dann die Verlängerung um 21 Spanten, was einer Entfernung von 13,125 m entspricht. Diese Veränderung der Schiffe sollte eine Vergrößerung der Deckflächen, des umbauten Raumes und der Tragfähigkeit bringen, wobei Heizung, Lüftung, elektrische Leistung, Beleuchtung und Manövrierfähigkeit den neuen Gegebenheiten anzupassen waren. Der Umbau-Auftrag ging an die HDW, die die Verlängerung der „Eyrafoss" in der Zeit vom 9.—23. Dezember 1984 und die der „Alafoss" in der Zeit vom 23. 3.—5. 4. 1985 durchführte. Am Beispiel der „Alafoss" soll nachfolgend der Umbau genauer beschrieben werden.

Als die „Alafoss" am 23. 3. 85 morgens um 6 Uhr vor Dock 16 erschien, waren bereits Verlängerungssektionen in fünf Einzelteilen auf dem Vormontageplatz der Werft vorgefertigt worden. Nach dem Reinigen der Bunkertanks für die „heißen" Brenn- und Schweißarbeiten wurde das inzwischen gedockte und trockengestellte Schiff zum Trennschnitt vorbereitet. Am 24. 3. um 14 Uhr war der Trennschnitt zwischen Spant 76 und 77 ausgeführt, und in nur 19 Minuten wurde das Vorschiff im sogenannten „trockenen" Verfahren — Vorschiff auf Stapellaufschlitten gleitend — um die gewünschte Länge per Winden und Seilzügen verschoben. Die fünf Verlängerungssektionen wurden per Schwimmkran in den entstandenen Zwischenraum eingebracht, eingepaßt und verschweißt.

Neben den reinen Verlängerungsarbeiten wurden außerdem ausgeführt:

- Verstärkung der Rahmenspanten und des Hauptdecks für eine Containerbeladung des Oberdecks
- Verstärkung des Trailerdecks (Hauptdeck) für höhere Achslasten bei rollender Ladung
- Verkürzung und Verstärkung der Heckrampe für höhere Achslasten bei rollenden Ladungen
- Seitenpforte und Paleitenlift ausgebaut, Außenhaut dichtgeschweißt und Hydraulikanlage entsprechend verändert
- Stahlummantelung des Funkraumes entsprechend Vorschrift eingebaut, die Reederei installierte eine erweiterte Funkanlage



Ro/Ro-Schiff (1500 BRT) Typ 610 C der Frederikshavn Vaerft A/S, hier um 13 125 mm verlängert.

Schiffsdaten

Länge ü. a. ot	105,60	m	Seitenhöhe	5,00 / 10,55	m
neu	118,725	m	Tiefgang	4,80	m
Länge zw. d. L. alt	96,00	m	Tragfähigkeit alt	3020	t
neu	109,125	m	neu	4400	t
Breite a. Spt.	18,80	m	Vermessung alt	1599	BRT
max.	19,00	m	neu ca.	1980	BRT
			Geschwindigkeit alt	15,3	kn
			neu	14,8	kn

Auf der geöffneten Heckrampe stehen 16 Paletten und anderen Behältern vorbereitete Einbauteile.

Das Vorschiff wird mit Hubzügen auf vorbereiteten Schlittenbahnen vorgezogen

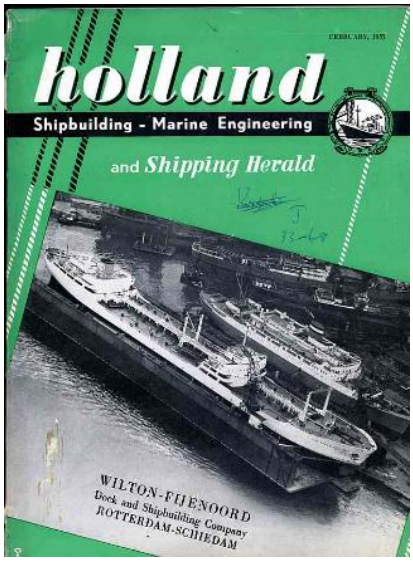
„Alafoss" im Schwimmdock der HDW, Schiff bereits getrennt, auseinandergezogen, die Lücke wird gefüllt.

Transactions of the Hull and District Institution of Engineers and Naval Architects, vol.I[vol.1]=1885/6 – vol.XI[vol.11]=1895/6, F. Oliver & Son, Hull, England. A UK regional professional engineering learned society. Published an annual technical journal with a mix of papers about all aspects of engineering, some naval architecture and related topics. Refs: none.

