

How Estimation of the Risk and FMEA Interfere?

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Abstract

Risk assessment and management, as technical activities involved in preventing hazards, are key to achieving performance goals. These are critical parts of any project planning and system analysis program. During the Risk Management, the risk estimation step represents the application of quantitative, semi-quantitative or qualitative measures to determine the level of risk associated with a specific hazard. When hazard causes are analyzed, techniques such as FMEA (failure mode effect analysis) and FTA (fault tree analysis) which focus on individual component failure or faulted modes are used. The intend of the paper is to present how the risk estimation and FMEA technique interfere and what need to do for eliminate the confusions and mistakes.

Keywords: Product Safety, Risk Management, Estimation of the Risk, Failure Mode Effect Analysis

References:

- [1] ISO/IEC Guide 73, "Risk management – Vocabulary – Guidelines for use in standards", Geneva, 2002.
- [2] IEC/ISO 31010, "Risk management -- Risk assessment techniques", Geneva, 2009.
- [3] U.S. Air Force Safety Agency, "System Safety Handbook", 2000.
- [4] Loznen S., Bolintineanu C., Swart J., "Electrical Product Compliance and Safety Engineering", Artech House, 2017
- [5] Leveson N., Thomas J., "STPA (System-Theoretic Process Analysis) Handbook", MIT, 2018.