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Cargo Boost

Cargo system update pre-order productivity evaluation for existing container ships

MACGREGOR PLUS PARTNER

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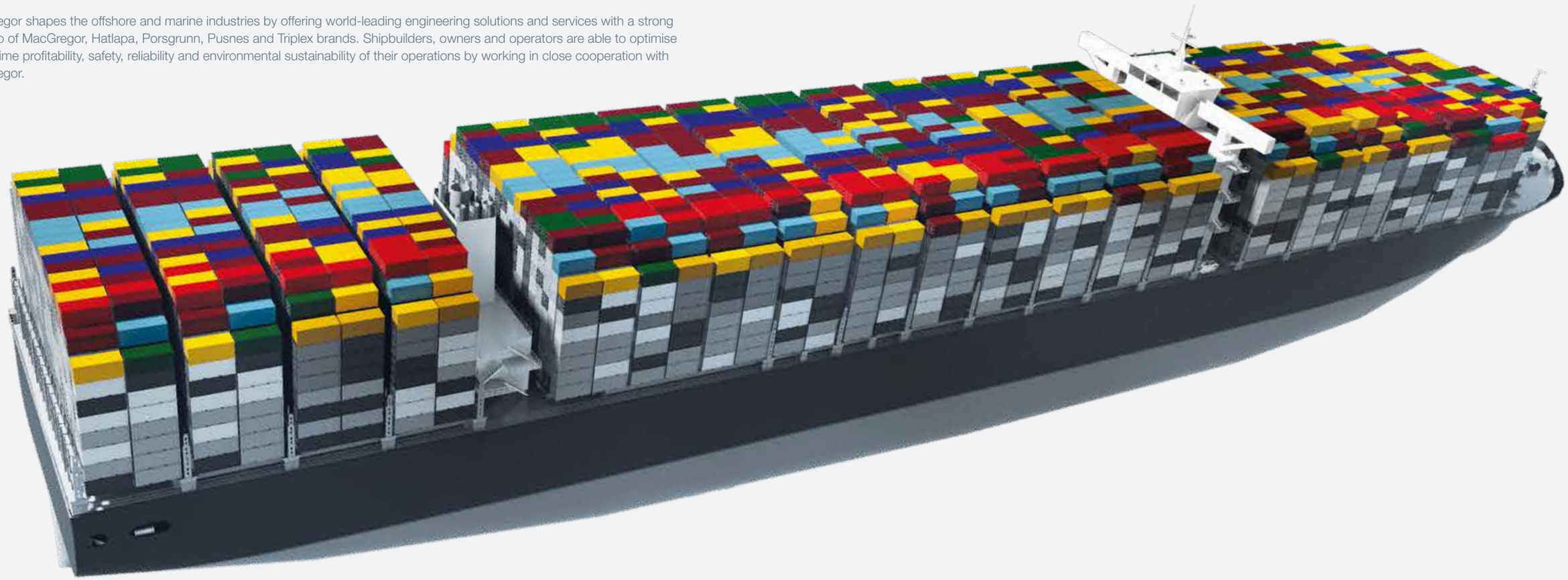

MacGregor solutions and services for handling marine cargoes, vessel operations, offshore loads, crude/LNG transfer and offshore mooring are all designed to perform with the sea. MacGregor is part of Cargotec (Nasdaq Helsinki: CGCBV). Published by MacGregor.

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CARGO BOOST FACTORY

How can you be sure that a cargo system upgrade will pay off?

Market needs, routes and cargoes change over a ship's lifetime. At some point the original cargo handling system may not meet the requirements of the current cargo profile* and an upgrade might be necessary to improve the ship's earning potential.

