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1. Hazard Checklist

Summary:
A Hazard checklist contains questions or topics intended to prompt consideration of a range of safety issues.

1.1. Hazard Checklist

1.1.1. Description and Purpose

1.1.1.1.

A Hazard checklist contains questions or topics intended to prompt consideration of a range of safety issues. It can also be used in combination with structured hazard identification (HAZID) techniques such as SWIFT and HAZOP.

1.1.1.2.

Checklists can be created from previous risk assessments, and provide an efficient means of generating a list of standard hazards suitable for HAZID of systems at all phases of development.

1.1.1.3.

The checklist should be constructed to address a range of safety issues including presence of hazardous materials or functions, functional performance, interaction with other systems, and personnel safety. If Hazard Analysis or Safety Assessment has already been carried out on a similar system, any available and relevant information should be incorporated into the Checklist.

1.1.2. When It Might be Used

1.1.2.1.

A Hazard Checklist can be used from the earliest stages of a project, although the technique is most readily applied when design information is sufficiently well defined to know what technologies will be used. Generally, Hazard Checklists are better at identifying Physical Hazards (depending on system components and location), than Functional Hazards.

1.1.2.2.

When setting up and using a Hazard Checklist, the following points should be considered:

- A Hazard checklist is useful for most risk assessments, but should not be the only HAZID method, except for standard installations whose hazards have been studied in more detail elsewhere.
- The topics presented in any Hazard Checklist should not be considered to be comprehensive; they are for guidance, and are the minimum that should be considered.
- For greatest benefit, Hazard checklists should be applied in an imaginative way by those with a good understanding of the system design, operation, location, upkeep and interactions.

1.1.3. Advantages, Disadvantages, and Limitations to The Defence Sector or The Particular Domain

1.1.3.1.

Advantages

- Makes use of experience from previous risk assessments.
- Supports rapid and full Hazard Identification of common systems and technologies.
- Helps to prevent past accidents from recurring.
- Promotes standard hazard categories, and facilitates comparison between HAZIDs.
- Can be prepared and applied by a single analyst at low cost.
- Requires minimal information about the installation, and so is suitable for concept design.

1.1.3.2.

Disadvantages

- Limited to previous experience, and thus may not anticipate hazards in novel designs or novel accident scenarios from existing designs.
- Bounded in nature and thus does not encourage imaginative thinking. The technique is therefore often used only as a prompt if ideas are dwindling or as a final review/check at the end of the Hazard identification exercise.

1.1.4. Sources of Additional Information

1.1.4.1.

A list of additional information (e.g., Standards, textbooks, and websites) includes but is not limited to:

- BS EN ISO 12100:2010 - Safety of machinery. General principles for design. Risk assessment and risk reduction [1]
- Generic and domain-specific Hazard Checklists are contained in SMP04 - Preliminary Hazard Identification and Analysis [2]
- AOP-15 Edition 3 [1]

1.2. Version Control

1.2.1. Version 2.3 to 3.0 Uplift

1.2.1.1.

Version 3.0 to 3.1 Uplift

Links within Sources of Additional Information have been updated.

Version 2.3 to 3.0 Uplift

Major uplift from the Acquisition System Guidance (ASG) to online version.

Source URL: https://www.asems.mod.uk/toolkit/hazard-checklist

Links
[1] https://www.asems.mod.uk/ExtReferences
[2] https://www.asems.mod.uk/guidance/posms/smp04