



Controlling Hazards on board

One of the essential part of Risk assessment is the process of controlling hazards. The hierarchy of control is a sequence of options which offer you a number of ways to approach the hazard control process. Here is a list, with typical examples.

1) Elimination (Hard measure)

Elimination is the process of removing the hazard from the workplace. It is the most effective way to control a risk because the hazard is no longer present.

Elimination is the preferred way to control a hazard and should be used whenever possible.

Example: Introducing mechanical devices to eliminate the manual handling hazard.



2) Substitution (Hard measure)

Substitution is the process whereby a hazardous material or equipment is substituted or the system energy is reduced. The goal, obviously, is to choose a new material that is less hazardous than the original.

When substituting extreme caution needs to be exercised to ensure that one hazard is not being traded for another. Before deciding to replace any material with another, consider all the implications and potential risks of the new material.

Example: Use of non-toxic or less toxic chemicals instead of toxic chemicals while painting an enclosed space



3) Engineering Controls (Hard measure)

Engineering controls are methods that are built into the design of a plant, equipment or process to minimize the hazard. Engineering controls are a very reliable way to control worker exposures as long as the controls are designed, used and maintained properly.

The basic types of engineering controls include process control, enclosure and / or isolation of source, ventilation.

Example: 1. Installing lagging on machinery



2. Installing guards on machines



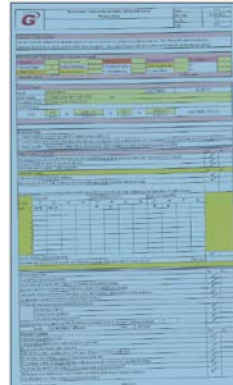
4) Administrative controls (“Soft Measures”)

Administrative controls involve minimising exposure to a risk through the use of procedures or instructions. These control measures have many limitations because the hazard itself is not actually removed or reduced.

Example: Use of tags



Use of work permit



5) Personal Protective Equipment (PPE) (“Soft Measures”)

Equipment worn by individuals to reduce exposure such as contact with chemicals, objects or exposure to noise.

PPE is used as a last resort when exposure to risk is not or cannot be minimised by other means.

PPE is worn by people as a final barrier between themselves and the hazard. This measure does not control the hazard at the source but relies on behaviour modification for its success. The success of this control is dependent on the correct PPE being chosen, worn correctly, used correctly and maintained in good condition.



Application

For controlling risk, consider those at the top of the list, from elimination, and work down to personal protective equipment as the least desirable choice.