Example Pages: [under construction]

Holland continues as ***Holland Shipbuilding*** continues as ***HSB International***, monthly, C.E. Radius & P. Grubbelaar, Rotterdam, later Dordrecht, Netherlands. Various changes of title ***Holland / Holland Shipbuilding – Marine Engineering / ~ and Shipping Herald / ~: Monthly Journal dedicated to Netherlands Shipbuilding, Marine Engineering, shipping, shiprepairing, harbours / dredging equipment***. Then continues as ***HSB International***, v32=1983 – to date, ISSN 0923-666X. A Dutch-based trade and industry technical magazine but now with an international coverage. With a particular emphasis on dredgers, dredging, and land reclamation. Articles in Dutch language with some in English language. Refs: none.

Example Pages: Hansa: Shipbuilding – Marine Engineering. And Shipbuilding Herald, vol.5 no.12 Feb 1957, pp.31-[only part of p31 scanned]. Scanning the horizon. By Mercator.



Holland
Shipbuilding - Marine Engineering
and Shipping Herald

FEBRUARY, 1957
VOL 5 No. 12

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SCANNING THE HORIZON

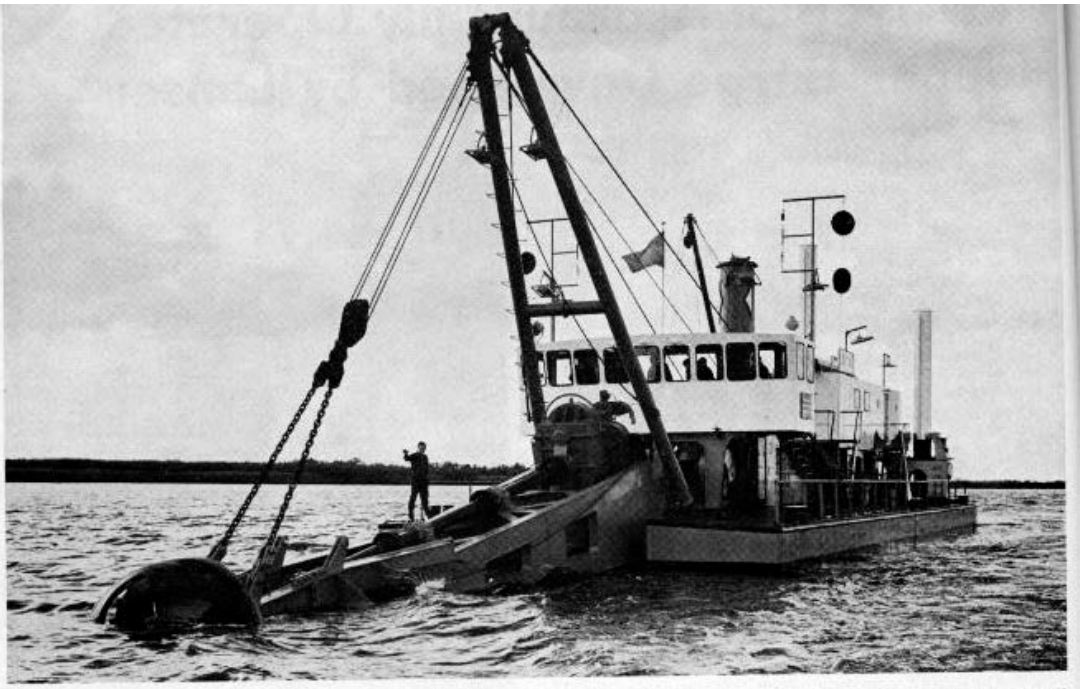
☆ by *MERCATOR*

THE major part of the present number of *Holland Shipbuilding* is devoted to a description of the new Holland-America Liner *Statendam*, the second largest vessel in the Netherlands merchant fleet. The new ship is remarkable in more ways than being a fine addition to the fleet of trans-atlantic liners catering for an ever growing number of tourists. In the first place she is the largest ship of her type built in the Netherlands since the war. Secondly, she is the largest vessel designed and constructed in the Netherlands for Netherlands owners during a period when the Dutch nation was again in the fully possession of its freedom. In this respect the vessel is symbolic. When the last flame of the burning *Statendam III* was extinguished in May, 1940 the lights of freedom went out all over the Netherlands; *Statendam IV* can therefore be held to be truly representative for the re-birth of the nation and the spirit of freedom which has always moved her.

Through the ages the ship has been a yardstick by which a nation's development can be measured. This is so for the tribesmen of pre-historic times who built their canoes with the aid of fire from the trunk of a tree, this is also true of our own age, when ships not only represent the technical skills a nation has acquired, but also its achievements in the field of culture. The new *Statendam* is a fine example in this respect, since the arts have been given a hand in the decoration of the ship.

