



Add value.
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CERTIFICATE

Rasim Muftiev

Has successfully completed the Functional Safety
Certification Program requirements for

Functional Safety Professional

In accordance with
IEC 61508:2010

Date issued: 22-Nov-2019
ID number: TA19011669
Field: Factory automation
Subject: Functional safety management
Hardware and software design

A handwritten signature in blue ink, appearing to read 'Günse Greil'.

G. Greil
Certifier

A handwritten signature in blue ink, appearing to read 'C. Dirmeier'.

C. Dirmeier
Trainer

CURRICULUM

- **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 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
- **Hardware design:**
Hardware lifecycle, high demand mode, redundancy, diversity, hardware fault tolerance, safe failure fraction, architectural constraints, proof testing, diagnostic tests, measures to avoid and control failures
- **Hardware reliability:**
Reliability modeling, block diagrams, failure data, calculation methods, SIL, PFH, PFD, HFT, SFF, DC, CCF
- **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
- **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