Functional Safety Certification Program

RISKNOWLOGY

TÜV SÜD

Choose certainty.
Add value.

C E R T I F I C A T E

Paparao Uppalapati

Has successfully completed the Functional Safety Certification Program requirements for

Functional Safety Professional

In accordance with
IEC 61508:2010

Date issued:	21-January-2022
ID number:	TS22050582
Field:	Functional Safety Industry
Subject:	Safety-Related Systems





G. Greil
Certifier

Dr. Michel Houtermans
Trainer

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C U R R I C U L U M

- **Functional safety management:**
  Life cycle concept, documentation requirements, verification, validation, assessments and audits, modifications
- **Hazard & Risk Analysis:**
  Hazard identification, hazard analysis, risk reduction, safety function definition using FMECA, FTA, ETA, LOPA, risk matrix, risk graph
- **Planning the safety system:**
  Planning for end users, integrators, and realization of safety systems, safety plan, verification plan, validation plan, safety requirement specification, requirements for suppliers, FAT, SAT
- **Hardware design:**
  Hardware lifecycle, energize vs de-energize, low demand, high demand, demand mode, continuous mode, redundancy, diversity, voting, hardware fault tolerance, safe failure fraction, type A/B, architectural constraints, proof testing, diagnostic tests, measures to avoid and control failures, compliant items, compliance routes
- **Hardware reliability:**
  Reliability modeling, FMEDA, simplified equations, block diagrams, FTA, Markov, failure data, HFT, SFF, DC, CCF, SIL, PFH, PFD
- **Software design:**
  Software lifecycle, embedded software, application software, utility software, fixed programming languages, limited variability languages, full variability languages, software architecture, V-model, measures to avoid failures, compliance routes
- **Operation and maintenance:**
  Installation and commissioning, safety validation, operation, maintenance and repair, modification and retrofit, maintenance override
- **Experience:**
  The holder of this certificate has more than 6 years experience in more than 2 functional safety projects

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