INDEPENDENT SAFETY ASSESSMENT FOR RAILWAY SYSTEMS

ASSESS THE SAFETY LEVEL OF YOUR RAILWAY SYSTEM

BUSINESS CHALLENGE

- Any development or modification of a railway system requires the identification and control of safety risks that may be generated by users and operators.
- Therefore the organization in charge of the development or the modification of a railway project (light rail transit, metro, high speed line) has the responsibility to manage safety and must guarantee that project organization and safety activities are compliant with the international standard EN 50126. This requires setting up a safety organization which manages risks during a project's duration and must demonstrate the safety level achieved.

BUREAU VERITAS SOLUTION

- To provide safety insurance to a national safety authority, operators or railway manufacturers can ask for an Independent Safety Assessment (ISA). The Independent Safety Assessment mission provides an authoritative independent opinion on whether or not a project / system will meet its safety requirements. In some countries, this mission is required by the authority.
- Bureau Veritas assesses global transportation systems as well as subsystems according to international railway standards (EN 50126, EN 50128, EN 50129). Bureau Veritas has strong expertise on system and subsystem assessments in order to guarantee an exhaustive and coherent assessment for:
  - Rolling Stock
  - Signalling Command & Control
  - Energy
  - Infrastructure
  - Maintenance
  - Operations

  To guarantee an exhaustive and coherent assessment, the ISA will be on-going throughout every project phase from conception to operation and maintenance. The ISA methodology is based on safety documentation reviews, safety audits and traceability checks.

RELATED SERVICES

- Certification of control-command / signalling systems according to EN 50126, EN50128, EN50128, provided by Bureau Veritas Certification
- "CE" Assessment of subsystems and interoperability components regarding TSI
- National homologation for metro, tramway and mainlines systems (OQA in France, VIS in Italy, ETH in Spain)
- Dubai Metro 2020
- Dakar Express Train (Senegal)
- Interurban Train RER E in Paris
- Paris Metro Line 14 extension
- Konya-Karaman Railway Line (Turkey)
- High Speed Line Roma Napoli and Torino Firenze
- Nagpur metro, Kochi metro, Lucknow metro and Noida metro (India)
- Hanoi metro Line 3
- Ningbo Line 1&2, Wuhan Line 2&4&6, Nanning Line 1, Zhengzhou Line 2, Qingdao Line 2, Lanzhou Line 7, Wuxi Line 2, CHangchun Line 1, XIamen Line 1, Hefei Line 6 (China)

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OUR APPROACH

Bureau Veritas as a Safety Assessor analyzes safety data and provides an appraisal of the system safety level. The safety assessment activities are organized as follows:

Assessment Plan
Issuance of the Assessment Plan

Documentation Review
Project Plans, Safety Process, Hazard Analysis, Safety Case

Safety Audits
Safety Audits to Check Process Implementation

Delivery of Certification
Safety Certificate Delivery upon Satisfactory Results Related to Assessment Phase

FAQ

WHY DO PROJECTS NEEDS ISA?

Independent Safety Assessment (ISA) is a tool for projects to ensure that a new or modified system is specified and implemented correctly and is ensuring its safety function.

ISA acts as an independent entity for the project and safety engineering team. By leading the assessment activities, ISA attests to correctly managed safety risks and assures safety authorities of its system operations.

DURING WHAT PART OF THE PROJECT IS ISA INVOLVED?

The ISA must begin at the start of the project. The earlier the ISA is involved, the better the safety

assessment activities will be planned. At the beginning of the mission, the ISA produces a safety

assessment plan which indicates the key milestones of the assessment to ensure completion on time.

WHY CHOOSE **BUREAU VERITAS SERVICES?**

RECOGNITION

Bureau Veritas is recognized as a Safety Assessor by the national railway authorities in several countries.

Bureau Veritas is recognized worldwide as a symbol of your organization's ongoing commitment to excellence, sustainability and reliability.

EXPERIENCE

Our experience is recognized by the main actors of the railway industry. We are known for:

- Expertise of control-command / signalling (CBTC, ATP, ATO, ETCS, ERTMS, Interlocking)*
- Experts with strong competencies in global system transport, infrastructure, signalling, rolling stock and energy
- Over 20 years of experience in safety assessment of railway systems

Additionally, Bureau Veritas is accredited for safety assessments of guided urban transport, conventional and high speed networks.

*CBTC (Communication Based Train Control), ATP (Automatic Train Protection), ATO (Automatic Train Operation), ETCS (European Train Control System), ERTMS (European Rail Traffic Management System)

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