Shipbuilding has always held a big place in the Netherlands, but it has known its ups and downs. There have been times when Netherlands shipbuilders led the world, such as during the 17th century; there have also been periods when it stood at a very low level, such as during the French occupation of the Napoleonic era. It has taken the Netherlands

Example Pages: Hansa: Shipbuilding – Marine Engineering. And Shipbuilding Herald, vol.5 no.12 Feb 1957, pp.31-[only part of p40-41 scanned]. 'Van Rees standard series of dismountable cutter profile dredgers'.



Van Rees Standard Series of Dismountable Cutter Profile Dredgers

N.V. Scheepsbouwwerf v.h. C. M. van Rees, Sliedrecht, has developed a standard type of dismountable cutter profile dredger which has been well-received, in Holland as well as abroad. This shows that the dredger fulfils present-day requirements. Already 18 of these dredgers have been delivered, while another two are still under construction for well-known dredging contractors.

In the meantime the dredger is still being improved and adapted to modern technical developments.

The dredger hull has the following dimensions:

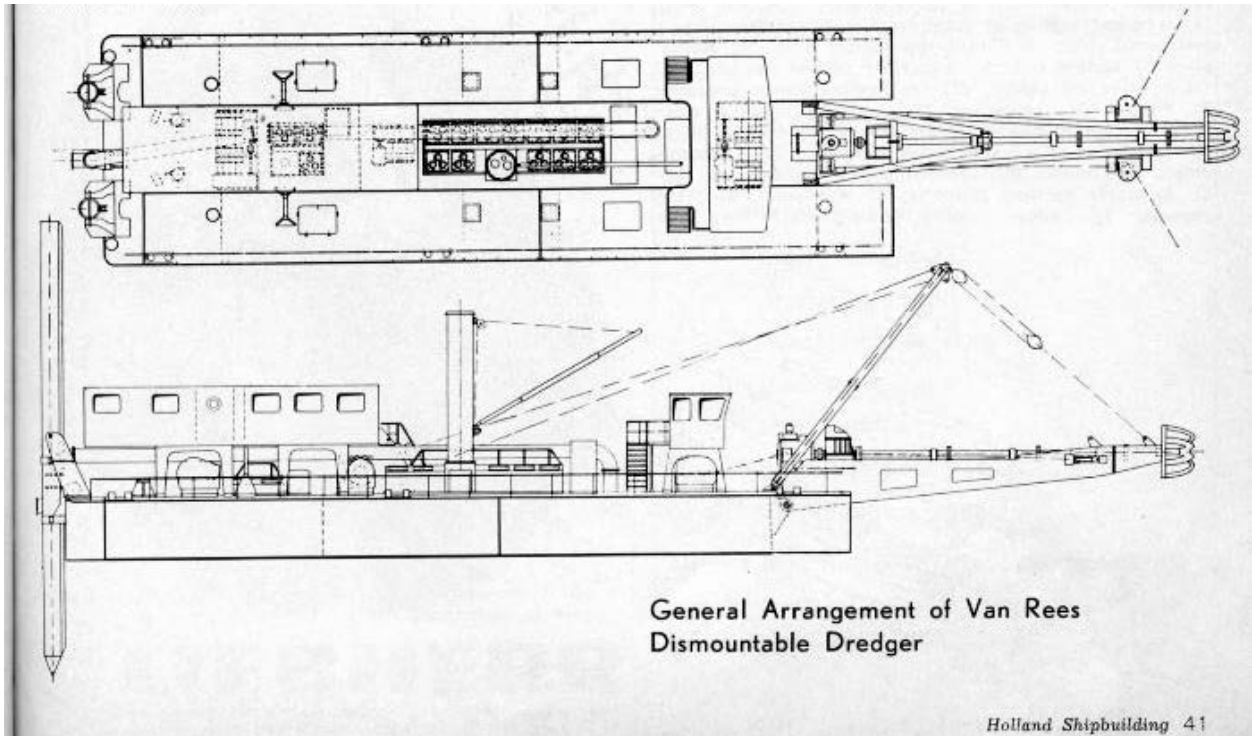
Length	32.50 m.
Breadth	9.— m.
Depth	2.50 m.

It consists of seven sections with dimensions and weights tuned to the requirements of road, rail and water-borne transport. The heaviest section, which measures 18 x 3.40 x 2.50 metres, has a maximum weight of 75 tons. As all deck machinery and fittings can be removed to a height of 200 mm. above deck level, the height of profile is such that the craft can pass under low bridges, while the use of stabilising pontoons enables it to pass under bridges or through locks with a maximum width of 6 metres.

