NAFTES Naval Fire Fighting Training & Education System

Advanced Firefighting training scenario 2

Re-entry techniques from above (through an inclined or a vertical ladder) to a compartment using two (2) hoses during a fire of liquid fuels

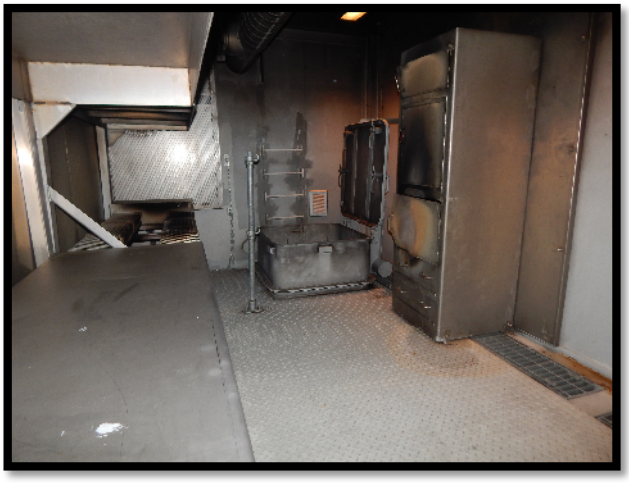
Introduction:

Reentry techniques through a hatch are safe procedures for reducing the dangers that firefighters are facing during their entry to compartments – enclosed spaces on ships. The videos for this module were shot at the Fire Fighting Training Unit at the Hellenic Navy Damage Control School, so the shape of the hatches and the staircases are not identical to the ones found on all kinds of ships. However, by applying the principles which are described and using their quick thinking , the trainees will be able to adjust themselves to any situation in order to execute a safe vertical top-to-lower-end entry onboard a ship.

Module description:

The second training scenario for advanced fire fighting focuses on the familiarization of the trainees with the appropriate procedure involving a series of techniques for re-entry through hatches using two (2) hoses during a fire of liquid fuels.

A number of enclosed spaces are accessible only from the top, through an inclined or a vertical ladder, such as the engine room. In these spaces the access of the team is hindered by the emitted thermal gases because they are accumulated on the top of the compartment and they exit when the hatch is opened.



Picture 1: A common hatch in FFTU

1) The positions of the members of a Fire Fighting Team

The Nozzleman with the hose of water (Protection) kneels above the hatch (in the opposite direction to the hinges). The Firefighter with the hose of foam is nearby him. The Team Leader takes a position to access the hatch release mechanism.

The Team Leader orders the Firefighter (FOAM nozzle) to perform a functional test in a safe area. The Firefighter performs the procedure and, if the nozzle functions properly (FOAM production), holds it, without any further instruction, informing the Team Leader about the success of the test.

Picture 2: The team's position

2) Cooling the hatch

Following the Team Leader's order, the Protection (Nozzleman of water hose) begins the cooling process (holding the nozzle at fog position 60° angle). When the level of cooling is deemed to be satisfactory and there is no water vaporization, the Protection turns the nozzle to position "fog" at an angle greater than 90° and reports to the Team Leader.

Picture 3: The "Protection" checking his nozzle in a safe area. Training without B.A usage.

3) The Team Leader informs the team that he is going to open the hatch and he opens it slightly. Simultaneously, the Protection directs his nozzle to the center of the opening, covering it up and thus protecting the team because there will be intense emission of thermal gases and probably flame.

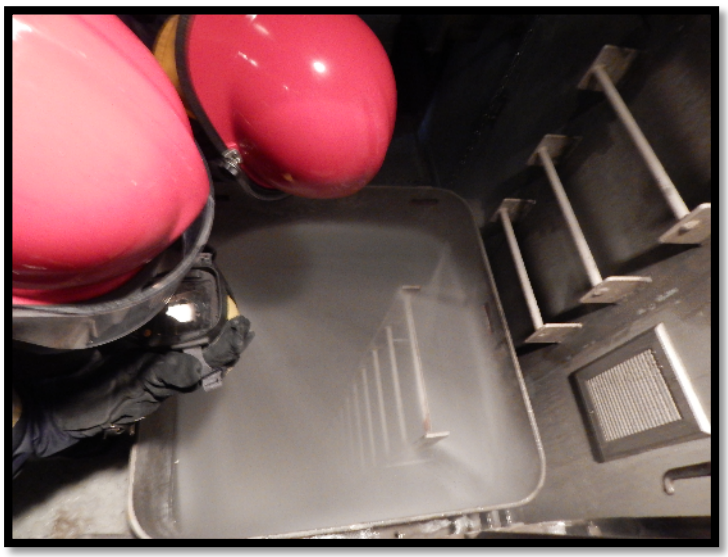
Picture 4: The Team Leader informs and is going to open the hatch.Training without B.A usage.

