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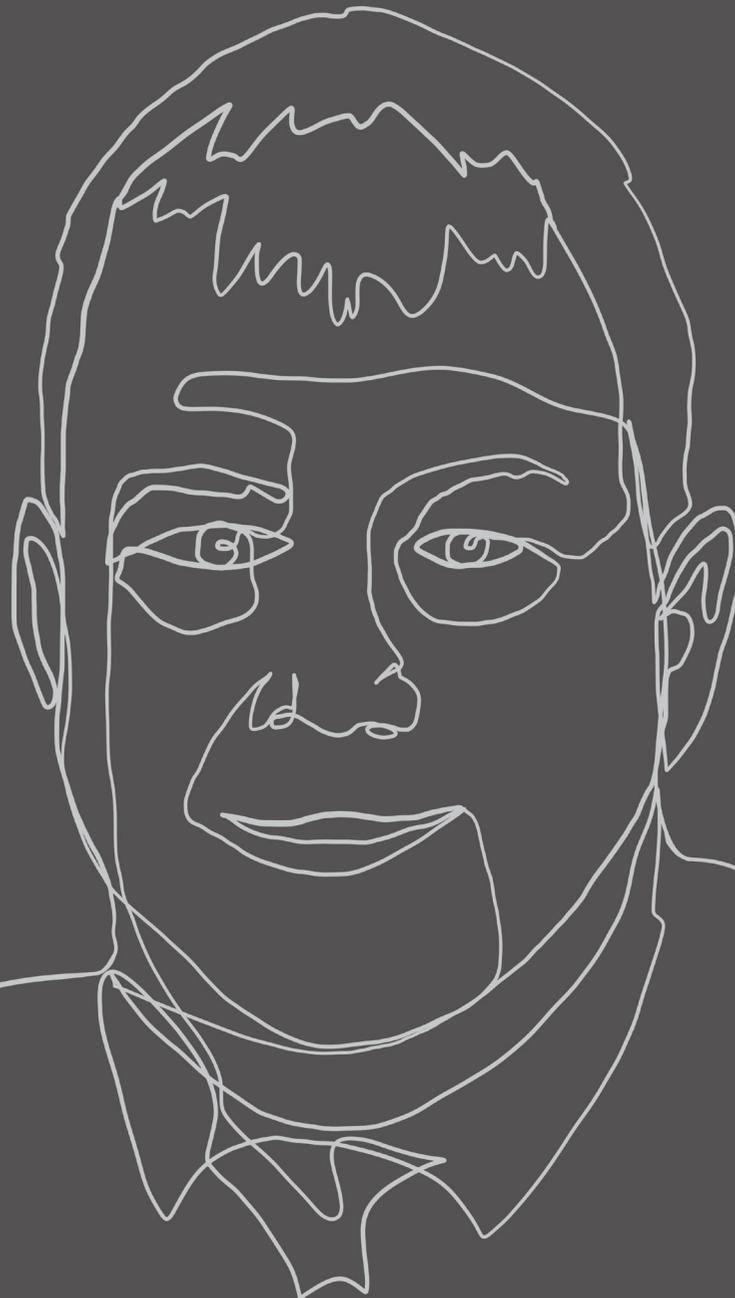
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THE UNGOVERNED SPACE



Coltraco highlight the need for better, more consistent, and reliable fire safety measures at sea

Fires on board ships can be devastating to the crew, vessel, and cargo. Fire safety standards on board cannot afford to slip. Part of this issue is related to the maintenance of gaseous fire extinguishing installations, which may be a result of holes in the regulations. With the recent difficulties that the shipping industry is facing, Coltraco understand the need for practical, cost efficient, solutions to safety issues.

However, maintaining high standards of fire safety practice does not have to be expensive or time consuming. Coltraco strive to provide easy and long-lasting solutions that are suitable to varying budgets. There is a call to respond to regulations with a rigorous attitude, to go above and beyond, and to provide security of life and infrastructure. Installations must be maintained so that they can provide the protection that they are intended for. This is a call for awareness of the problem and for action to be taken now.

