

# Preparing for a mega boxship casualty

**Sam Kendall-Marsden**, of Standard Club, says the vast scale of today's ultra-large container vessels will give rise to some unprecedented challenges in the event of a major casualty.

**B**y next year there will be nearly 600 ultra-large container vessels (ULCV) plying the world's oceans. The largest to date, *MSC Gulsun*, launched this summer and has a capacity of 23,756 20-ft equivalent container units (TEU). Laid end to end, these would stretch for approximately 144 km. The mega boxship era only dates back to 2006 with the record-breaking 15,550 TEU, 400 m-long *Emma Maersk*. Maersk pushed the envelope again in 2013 with its new 18,000 TEU-plus Triple E class, with the Es standing for "economy of scale, energy efficient and environmentally improved". The size of container ships continues to increase. In the past two years, MSC, OOCL and Cosco have launched more than a dozen 21,000 TEU-plus giants, and dozens more are on order.

The generally accepted definition for ULCVs is anything over 10,000 TEU. However, with the 2016 upgrade of the Panama canal, anything up to 15,000 TEU is now technically part of the new Neopanamax class. Either way, this fast-growing class of ships is a recent addition to the global shipping industry and will give rise to unprecedented challenges in the event of a major casualty.

## What can happen

Fortunately, there have been very few incidents to date, but this also means the industry has had little experience of what will actually happen when one of these vast floating warehouses gets into trouble. Some clues were provided by a fire on the 15,226 TEU *Maersk Honam* in March last year, which at the time was carrying just 7,860 containers in the Arabian Sea. In addition to the tragic deaths of five of its 27 crew, it took five days to bring the fire under control and a further seven weeks before the ship could be towed to a suitable port of refuge, in this case Jebel Ali in the United Arab Emirates. The fire destroyed cargo in almost 2,000 containers in the ship's first three holds and led to a complex and challenging operation to remove and dispose the waste, which is still ongoing.

To help ensure the shipping industry is better prepared for a mega boxship casualty, Standard Club recently published a 32-page bulletin on the issue featuring articles by leading international maritime casualty specialists. Topics covered range from firefighting, ports of refuge, salvage and pollution control to post-casualty cargo management, cargo claims, general average and communications.

## Casualty management

Burnay, of the Lloyd's Special Casualty Representatives Panel, looks in particular at the potential technical challenges of managing a ULCV casualty. He says it will be vital in the early stages to have sufficient information to understand the ship's condition, to assess the immediate risk to the crew and any potential environmental impact, and to plan effectively how to proceed.

"During these early stages it is common to use the available data from an existing similar-sized ship to give an indication of the likely condition. Given the recent emergence of ships of this size and the

relatively few incidents experienced to date, such information may not be at the [casualty management team's] disposal," he said.

Shipowners and operators therefore need to provide information contained in the ship's drawings and documentation to the casualty management team as soon as it is requested, he says. This should include the pre-incident loading condition, general arrangement drawings, tank capacity plans, stability booklets, loading manuals and cargo manifest. "A quick response with accurate data and information is critical to the success of minimising any loss in a casualty."

Burnay predicts one of the toughest tasks will be lightering a grounded mega box ship. "If containers need to be removed before the ship can be refloated, this presents a huge challenge due to the difficulty in bringing suitable cranes alongside the grounded ship. With such large ships, the necessary height and reach of cranes is prodigious, as is the size and draft of the ships needed to support them. A large deck and terminal space will also be required to remove, process and temporarily store a significant number of containers."

As such shipowners and operators also need to provide casualty management teams with an accurate container stowage plan, he says. This should detail: "the weights and contents of the containers to be removed, whether they contain any dangerous goods and whether they require electrical power for reefer units. This information will assist in assessing the potential environmental impact if containers are lost overboard, either during the casualty or in subsequent efforts to assist the ship."

Given the high windage area of ULCVs, he says the stowage plan will also help to calculate the required tug capacity for towing the ship to a port of refuge for repair – which could be thousands of miles away.

## Port of refuge

Nick Barber, of law firm Stephenson Harwood, stresses the probable difficulties of finding a suitable port of refuge for a stricken mega boxship. "Issues that can make identifying a place or port of refuge difficult include the risk of the ship sinking in a fairway or harbour and causing substantial economic loss, the size of the ship and height of the container stacks, which make suitable cargo-handling facilities harder to find, and the fact that extinguishing container ship fires can be a drawn-out process."

In particular he says the port of refuge will need to have sufficient draft to accommodate the damaged ship, facilities to handle the cargo, space to separate and survey containers from the ship, as well as facilities to handle and dispose of any damaged containers, cargo or other debris arising from the casualty. "This may include potentially hazardous materials such as contaminated firefighting water."

Barber notes that for some of the people involved, particularly in the port, it may be the first time that they have had to deal with many of the issues that arise in a major boxship casualty. "Addressing these issues requires close cooperation between the



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owners, salvors, P&I and hull and machinery insurers (and their advisers), local correspondents and the relevant authorities at the place or port of refuge.”

### General average

Amy O'Neill, of average adjuster Richards Hogg Lindley, focuses on the likely role of general average in ULCV casualties. Given the huge losses, sacrifices and expenditure likely to be involved, she says shipowners will have little option but to declare general average.

“The key benefit of general average to all parties is that it provides a framework that allows for the shipowner to take immediate action at a time of real peril to attempt to save the property involved. [It offers] reassurance that, in due course, once the danger has subsided, these expenses and losses will be assessed by an independent expert and those allowable as general average will be contributed to by all parties involved on the basis of their arrived values at destination.”

Once general average is declared, she says the shipowner will need to collect security documents from all container owners. For insured containers this is relatively straightforward, but for the 10 to 15 per cent of uninsured containers, each container owner will be required to pay a percentage of their cargo value as a deposit in respect of their ultimate general average contribution. “On a mega boxship, the number of cargo interests will be larger and therefore the time taken to contact each will be greater. As a wider issue, it is important that cargo owners insure their cargo against such losses to avoid such requests for cash security.”

### Industry response

The container shipping industry recognises that mega boxships present a special class of operational and salvage risk given the size and magnitude of cargo on board. An industry working group

including Standard Club was recently established to examine the specific challenges associated with salvaging such a ship.

One of the important outcomes to date has been the development of an initial assessment form that masters and ship managers can use in an emergency to guide salvors' initial response efforts. As time is of the essence in reacting to emergencies, the form captures the critical information required in a brief, accurate, timely and actionable format. A copy of the form can be obtained on request from Standard Club. It is hoped that this format or similar will be widely adopted so that the master is relieved of the demands for information from disparate parties as the emergency unfolds. The managers ashore can perform and control this necessary task while the master and crew can focus their efforts, experience and expertise on solving the crisis.

ULCV groundings, fires, collisions, machinery breakdown and structural failure will each present their own specific challenges. However, being prepared, having clear emergency response procedures and maintaining an alert and fully trained crew should help to manage these incidents effectively and limit their potentially huge consequences. *MRI*



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