If there is intense vaporization with the use of water, we can leave the nozzle open placing / securing it between the hatch and its framework. In this way, the firefighting team is protected from the emitted thermal gases and at the same time the thermal gases are getting cold, without putting any further strain on the personnel. When the personnel realize that there is a reduction in the emitted vapor they must start preparing for the full opening of the hatch and the entry of the Firefighting Team to the compartment.

Picture 5: Attaching the nozzle to the hatch. Training without B.A usage.

4) Opening the hatch and flame source near the ladder.

The Team Leader inspects the ladder and the nearby place by using a thermal camera (TIC). If he detects sources of fire and if it is possible, they are fought from above from the Firefighter using FOAM. In the case of a fire of liquid fuels, two (2) containers (about 50 Lt) FOAM are discharged before the team descends.

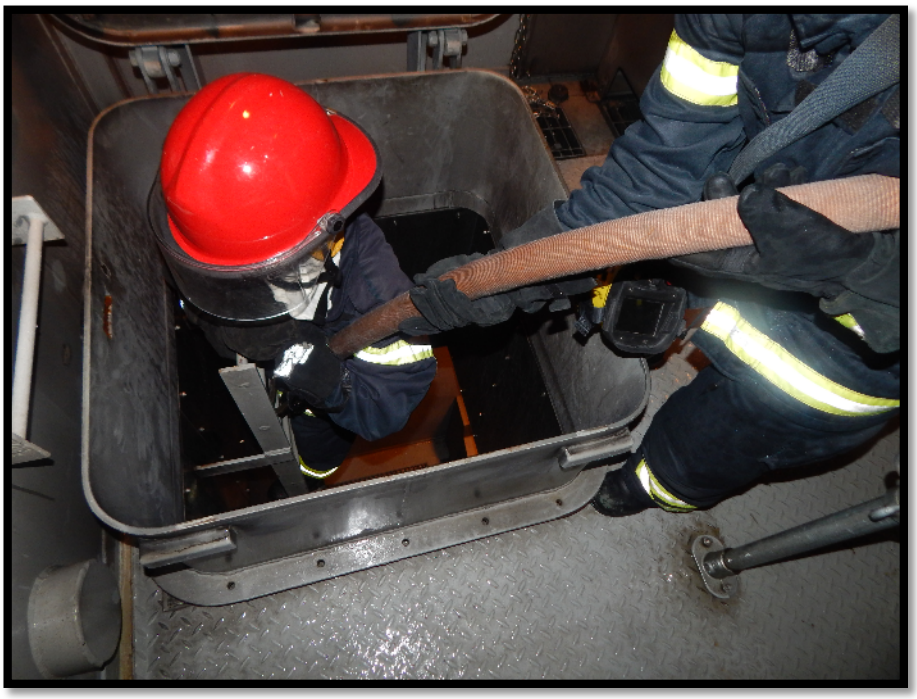


Picture 6: The Team Leader checking the ladder . Training without B.A usage

5) The descent of the Fire Fighting Team

If the Team Leader does not observe a flame source near the ladder (with the use of a thermal camera), he orders the Protection to start preparing for descent. Then, the Team Leader takes over the hose of Protection (the flow of water is not stopped) from the Firefighter so that the latter to start preparing for entering the compartment.

The Protection steps down a few stairs the gangway (so that the highest stair reaches his shoulder). When he reaches this height, he raises his hand with his fist clenched, stating in this way that he is ready to take over the hose. He takes over the hose and goes down the ladder cautiously.



Picture 7: The “Protection” receive the hose. Training without B.A. usage

6) The Protection first in the compartment

After the Protection has successfully descended, he can start the gas cooling procedure.

Then, in the same way the Firefighter (FOAM with the nozzle closed) goes down and takes a position next to the Protection.

Picture 8: The Team Leader gives the hose to the Firefighter. Training without B.A usage

7) Last the Team Leader in the compartment

Last in the compartment enters the Team Leader by taking position behind the Protection. The extinguishing of the fire sources is performed exclusively by the Firefighter with the FOAM nozzle. Throughout the firefighting process the hoses of the group are assisted by appropriate Supporters.

Picture 9: The Firefighting Team in the compartment

Summary:

Regardless of how effective firefighting simulators are in the teaching of firefighters and ship crew members basic firefighting skills in a "real fire" environment, education should not create a false sense of security and crews become over-confident. Erroneous impressions can be dangerous. Trainees should always be aware of all the serious issues in reference to a fire on board.