FIRE AT SEA: THE PROOF IS IN THE STATS

At sea, fire poses one the of biggest threats to ships. Sailing alone and at sea throughout the year, without the ability that a land-based asset may have to call upon the emergency services. The danger is shown in the statistics. A study published by the Finnish Transport Safety Agency showed that almost 800 fires happened in European waters between 2004 – 2014, 10% of which were classed as serious. Further to this, circa 200 of these incidents required external support to deal with the fire. In some of these cases the fire suppression installations may not have been at their full capacity, which could explain the outbreak of uncontrollable fires.

The Short Read

- *Life-threatening issues must be dealt with*
- *Gaseous fire extinguishing installations are difficult systems*
- *Crew are often not trained to shut down, dismantle, weigh, and re-install gaseous cylinders*
- *The maintenance of installations must be a priority*

*“At sea, fire poses one the of **biggest threats** to ships. Sailing alone and at sea throughout the year, **without** the ability to call upon the **emergency services**”*



DEVASTATING EFFECTS OF FIRE AND WATER INGRESS

A clear of example of where actuation has failed to provide safety to the vessel is MSC Flaminia. In July 2012, the container ship was exposed to an uncontrollable fire which tragically lead to three fatalities and two severely injured crew members, as well as dire damage to the ship structure and its cargo. In this example, the actuation of the CO2 system failed when it activated without instruction in the engine room, although the discharge was intended for cargo hold 4, which turned off the auxiliary boiler and auxiliary fan for the main engine. This led to an out of control fire which required three salvage tugs to deal with the effects of the explosions and fire. However, the extent of the fire meant that the salvage teams could not enter the vessel for 4 days. Cargo areas 3-7 in the ship were significantly damaged and the ship's structure was weakened, requiring replacement. Under the pressures, the hatch covers lost their integrity and bulkheads were severely damaged which led to water ingress in all the cargo.

WHAT ABOUT YOU?

Could you afford for this crippling financial, physical, and reputational damage to happen to your crew and vessel? The correct answer for any ship owner, ship manager and P&I club is “No.” Chances must not be taken

CASE STUDY

CARNIVAL CRUISES SOUGHT COLTRACO ULTRASONICS' EXPERTISE

“Ships sink; fires happen”. Addressing these two main causes of vessel loss is critical, especially when all owners and managers are seeking to reduce risk, cut costs and improve safety. Carnival Cruises chose to protect their fleet by improving fire safety. One aspect of this is that they chose Coltraco Ultrasonics to be their supplier for the Portalevel® MAX Marine which tests the CO2 fire installations onboard for leaks in content.

Coltraco won ‘Supplier of the Year’ at the 2017 Seatrade Cruise Awards thanks to supplying Carnival Cruises.

- Portalevel® MAX Marine is designed primarily for the vessels’ crew to inspect large fire suppression systems of up to 600 cylinders.
- The ease of operation, in comparison to weighing, increases the ability of more regular and frequent checks, improving fire safety management onboard.
- Coltraco’s innovative method of inspecting leaking cylinders with ultrasonics enables identification in under 30 seconds using Portalevel® with one person, instead of the traditional 15 minutes with two people laboriously weighing.
- The safety of their ships is integral for the continuation of their business success and it can be for yours too.

Using ultrasonic technology to pinpoint the liquid level of the suppressant agent in the cylinders of the extinguishing system makes testing quicker and easier. Available anywhere worldwide with 7 service stations to support you for the lifetime of the equipment as part of Coltraco Customer Care (CCC); details on coltraco.com/portalevel-max-8th or in the MSG IMPA p/n: 652776.