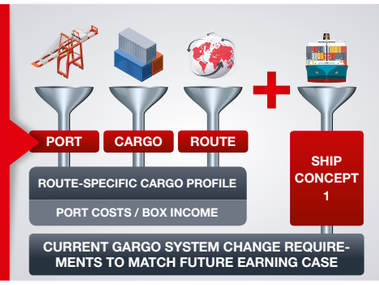
We believe that all existing container vessel cargo systems on board can be upgraded, and have set our minds to this challenge because we understand the whole cargo system.

The starting point for our upgrade process is to define a container stowage arrangement that includes a combination of hatch covers, lashing bridges, lashing components, and bearing pads to enable your vessel to carry the maximum payload possible.

We work on a turnkey delivery basis and can take overall responsibility for the upgrade project from design and sourcing through to delivery. We have the tools to analyse your ship's business profile and maximise the amount of cargo it can carry in relation to deadweight tonnage. We will deliver proven data to demonstrate that the upgrade will pay off well before the ship is ready to be docked. This is how we do it:

1

The first step is a preliminary feasibility study, including an analysis of the vessel´s current cargo securing system and definition of additional payload and earning capacity for the 'new' vessel.



2

The next task is to define the cargo system based on this information. With our in-house tools and knowledge, we can help construct the cargo system modification specification both from a system and operating perspective. This description of the whole cargo system can then be used at the upgrade stage.

3

Final proof and verification of the system by comparing the existing vessel and the proposed concept using our analysis tools. This verification forms the basis for the investment decision.

4

Customer receives the final technical cargo system specification for the modification, a detailed quotation, and an inquiry specification that can be used for negotiations with the shipyard.

* MacGregor defines cargo profile as the distribution of containers on board a ship in terms of container sizes and container weights, operating on a particular route.

1. Preliminary feasibility study

Current ship or fleet analysis

A good starting point is an analysis of the vessel's current particulars: cargo profile, the routes it serves and the distribution – in terms of size and weight – of the containers it carries. All available technical material such as original drawings are useful.

Earning evaluation

We can propose a concept that will deliver additional potential earnings for your vessel and suggest the optimal corresponding design and hardware. At this stage the proposed cargo system is evaluated against the ship's business profile. This is known as the Individual Earning Report (TIEReport 1.0). As a result of this evaluation, it will become clear if the proposed upgrade is feasible or not.

2. Cargo system definition

System requirements

MacGregor will need to know what routes the ship intends to serve and the profile of the cargo that it will carry after the upgrade. It is also possible to determine the type of cargo that will deliver the best earnings and how the cargo system can support the ability to carry this cargo.

The definitive requirements for the cargo system are specified at this stage. These include, for example, container stack weights and heights, which are checked against the selected GM. The nominal capacity and the actual cargo-specific capacity per container weight and size can be a part of this phase.

Earning case requirements

Based on an analysis of the whole ship's cargo system, bay by bay, we define the proposed concept in terms of earning ability and investment.

3. Verification of the proposed cargo system

Evaluation of the investment profile

We produce the Individual Investment period Earning Report (TIEReport 2.0) to demonstrate and validate the earning ability of the proposed cargo system specification as the basis for an investment decision. For this analysis the ship's cargo profile, especially the anticipated route and cargoes and cost structures need to be known. The ship's existing Baplie files, from which we can generate the cargo profile, are useful.

With the TIEReport 2.0 complete, it is possible to compare the existing vessel and the proposed upgrade concept and obtain the necessary figures to support the decision-making process.

Evaluation of the ship's structures

Although the existing hull is considered in step 2, the purpose of this evaluation is to verify that it can carry the proposed cargo profile from a strength and stability perspective and to suggest any necessary hull strengthening or modifications.

4. Final cargo system technical specification and docking arrangements

Finally, the new system is specified in detail and an inquiry specification to support shioowner in shipyard negotiations is produced, along with our quotation for the actual upgrade work.

We can be responsible for the project from definition, through the design process, to the delivery of the hardware and software. This can include consulting and guidance for docking arrangements, experienced project management, supervision and commissioning of local personnel on site, as well as component supply and logistics.