Railway Technology

Independent Safety Assessment (ISA)

Approval bodies are more frequently demanding an idependent examination of the safety-related design of railway systems by an independent third party.

With an Independent Safety Assessment (ISA), TÜV NORD offers a safety orientated and independent testing based on the principle of double checking. The aim is to gain additional certainty that the necessary safety level has been achieved.

Basis for this assessment are the specifications of the European Committee for Electrotechnical Standardization (CENELEC). These specifications differ from traditional verification processes in that they base the safety verification on a probabilistic rather than deterministic safety concept. That means: the safety of a system according to CENELEC is considered sufficient if the risk originating from the system can be reduced to a certain tolerable level by means of defined system-related and organisational measures.

As railway related systems become more complex, traditional methods of verification become more problematic; here the probability-based approach offers significant advantages. For this reason, ISA is not only used within the actual area of application of the CENELEC standards, but in the entire rail sector.

Experts from TÜV NORD have many years of experience in Independent Safety Assessment for rail systems and vehicles. Why not take advantage of the additional benefits of our system-based approach and expertise from one source for questions of railway safety and inspection.

TÜV NORD - Making our world safer.



Independent Safety Assessment (ISA)

Our services

Safety assessments/ISA

- According to CENELEC standards DIN EN 5012x
- According to the Common Safety Method CSM (402/2013)
- According to functional safety IEC 61508
- According to national rules and regulations

Review of formal proofs of safety

- RAMS analyses
- FTA
- FMEA/FMECA
- PHA
- Hazard Log
- Safety management audits
- Auditing of the software development processes

Support with official approvals

- EC conformity
- International approval processes
- EBO, TEIV and VV-IBG
- BOStrab

The benefit to you:

- Protection of people and the environment
- Avoidance of wasted investment
- Safety proofs
- Optimizing of processes
- Higher-level specialist competence of one-source supplier
- Independent inspection according to the current status of national and international requirements

Our expertise:

- Independence and neutrality
- Specialist independent experts with long-standing experience
- Assessors with EBA-recognition
- Accredited inspection body according to DIN EN ISO/ IEC 17020 (DAkkS)
- Notified Body (NoBo)
- Designated Body (DeBo)
- Assessment Body (AsBo)
- Partner of country and municipal authorities (Landeseisenbahnaufsicht (LfB, TAB))
- Associated partner of the German notified body

We look forward to sharing our expertise with you. Why not contact us.

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