By splitting the ladder and by the application of two 3-drum winches as well as a separate hoisting winch with adjustable transmission, the dredger can be used as:

a. Cutter dredger with a maximum cutter depth of 16 m., the use of different cutter heads enabling an optimum production under different operating conditions.
b. Profile dredger with a maximum suction depth of 20 m.
c. Suction dredger for great depths, by mounting a sand-pump on the ladder. The cutter is then driven by an electric motor.

The suction dredger can be mounted and dismantled while afloat by means of the stabilising pontoons. The latter can easily be converted into a floating crane with a hoisting capacity of 10 tons and at the same time is suitable for the carriage of fuel and potable water. The high degree of stability, sufficient freeboard and great pull of the winches make the dredger entirely suitable for use in open water and in currents. Optimum production is obtained under



Hovering Craft and Hydrofoil, [HCH], v1=1961 – v16n6=Jan 1977, monthly, Kalerghi Publications, London, England. A monthly trade and industry technical magazine. The first to specialise in hovering craft and hydrofoil. Including civil and military vessels. Continues as ***High-Speed Surface Craft***, [HSSC], v16n7=Feb 1977 – v27=1988, continues as ***Fast Ferry International***, [FFI], v28=1989 – to date, High-Speed Surface Craft Ltd, England, ISSN 0954-3988. These changes of title reflected the growing importance of this type of craft. A monthly trade and industry technical magazine. Includes all aspects of design, building, operation, and related topics concerned with high speed marine craft. Includes some vehicle / ship general arrangement plans. Refs: FFI http://www.fastferryinfo.com available by subscription only, MTSC does not subscribe.

This specialist magazine was launched in response to the rapid increase in ground-effect vehicles which had been pioneered in the UK. Changes in magazine title reflected how the market had expanded to include many different types of high-speed craft including ground-effect craft, hovercraft, hydrofoils, catamarans, and eventually to be dominated by the fast ferries which is now the main civil use of high-speed surface craft.

Example pages: Hovering Craft and Hydrofoil, vol.1 no.1, 1961 Oct, pp.1. "[*Front cover showing 'Sirena'*]"; Pp.3. "*First commercial GEM. Setting the pace*". Outlines the rapid rise in commercial high-speed hydrofoil craft but that as yet no ground-effect-machines (GEM) are in commercial operation.

Hovering Craft and Hydrofoil, vol.1 no.1, 1961 Oct, pp.17-18. "*Vickers hovercraft programme announced*". A new range of designs from Vickers-Armstrong with potential marine applications. One of three British companies developing ground-effect-machines.

Hovering Craft and Hydrofoil, vol.1 no.1, 1961 Oct, pp.26-27 [only part scanned]. "*Design and operating problems of commercial hydrofoil boats"*. By H. von Schertel. Briefly explains the development of commercial hydrofoil craft and the rapidly increasing demand for fast passenger and cargo craft due to their speed and economic advantages compared with other marine craft and aircraft over short distances. Shows the 'Sirena' as an example.

High-Speed Surface Craft, vol.21 no.12, 1982 Dec, pp.1 "[*Front cover*]" including photograph of British Hovercraft Corporation AP.1-88 ; pp.3 "[*Contents*]"; pp.4-10 [only pp.7 scanned] "*Genoa 1982: 22nd Salone Nautico: A brief*

report on the international motor boat show" describing boats at the show including the 12m craft from Versilcraft shipyard of Viareggio; pp.13 "*Stirling Moss makes flying visit*" one paragraph news snippet about the famous racing driver who was sailing the Tiger, the latest hovercraft from Air Vehicles Ltd at Cowes.

No 1 VOLUME 1

Joint Editors:
JUANITA KALERGHI
ROY McLEAVY

Advertisement Managers:
Hovering Craft:
DAVID MONDEY
Hydrofoils:
S. GILHAM DAYTON

IN THIS ISSUE

OCTOBER 1961

HOVERING CRAFT & HYDROFOIL

THE INTERNATIONAL REVIEW OF GROUND EFFECT MACHINES & HYDROFOILS

First Hovering Craft & Hydrofoil Monthly in the World

FIRST COMMERCIAL GEM

Both hydrofoils and air cushion vehicles will have their own individual parts to play in speeding-up overwater transportation. The hydrofoil is now established as being fast and safe for passengers and profitable to the operator, but as yet it is still early days for the GEM. The first fare-paying passenger has still to step aboard one of these craft to make the world's first-ever commercial air cushion trip. Nevertheless, the day that this happens is probably not far off. According to the Chief of the U.S. Navy's Bureau of Ships, the question of whether a 2,000-ton seagoing craft is practical or not is not likely to be answered for another year or so. But certainly the first generation of commercial GEMs is almost with us. Though the art has still a long way to go and the majority of the craft are small, there is nothing of the "flying front porch" about them, as reference to later pages in this issue will verify.

