Layer of Protection Analysis/Safety Integrity Level and Metrics Criteria

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Abstract

Key to the application of Layer of Protection Analysis and Safety Integrity Level studies is a method to quantify, validate and measure parameters of such studies. By providing such metrics criteria, our proposed methodology is able to monitor the progress of qualitative hazard studies that require progress to a semi-quantitative level, data which can be extrapolated to determine the percentage of hazard scenarios that would need be escalated to a higher precision study and thus, lead to the use of different teams, time and resources to attain targets. In addition, such metrics will provide an objective account of the work undertaken and hence, the value of work completed. By providing this formalized and systematic approach, our proposed methodology provides a more accurate decision base for organizations willing to make LOPA and SIL part of their risk management toolbox.