FIRE ISOLATOR

EV-CAR FIRE PROTECTION

EV FIRE PROTECTION

The danger of lithium-ion batteries, such as those found in smartphones and electric vehicles (EVs), catching fire or exploding is well known. Although the actual impact of an EV battery catching fire and the dangers that those fires can cause are widely known, it remains very difficult to extinguish these fires.

Imagine this happening on the cardeck of a ferry or in a carpark. The consequences could be disastrous. The methods for extinguishing a lithium-ion battery fire are depending on the location and size of the fire. However, as a general rule, using only water will not do the job and special strategies & methods are needed to fully and safely extinguish or isolate an EV car fire.

KEY FACTS ABOUT EV-FIRES

Here are a few key facts that everyone dealing with EV's on ferries or in car parks should know and do about EV-fires:

1. Lithium-ion batteries are a Class B flammable liquid and require dry chemical extinguishing agents to extinguish
2. Important is that preventive action should be taken to avoid a chemical reaction that could cause a fire
3. Be sure that the crew is well trained in the various actions that need to be performed

In terms of minimizing the damages in case of EV-fires, it is a best practice to perform all three actions.

ABOUT THE FIRE/ISOLATOR CONCEPT

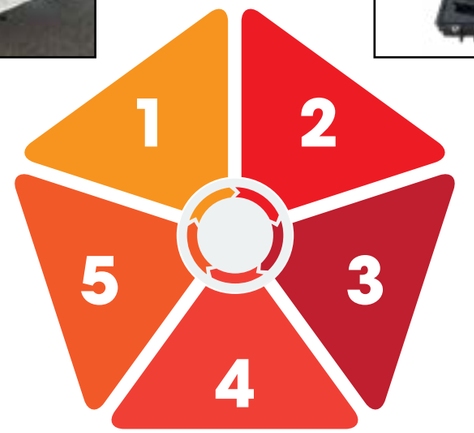
In general, there is no single solution to extinguish EV car fires. Most specialists agree that more than one solution should be available on board ferries or in carparks. Once an EV fire occurs, the shipowner/captain must be able to reach the nearest port as soon as possible to keep damages to an absolute minimum. In case of an EV on fire in a car park, the goal must be to minimize the collateral damage. Specialist with a long track record of fighting E-fires figured out what the best method to fight an EV fire is in order to have minimum damages towards Cargo & Passengers. The conclusion was that a combination of different extinguishing methods delivers the best results. With this best practice, the concept of Fire Isolator was born.

The Fire Isolator Concept holds 4 elements that, when used together, deliver the best results when fighting EV-fires on board ferries or in car parks:

1. The use of a High Temperature resistant Fire Blanket
2. The use of aerosol units that interrupt the chemical chain reactions occurring in the flames
3. The use of a Water Mist lance
4. The use of a thermal imaging camera to monitor the temperature of the fire
5. A dipping container in which the EV car needs to end up submerged + Training of the crew in this concept

EV FIRE/ISOLATOR CONCEPT

BY USING MULTIPLE WAYS OF EV CAR FIREFIGHTING, THE CHANCES OF ISOLATING THE FIRE AND SAFELY REACHING THE PORT ARE INCREASED BY 500%.



EV FIRE/ISOLATOR PRODUCTS

FIRE/ISOLATOR BLANKET

The Fire Isolator Blanket is the best way to extinguish and isolate car fires for normal cars as well as All-Electric Vehicles (EVs). The Fire Isolator Car Fire Blanket will direct assist in containing the flames, smoke and toxic fumes. The blanket is temperature resistant up to 1600 °C, and should be gently placed over the vehicle.

FIRE/ISOLATOR AEROSOL UNITS

Our Aerosol Units are lightweight, hand-held units designed to provide portable fire extinguishing. Aerosol Units are designed exclusively for trained first responders to slow or stop the escalation of a fire. It has been proven that the deployment of a Aerosol Unit by trained personnel can save valuable time, stop a flashover and provide an emergency route through a wall of flames and/or even extinguish the fire and ultimately help save lives.

FIRE/ISOLATOR WATER MIST LANCE

The Fire Isolator Water Mist Lance is your assistant in quickly and efficiently extinguishing fires in EV vehicles. The Fire Isolator Water Mist Lance is drilled directly into the battery by a specialist in an easily accessible location. This method allows water to enter the battery cells directly. The lance only needs to be inserted at a small depth.

FIRE/ISOLATOR THERMAL CAMERA

A thermal imaging camera is a type of the thermographic camera used in firefighting. By rendering infrared radiation as visible light, these cameras allow firefighters to see areas of heat through smoke, darkness, or heat-permeable barriers. In the context of the Fire Isolator concept, it is important to monitor the temperature under the fire blanket to see if more aerosol units need to be deployed

FIRE/ISOLATOR DIPPING CONTAINER

A dipping container in which the EV needs to end up submerged, for probably even several days.

EDUCATION AND TRAINING

Education and training resources provide fire and rescue professionals with essential information that continually supports the designation of how to deal with E-fires.

Superior training efforts, whether online, in a classroom or on board, are essential. Training of basic skills, such as the use of all the different basic equipment and the maintenance and use of SCBAs.

For the training program around Fire Isolator we refer you to the special brochure for this training program.

ENGINEERING, INSTALLATION AND SERVICE

For maritime sectors: based on drawings of your vessel, our team of engineers will create a tailor-made proposal. Quotations can be made for both Open Deck ferries and closed RoPax ferries.

If required, we can deliver the EV Fire Isolator equipment on board and install it professionally. We also offer Annual service contracts. For more information, please contact us.

For parking garages/facilities/real estate sectors we can determine in consultation the number of Fire Isolator products that need to be available per deck/floor.

ACCESSORIES

Required accessoires like fire suits, thermal imaging cameras, firehoses, coupling and cabinet can be quoted. Ask us for the pricing information.

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