Speculation is rife, naturally enough, as to who will operate the first craft commercially, the identity of the craft, and the route chosen. It is highly likely that a number of experimental services will open up within a few months of one another. Our best wishes to those operators who take the plunge at this stage and our sincere congratulations to those responsible for developing the craft that make such services possible.

SETTING THE PACE

Eight years have passed since the introduction of the world's first scheduled hydrofoil service on Lake Maggiore. Since then the technical development of the hydrofoil has continued apace, but when compared with the jet airliner—a comparable transport innovation introduced at approximately the same period—none will deny that the rate of application of the commercial hydrofoil has been disappointingly slow.

VICKERS HOVERCRAFT PROGRAMME ANNOUNCED

Vickers-Armstrong (South Marston) is one of three British companies with a strong aviation background now developing ground effect machines. The firm considers the essential concept to be exploited is the amphibious vehicle with a high overwater speed

THE BASIC DESIGN of the first generation of these craft comprises a primary structure in the form of a stiff platform, taking the distributed pressure of the air cushion on the bottom surface. Fans lift engines, and distribution ducts for the peripheral jet are mounted on this platform, with the remaining area providing accommodation for passenger cabins and/or cargo holds. Controls are provided to stabilise the craft in heave, pitch and roll, and to counteract the effects of side loads and yawing movements. Model tests have been made, over water, ground and in the wind tunnel, to determine the aerodynamic behaviour and ground interference effects. To follow up these tests a research craft, the VA-1, was built.

This was fitted with bare essentials only for the first overland tests, and in this condition it first became operational in 1960. It has a weight of 3,300 lb. and an operating height of 4.5in.

It has been operated continuously since with various modifications, including several different lift curtain systems. Stability devices, such as compartmentation of the cushion and associated controls, have also been developed. Various fairings and a cabin have now been added as protection for over-water trials. These modifications have increased the weight to 3,500 lb. and the operating height is now 4.1in.

Since it is recognised that practical demonstration, particularly overseas, is essential with such a new type of vehicle, the next craft has been made sufficiently small to be airfreighted to demonstration sites.

VA-2

The VA-2 is a small utility vehicle, carrying four or five people, with a speed of 40 knots and an endurance of 1¾ hours. In addition to demonstrations in remote parts of the world and route assessments for prospective operators, the craft has immediate applications as a fast executive transport over sheltered and inland waters and for the transport of personnel and equipment over difficult terrain where existing types of vehicles cannot operate.

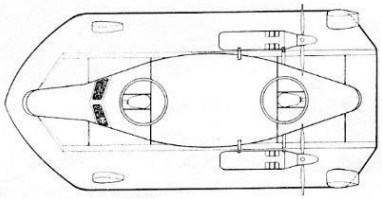
To provide the required width for loading into current British transport aircraft, three sections on either side of the main structure are detachable. To give height clearance for loading, the two fin and rudder assemblies, and complete propulsion unit with support struts, are detachable. They can be rapidly assembled on remote demonstration sites.

The vehicle is powered by three light aircraft piston engines, two for lift and one for propulsion, and the operating height over a solid surface is 8.5in.

Overall dimensions of the assembled craft are: length 28ft. 4in., breadth 14ft. 10in., height 10ft. 4in.

VA-3

The next craft, designated VA-3, is already under construction. This is a 10-ton vehicle and will carry a useful load. As a passenger ferry it can operate in river estuaries and similar terrain, where its amphibious capabilities allow it to operate over water with waves up to 2ft. and over shoals and mudbanks.



VICKERS VA-3, a 10-ton craft designed for operation in river estuaries.

DESIGN AND OPERATING PROBLEMS OF COMMERCIAL HYDROFOIL BOATS

by Baron H. von Schertel
(Supramar A.G., Lucerne)

OUR COVER PICTURE SHOWS SIRENA, one of the Supramar PT 50 hydrofoil boats plying between Stockholm and the Finnish Aland Islands. Equipped with two Daimler-Benz diesel engines of 1,350 h.p. each, the Sirena seats 120 passengers.

