Bureau Veritas
Services

BUREAU VERITAS
Move Forward with Confidence

Design Review

Providing confidence that your design achieves best practice standards

BUSINESS CHALLENGE

Oil and gas industry operators need to have high levels of confidence that their facilities will operate as intended. If lifetime costs are to be minimized, problems must be identified and eliminated from the design.
Owners want facilities to be built to standards that have been proven by the experience of industry, and meet their own exacting requirements for operational, safety and environmental performance.

SOLUTION

What is Design Review?
Design review is an independent review of the design intent of an engineered system or process, as defined by documented standards. The scope of review will normally include structures, vessels, pipelines, and safety systems. The review process also aims to identify errors or failures in the design (or operation) of the engineered systems and processes.
Bureau Veritas Technical Centres provide two types of systematic design review according the needs of clients – either a 100% appraisal of the design against relevant design standards, or a verification (sampling) review against standards defined by the facility operator. The latter is based on the goal-setting approach which originates with UK safety case regulations and verification against DCR and PFEER.

What are the key benefits?
The review provides confidence that your asset design is compliant with well-proven standards, and guidelines that draw on the best-practice experience of the oil & gas industry. Where design review is required by regulation, a certificate is provided as evidence of compliance. By confirming that the design is based on best practice standards, the review also contributes to demonstrations that risks are ALARP (as low as reasonably practicable).

WHY CHOOSE BUREAU VERITAS ?

- Our Technical Centres for design review services are established in strategically important oil and gas locations worldwide. Bureau Veritas is recognized as an industry leader in design review.
- Our teams have high levels of technical competence with monitoring and assessment that is open to scrutiny. The international network of Technical Centres share knowledge and experience to ensure that the right specialist advice is always available.
- The service is also supported by a secure online management information system (BVnet) which allows clients to monitor the status of the review in real time.

RELATED SERVICES

- Independent Review Certificates (IRC)
- Certificate of Conformity (COC)
- Safety audit
- Safety Critical Elements & Performance Standards development
- Operational Verification
- IEC 61511 and ATEX consultancy
- Fire and explosion modeling
- Spill and dispersion modeling
- Fire systems basis of design consultancy

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OUR APPROACH

Specialist engineers in Bureau Veritas' Technical Centres assess all safety aspects of the plant design and check the compliance with international standards requirements. The design appraisal is performed through a review of the design documents prepared by the designer or manufacturer – drawings, calculations notes, specification and functional diagrams, special survey etc.

The review will include independent analysis including checks on design calculations, detailed inspections of drawings and specifications.

FAQ

What is the difference between a 100% design appraisal and the newer verification approach?
A full design appraisal involves review against standards such as API, ASME, NACE etc. and will normally be followed by issue of a certificate of conformity. The verification approach comes from the goal-setting approach to safety management. It involves review of "safety critical elements" and "performance standards" which have been defined by the owner / operator. Successful design verification is marked by the issue of a statement of "initial suitability".

CASE STUDY

Bureau Veritas is providing design review services to BG Tunisia for its Hasdrubal Project in the Mediterranean Gulf of Gabes. The project includes a Normally Unmanned Installation (NUI) connected by 110km of pipeline to new receiving installation on the coast of Tunisia south of Sfax.

BG Tunisia is following the design review "verification" process, which is now recognised by many international operators as best practice within oil industry. Bureau Veritas' experience in its worldwide network of Technical Centres confirms the global trend towards adoption of the goal-setting philosophy.

BG Tunisia's approach is not driven by regulations. Instead they require these third party checks for their own assurance. The design verification process provides confidence that all safety critical elements are correctly designed.

CONTACT

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