Combined with the MAX Marine, The Portasteel® Calculator is an advanced calculator application that



PORTASTEEL CALCULATOR

SAFER • BETTER • FASTER

Weigh Cylinder Contents of Fire Extinguishing Systems in 60sec with Portalevel + record the data

converts the liquid level height of CO2, NOVEC™ 1230 and FM-200® liquefied gaseous extinguishing agent into the agent weight/mass, using the readings taken on an ultrasonic non-destructive liquid level indicator device. Furthermore, the Portasteel® can convert an expected agent weight back to the required liquid level, allowing users to anticipate where the level should be. The Portasteel® has widely been recognised by awards, as a finalist in the Safety at Sea Awards 2017 and the Tanker & Trade Awards 2016.

IMPROVE ONBOARD SAFETY MANAGEMENT SYSTEM WITH PORTALEVEL® MAX MARINE

The maintenance of installations must be a priority. It does not need be expensive nor time consuming; Coltraco will support you in ensuring the safety of your crew and vessel. Tragic case studies of incidents such as MSC Flaminia prove that fire safety onboard must be a priority. Do not narrowly comply with regulations and thereby risk the effectiveness of your installations. Coltraco are proud that they can make your critical safety processes more effective.



“Only having the **annual inspection** by accredited marine servicing companies is **not enough** – the **crew must take responsibility** for their **own fire protection**”

when lives are at risk, which is all the time when a vessel is at sea. We call this the “ungoverned space”. Simply put, the ungoverned space is the area where either the regulations or the protecting systems of the critical infrastructure are not providing effective, consistent, and reliable safety. This life-threatening issue must be dealt with, with specific regard to loss of contents in fixed fire extinguishing systems and the need for improvements to room integrity testing.

CUTTING THROUGH TO WHAT YOU NEED TO KNOW

Gaseous extinguishing installations are difficult systems. There are few who understand them in all their complexity. A vessel’s extinguishing installations are its essential defence against the risk of fire at sea. The main factor that needs to be understood is that they must be able to actuate, or release their gas, in the event of a fire. Surely an extinguishing installation should extinguish? This may seem like an obvious point, but on further investigation the difficulties with this statement arise. What if the extinguishing installation cannot actuate fully because there isn’t enough gas within the cylinder?

Gaseous extinguishing systems are highly pressurised, the risk of leaking and discharging is accepted as part of their use, which is shown in the regulations that demand their upkeep e.g. IMO SOLAS FSS Ch5. 2.1.1.3: ‘Means shall be provided for the crew to safely check the quantity of the fire extinguishing medium in the container’

Often this is misunderstood, this code specifically

states that the crew must test their extinguishing installations in between the periodic inspection, maintenance and certification. Only having the annual inspection by accredited marine servicing companies is not enough – the crew must take responsibility for their own fire protection. However, what must be noted is that the crew are often not trained or certified to shut-down, dismantle, weigh, and re-install the gaseous cylinders.

Adding to this, the definition of leakage within the regulations is troubling. ISO 14520-1 clearly states that: ‘If a container shows a loss of agent quantity or a loss of pressure (adjusted for temperature) of more than 5%, it shall be refilled or replaced.’

Given that the gaseous systems are designed specifically to the individual need of the vessel, a 5% loss of agent may mean that they would not fully extinguish the fire. In a recent article by the Maritime Executive, Captain Madden urged crews to routinely and properly inspect and test fixed firefighting systems; “Too often they are found with... concerns about leakage”. The only way to determine a cylinder is free from leakage is to check its contents. But if the crew cannot weigh their own cylinders, because they are not certified to do so, then how is this achievable?

CO2 UK Marine Equipment Directive (MED) UK/EU legislation with US Coast Guard Mutual Recognition 7.3.2.6 states: ‘Means should be provided to verify the liquid level in all the cylinders, either by weighing the cylinders or by using a suitable liquid level detector.’

COLTRACO Ultrasonics | since 1987

SHIPS SINK. LEAKS HAPPEN. protect your fleet.

ultrasonic watertight integrity test indicator

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