IT HAS TAKEN a comparatively long period of time (some 50 years) to develop the hydrofoil boat into a type of craft now commercially applied as a "new" means of transportation. By comparison, development or airplanes, roughly starting at the same time as that of hydrofoil boats, proceeded at a very much faster pace. Indeed, the airplane has now reached a very high degree of perfection, while interest in and development of hydrofoil craft have not been steady over the years. One reason for slow progress in the art of "flying" in water may have rested in a number of hydrodynamic problems, not encountered in air. Even after solving such problems, a number of well-performing experimental boats were simply disregarded, however. It appears that the new means of waterborne transportation was considered with suspicion; and practical application was prevented by the tendency of ship owners and operators to stick to the traditional, conventional and conservative types of boats and ships.

Speed and Economy

Foil-supported craft can be designed for comparatively high speeds, and they can operate at such speeds with reasonable efficiency. This is to say that at higher Froude numbers (or speed-size ratios) hydrofoil systems are known to function at drag over weight ratios below those of conventional motorboats (either of the planing or of the non-planing type). In conclusion, hydrofoil boats must be expected to be comparatively economical (as far as size of machinery and fuel consumption is concerned) in certain size and speed ranges where other types of water-borne craft cannot very well operate effectively.

In Figure 1, the specific power requirements of various water land-borne vehicles (railroads) was already far advanced. Since then, aircraft have been perfected to such a degree that today more passengers cross the Atlantic by air than by ship. This indicates that most people prefer speed (saving time) rather than relaxation while travelling. Such preference for speed is particularly evident in short-distance trips across water, wherever means of transportation speedier than the conventional water-borne type are made available. Examples for such situations might be lakes (or Long Island Sound) or boat lines on rivers (or along the coast) or, last but not least, ferry services such as to and between islands.

After the arrival (availability) of reliable hydrofoil craft, another change seems to develop within the short-distance sector of water-borne transportation. Because of their high cruising speed, up to three times as high as that of previously existing conventional boat lines, foil-supported craft appear quite capable of competing even with fast land-borne vehicles

a unit weight of 11.7 lb/h.p., including fuel sufficient for a range of 300 km.). Taking also into account some material necessary to strengthen the planing bottom, the dead weight of this craft is then expected to be at least 3 tons higher than that of the hydrofoil boat. The equivalent loss of passengers (on a weight basis) is in the order of 37. The number of paying passengers is, in other words, reduced to ≈ half, while the expenses for machinery and fuel are roughly doubled. Experience in commercial passenger transportation proves that, applying the foil-supported type of carrier, a yearly net profit can be obtained in the order of some 40 per cent of capital invested. On the other hand, using the planing type of boat, no profit can be expected at all under the conditions of operations as stated above.

(to be continued)

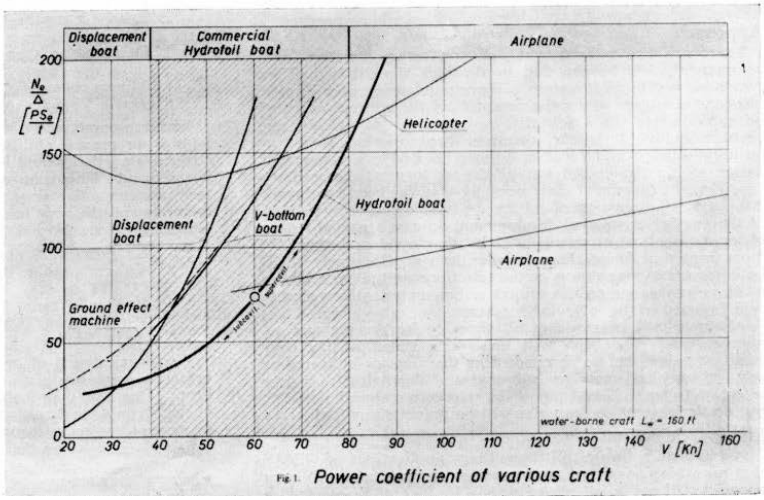
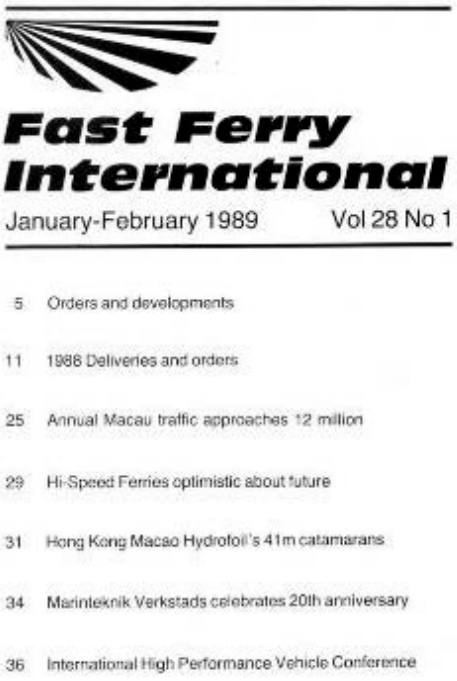


