Problems with the proper use of Personal Protective Equipment (PPE)

Shahrokh Khodayari Master Mariner

► Introduction:

When studying the various accidents as well as claims & their causes; it is observed that there is a large percentage attributable to personal injuries, most of which are because the crew members did not use the Personal Protective Equipment properly.

In most cases it is documented that the PPE were used but still we encounter too many accidents. If the matter is approached optimistically and we presume that the records are not false so where is the problem?

It can be that the safety culture is not predominant. Use of proper PPE alone can not guarantee safe practices & avoidance of accidents. If the unsafe practices are recurrent, the PPE can not be so efficient either.

It must be borne in mind that the personnel on board should practice their own safety standards and such equipment does not eliminate hazards but gives only limited protection in the case of accidents.

On the other hand the always present hindrance is there: Lack of Training.

This issue -which seems to be the underlying factor for many hazardous incidents - has its own discussion objectives but the aim of this paper is to denote some "practically observed points" in the use of personal protective equipment.

Most seafarers are aware of the rights & wrongs in this concept but yet again many ignore very simple points due to physical restraints; weather implications, old habits, overconfidence & complacency.

The PPE may be uncomfortable at times, they may make you sweat & feel uneasy or restricted but they save lives. Anyhow, the matter that; such devices may be uncomfortable or not easy to use; should be looked into by the administrations that approved the equipment & various inspectors who can question the issue.

We are having the MLC requirements at our door-steps; we already had the ISM code; both of which stipulate amongst other things the need for safe ship-board operations; appropriate training & familiarization & resources management.

The views hereunder are derived from pragmatic researches and behavior studies, accident investigations, root cause analysis & past experiences.

It is advisable that while holding training sessions on board or during various drills the crew members are reminded about the points and the correct usage of PPE are practically shown and explained. The following notes are observed wrong practices, reiteration of which can be used into advantage for accident prevention measures by seafarers. It is presumed that the PPE are of approved type, effective & suitable for use on board & having been maintained in accordance with the manufacturer's instructions.

▶1- Working clothes (Overalls):

They should not have loose flaps or hanging strings. Some crew members cut the overall sleeves to make them easier to use. It should be remembered that the sleeves are part of the protection & cutting them off will reduce the protective coverage area. On the other hand if short sleeves are used, the cut parts must be properly sewn to avoid hanging and loose threads which can be unsafe while working with running/turning machinery.

▶2- Head Protection:

Many seafarers do not used the chin-straps or cut them off the safety helmets. This is a very wrong practice. At many occasions the helmet is lost while bending over and climbing up or down a ladder. When the chin-strap is not fixed; the protection is not complete & the helmet can slip off the head when there is any impact on or around it.

▶3- Hearing Protection:

Use of ear-muffs is at many occasions dispensed with. Beware of proper placement of the muffs on the ear to provide protection. Some ear-protection equipment are in the shape of plugs (like swimming ear-plugs) which may become dirty or infected after repeated use in working environment.

It is observed that in some instances crew members, such as engineers, do not use the ear-muffs to be able to hear various engine & automation control or phone alarms which are usually louder that the surrounding noise, but these alarms should normally have visual signals & rotating lights, etc to attract attention.

► 4-Eye Protection:

The goggles should provide a full eye-ball protection. Any attempt to cut air-holes or the side protections should be avoided. Once a person uses goggles; the conception will be that the operation can be done with less worries; but if you have cut out parts of an approved goggle, the unwanted particles can still enter your eyes.

For some operations involving welding flux & hot melted materials; an ordinary plastic goggle will not be a protection but can become an additional hazard.

► 5-Foot Protection:

Some seafarers are wrongdoers by misusing the safety shoes. It has been observed that the back-side of the shoes are either cut or bent down, this way the shoes are used like slippers. This action along with another act of not-wearing socks makes a pair of safety shoes entirely useless. Some of the young generation officers or ratings use no socks with shoes even those with uniforms. They seem to find it chic or fashionable but we should not let this go on with the safety shoes.

If the wearer uses no socks, the inner part of the shoes get sweaty & the feet can slip out. If the back side is cut or bent; this will surely happen, especially if spilt oil or water is present.

Use of too old, cracked, oily & chemical soaked shoes can be very dangerous too. In some companies that the supply of PPE is scarce or too few; this happens very often. After all you can not expect the crew members to get their own safety gear & the better management practice is to provide such gear on board in a systematic way.

At some occasions even financial compensation for safety gear can not be very effective either.

▶6-Hand Protection:

Use of gloves is dispensed with at many occasions on board. If the job is working with fine elements or there are too much of liquids or oil involved; the crew members are tempted to let the gloves go. Supply of proper type of gloves is very important here; if the company supplies only limited types of gloves which can not be used for all occasions on board; then such problems can happen more oftentimes.

As quoted from the AP code "Leather gloves are generally better for handling rough or sharp objects, heat-resistant gloves for handling hot objects, and rubber, synthetic or PVC gloves for handling acids, alkalis, various types of oils, solvents and chemicals"

►7-Respiratory Protective Equipment:

This sort of equipment is rarely neglected in most occasions & in an entry into enclosed space will have to be worn if all is done as per the check-lists & procedures. But in many other occasions like dusty cargo operation; working with chemicals or being exposed to various fumes such as welding fumes, use of proper masks is neglected or eased off.

▶8-PPE & Galley personnel:

Galley crew are amongst those who use PPE the least; although the number of accidents in Engine Room area are the highest but the personal protective equipment are taken easy in the cooking areas aboard.

One rating asked if we must use PPE at home and in the kitchen!?

This seems funny but many have that belief. The ship's galley can be a very dangerous area. It is on board a moving vessel; there are electric devices and hot water/oil involved & surely flammable materials like oils, etc.

We do not expect the galley people to wear all safety gear but to be vigilant of the dangers. An overall may not be necessary but proper shoes are. Not safety shoes but no slippers either; you may slip with it and the hot spilt liquids can burn your feet. Galley or kitchen gloves should be used for hot object handling.

You need no helmets but proper head-wear for health reasons is required.

Use of a proper mask will be essential while frying food as well as hygiene reasons. Fire precaution & prevention measures & familiarization are surely essential too.

Shahrokh Khodayari Master Mariner MSc Nautical Sciences Maritime Accident Investigator Maritime Management Systems Lead Auditor Maritime Human Elements Analyst Maritime Lecturer (IMLA life-time member)