FIRE ALARMS

Don’t ignore a sound you can live with

Aviation Safety Blog
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USS Bonhomme Richard (LHD 6) at Naval Base San Diego, July 12, 2020. (U.S. Navy Photo by Mass Communication Specialist 2nd Class Austin Haist)

Fire-related injuries and deaths affect both military personnel and our civilian associates. In recent history, there have been multiple fires on Navy and Marine Corps installations and vessels that resulted in injuries and catastrophic property damage. It is critical we understand the magnitude of these events and continuously improve our risk mitigation efforts to prevent further fire incidents.

The National Fire Protection Association (NFPA) reports responses to a fire every 23 seconds. The NFPA estimate there is a fire-related injury every 47 minutes and fire-related deaths occur every three hours. In 2021, 1,353,500 fires resulted in 3,800 civilian deaths and 14,700 injuries. In many of these cases, the injuries and deaths are preventable with working smoke and fire alarms, as well as properly executing follow-on procedures. A fire alarm system is designed to detect and alert occupants and emergency services of the presence of smoke, fire, carbon monoxide or other fire-related emergencies. These systems may include smoke detectors, heat detectors, optical sensors and manual fire alarm activation devices, all of which are connected to a fire alarm control panel, which is normally found in an electrical room or panel room. Fire alarm systems generally use visual and audio signals to warn building occupants. It is not enough to simply have these alarms installed; it is critical that these, as well as the emergency response equipment, are strategically placed, working properly and free from obstructions.

Due to the nature of our trades, performing our duties on flight decks, flight lines and inside hangars, pose inherent risks for fire. Many of our responsibilities require multiple moving parts from aircraft to the related support equipment and cargo. We are not only performing these duties in high-stress environments, but our surroundings are often-times littered with deafening noise requiring double hearing protection devices. When executing these high-risk responsibilities, we must remain cognizant of fire alarms and the location of associated emergency response equipment.

It is an unfortunate reality that we must not take for granted that these fire detection systems are functioning properly. Not only can the system's equipment malfunction, but there are cases of intentional disarming of these critical lifesaving devices. In 2021, the Royal Navy reported an incident where an inebriated Sailor had intentionally disabled the smoke alarm so he could vape without exiting the facility. The disabled smoke alarm remained inactive and undetected for more than a month until a company came to periodically replace the smoke alarm. This foolish and reckless act created the potential for disastrous consequences but emphasizes the importance of ensuring these fire detectors are accessible and functioning properly.

Another fire-related incident that hits closer to home is the catastrophe that occurred aboard USS Bonhomme Richard (LHD 6) on July 12, 2020. The ship burned for more than four days, resulted in a ship beyond economical repair and left 59 crew members injured. The

investigations concluded the loss was completely preventable. Investigators found causal factors leading to the ineffective fire response. Contributing to the complete loss was the lack of training readiness of the ship's crew, integration between the ship and supporting shore-based firefighting organizations and lack of familiarity with requirements and procedural noncompliance at multiple levels.

A fire in the workplace should be detected quickly and a warning sounded so people can escape safely. Early discovery and warning increases the time available for escape and enables people to evacuate safely before the fire takes hold, blocks escape routes or makes escape difficult. Fire alarm reporting systems on DoD installations are connected to central control panels that are continuously manned by qualified operators who process and dispatch the appropriate responses.

With all systems functioning properly from detection to reporting system, we are charged with our own applicable and timely responses to minimize injuries and damage to equipment and facilities. Emergency procedures must also be in place and practiced ensuring safe evacuation in the event of a fire. When fire detection alarms are activated, our emergency action plan should be enacted like second nature. From the time of checking in to a new command, it is imperative we become knowledgeable of the location of emergency action items (e.g., fire bottles), primary and secondary evacuation routes, as well as mustering locations. Additionally, it is important to note that some fire alarm systems may disable elevators which are unsafe to use during fire circumstances.

The nature of our high-risk occupations is inevitably associated with risks of fire that can spread rapidly leaving little time to react and evacuate. Understanding the risks involved is critical. However, with proper planning, we can mitigate these risks. Communication, established roles, knowledge of location of emergency action items, evacuation routes, mustering points and training are essential to maintain a high level of preparedness.

Cover: A U.S. Navy Sailor dons firefighting ensemble to combat a fire aboard USS Bonhomme Richard (LHD 6) at Naval Base San Diego, July 12, 2020. (U.S. Navy Photo by Mass Communication Specialist 2nd Class Austin Haist)