Fig. 1. Power coefficient of various craft

Example pages: **Fast Ferry International**, vol.28 no.1, 1989 Jan-Feb, pp.1 "[*Front cover*]"; pp.2 "[*Contents*]"; pp.5-9 [only pp.5 scanned]. "*Orders and developments*" brief descriptions of world events; pp.11-24 [only pp.11 partly scanned]. "1988 deliveries and orders" a directory of new vessels worldwide giving brief details of each.



. . . and Kawasaki Heavy Industries

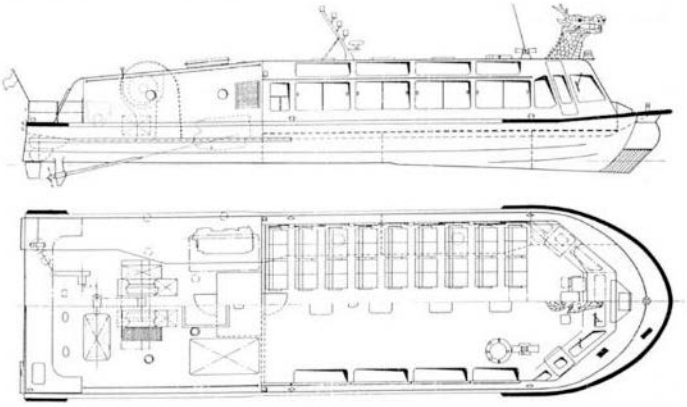
Kawasaki Heavy Industries has released details of the first Jetfoil 929-117 hydrofoils to be built at its Kobe yard since the company signed a license agreement with Boeing Marine Systems. The first of these is scheduled to be delivered to Sado Kisen Kaisha in March. Fitted out for 266 passengers, it will join the 929-100 and two 929-115s already operated between Niigata and Ryotsu on Sado island.

A 265-seat version will then be delivered to Kagoshima Shosen in June for a route linking Kagoshima, Nishinoomote on Tanegashima Island and Miyanoura on Yakushima Island. The other two craft will both be based in Nagasaki. Japan Ocean Cruise Line is to introduce one, configured for only 180 passengers, in September on an international service to Cheju in South Korea. The fourth Jetfoil off the Japanese production line, a 282 seat variant, will then be delivered to Kyushu Shosen Kaisha next March for a route to Fukue and Narao in the Goto Islands.

1982, a 12m SES in October 1982 and three 27m craft in August 1983. Two years later, the design of a 31m ferry was completed.

ferry has joined the KTMI 12m SES on the Yang Gu-In Jae route on the So-Yang man-made lake near Seoul. A single Volvo Penta TAMD 41A 170hp

The 17m SES built by Korea Tacoma Marine Industries features the distinctive figurehead favoured by Dong Bu Express



Korea Tacoma Marine Industries

	14m hovercraft	17m SES
Length overall	13.35m	17.3m

1988 Deliveries and orders

Yet another record year for fast ferry deliveries and orders. With 70 vessels launched in 1988, 50% more than during the previous year, and outstanding orders accounting for another 75, approximately the same number as at the end of 1986, there is little sign of a levelling off of activity in the industry. Some yards could still ship craft in the final quarter of 1989 but this situation is unlikely to last very much longer. Deliveries for the second quarter of 1990 are already being confirmed.

Nor does the following tell the complete story. The number of craft built last year was higher than indicated, at least five catamarans were launched at two Australian yards and a monohull in Japan but because no details could be confirmed they have not been included. Similarly, several outstanding orders have yet to be officially announced.

Catamarans continue to dominate the order books while surface effect ships and wave piercing catamarans are beginning to make an impact. As usual, the figures do not include hydrofoil production in the USSR, only those vessels known to have entered service overseas.

Ferries carrying up to 99 passengers were again the most popular size during 1988 and 200-349 seats continued to be the most popular range. In the current year, it seems likely that the 200-249 seat size will dominate production. There is certainly a trend by operators towards larger craft. Or even very large craft, four passenger/car ferries are due to be delivered in 1990. As in other

The continuing reluctance of builders or operators to disclose financial details and fluctuations in international exchange rates makes any conversion into a single currency or assessment of the total value of the market fairly meaningless. The final column of the listing now details the country the vessel was delivered to rather than a contract price.

