Safety Instrumented Systems (SIS) - Critical Aspects, Design, and Verification

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ABSTRACT

Paper will cover key concepts like Events Probability, Severity, Risk and Consequences etc. Guideline Documents / Standards for designing SIS system will be discussed. Further, how we may determine the Appropriate Target SILs for the various SIFs of a SIS will be illustrated using different examples. Method includes agreement on severity and likelihood rankings based on vendor data and past industry experiences and knowledge. This is a subjective decision which can vary from person to person, which translates to the integrity level of the proposed SIS. Sound discussion must be done with right subject matter experts involved to arrive at a practical and logical severity and likelihood rank. Further, SIL Verification and Calculation Methods/ Tools and other concepts will be discussed.