

QUANTITATIVE RISK ASSESSMENT (QRA) EXPERTS




DEKRA India Private Limited is a group company of DEKRA SE. DEKRA is one of the world's leading professional safety firms, headquartered in Stuttgart, Germany. With over 50,000 employees in 50 countries, DEKRA has been active in the field of safety since 1925.

Job Overview

DEKRA India Private Limited is looking for a **Quantitative Risk Assessment Expert** having **10+ years** of experience in process safety, risk and reliability for the role to be in India.

This role requires a safety, reliability, and risk management specialist who will contribute to the development of process safety excellence in India, manage projects and relationships with the existing and potential clientele.

As a leading technical specialist, he will be responsible to perform/guide risk assessments and reliability studies and conduct risk management training. As a project manager with sound commercial awareness, he will be required to manage the delivery of projects by efficient utilization of time, quality and cost. He will also be responsible for DEKRA-India's growth by constantly seeking new opportunities and furthering the existing client relations.

 **Location: Mumbai, India**  **Type: Full-time** |  **Experience: 10+ Years**

Join Our Team of Safety Experts!

Seeking a highly experienced **Quantitative Risk Assessment (QRA) Expert** to lead complex risk studies, develop advanced models, and provide strategic risk insights across projects and operations. The ideal candidate will have over **10 years of experience** in quantitative risk analysis within high-hazard industries such as oil & gas, petrochemicals, energy, chemical, Pharma processing. Preferred candidate who has performed more than **50 number** of **QRA, Facility Siting, FERA & OBRA** studies. The role involves in-depth hazard identification, consequence modelling, frequency estimation, and risk quantification, using state-of-the-art software tools and methodologies. This individual will play a pivotal role in ensuring compliance with international safety standards and guiding decision-making through quantitative insights.

Key Responsibilities

- Lead and conduct process safety studies for greenfield and brownfield projects in Oil & Gas, Refinery, Chemical, Petrochemical, Pharma & etc sectors.
- Lead and develop Quantitative Risk Assessments (QRA). Facility Siting, OBRA, FERA Studies for greenfield and brownfield projects.
- Lead and execute high-quality QRA studies (e.g., facility siting, land use planning, risk to personnel).
- Develop and validate risk models including event trees, fault trees, consequence modelling, and frequency estimation.
- Perform fire, explosion, toxic dispersion, and BLEVE modelling using tools such as PHAST, SAFETI, or equivalent.
- Interpret and present risk results in the form of FN-curves, risk contours, individual and societal risk metrics.
- Ensure compliance with international standards (e.g., IEC 61508/61511, API 580/581, ISO 31000) and regulatory requirements.
- Conduct Hazard Identification (HAZID), HAZOP, LOPA, and integrate outputs into QRA

models.

- Develop and implement risk mitigation strategies and provide actionable recommendations to stakeholders.
 - Support major projects in decision-making, risk communication, and design optimization.
 - Review and approve technical documentation and QRA deliverables from consultants or junior staff.
 - Perform the other safety studies like PHA analysis, PSM implementation, DHA Studies will be added advantage.
 - Mentor and provide technical leadership to risk and safety analysts and engineers.
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Qualifications & Skills

- Bachelor's or master's degree in Chemical Engineering, Process Engineering, Risk Engineering, or a related discipline.
 - **10+ years of experience in Quantitative Risk Assessment and process safety.**
 - Proven expertise in:
 - QRA tools: DNV PHAST, SAFETI
 - Deep understanding of risk analysis methods, consequence and frequency modelling, and industry-standard tools (e.g., DNV GL PHAST/SAFETI, Shell FRED, FLACS, @Risk, BowTieXP).
 - Proven track record in high-hazard industries (Oil & Gas, Refinery, Chemical, LNG, Chemical & Pharma sector, etc.).
 - Strong grasp of probabilistic risk assessment, uncertainty analysis, and risk criteria frameworks.
 - Experience working with multidisciplinary teams, contractors, and regulatory bodies.
 - Excellent communication, report writing, and presentation skills.
 - Certification in relevant areas (e.g., TÜV Functional Safety, CFSE, PMP, PE) is a plus.
 - Strong knowledge of relevant international standards and regulatory guidelines.
 - Excellent English communication skills (written and verbal).
 - Strong interpersonal, presentation, and problem-solving abilities.
 - Willingness to travel based on project or client needs.
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What We Offer

- Competitive salary and comprehensive benefits.
- Exposure to high-impact international safety projects.
- Continuous learning and professional development opportunities.
- A collaborative, knowledge-driven, and supportive work environment.

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