Deliveries not previously reported in the magazine include an A. Fai Incat 21m catamaran to the PRC, an International Catamarans Tasmania Incat 37m wave piercer to New Zealand, a Lloyd's Ships Crowther 35.6m catamaran to Singapore, a Sabre Catamarans Sabre 55 100 seat catamaran crewboat within Australia, a Sea Management 17m 70 seat catamaran within Australia and an SFCN 34.6m monohull to the French Antilles.

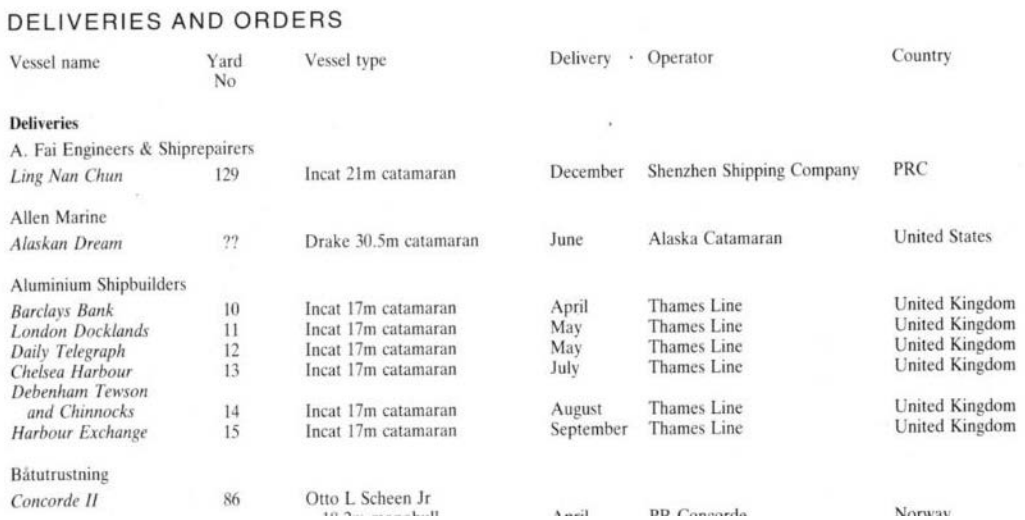
Previously unreported orders include another A. Fai Incat 21m catamaran for the PRC, an FBM Marinteknik Shipbuilders 34 CPV catamaran for Malaysia, two Fjellstrand 38.8m catamarans for Spain, a Gladding-Hearn Incat 27m waterjet powered catamaran within the United States, a Hovermarine 218 surface effect ship for Turkey and two more Rodriquez RHS 160F hydrofoils for Italy being built by Seaspeed (Malta).

For the purposes of the listing, a fast ferry or crewboat is considered to be a vessel, delivered or ordered for commercial service, capable of carrying at least 50 passengers or equivalent payload and having a minimum service speed of 25 knots. Where a contract has not involved a new craft, the year of construction is listed in brackets. Where the sale of a boat has resulted in a change of name, this is indicated in the right hand column of the listing.

No low speed designs or high speed vessels ordered for non-commercial or military service are included in the following pages. Consequently, production activity at some of the yards during 1988 and 1989 may be greater than a listing of just the fast ferries built would suggest.

1988 deliveries and orders according to craft type and size

	Deliveries	Outstanding orders	Total
Catamarans	38	27	65
Hovercraft	1	2	3
Hydrofoils	5	14	19
Monohulls	16	5	21
SWATH/FDC	–	3	3
Surface effect ships	7	17	24
Wave piercing catamarans	3	7	10
Total	70	75	145



DELIVERIES AND ORDERS

Vessel name	Yard No	Vessel type	Delivery	Operator	Country
Deliveries					
A. Fai Engineers & Shiprepairers					
Ling Nan Chun	129	Incat 21m catamaran	December	Shenzhen Shipping Company	PRC
Allen Marine					
Alaskan Dream	??	Drake 30.5m catamaran	June	Alaska Catamaran	United States
Aluminium Shipbuilders					
Barclays Bank	10	Incat 17m catamaran	April	Thames Line	United Kingdom
London Docklands	11	Incat 17m catamaran	May	Thames Line	United Kingdom
Daily Telegraph	12	Incat 17m catamaran	May	Thames Line	United Kingdom
Chelsea Harbour	13	Incat 17m catamaran	July	Thames Line	United Kingdom
Debenham Tewson and Chinnocks	14	Incat 17m catamaran	August	Thames Line	United Kingdom
Harbour Exchange	15	Incat 17m catamaran	September	Thames Line	United Kingdom
Båtutrustning					
Concorde II	86	Otto L Scheen Jr			Norway

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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

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

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