Bureau Veritas
Services

BUREAU VERITAS
Move Forward with Confidence

Hazard & Operability Study (HAZOP)

A powerful tool for identifying the causes of undesirable plant conditions

BUSINESS CHALLENGE

Most industrial licensing authorities and insurance companies require operating companies to carry out hazard studies and risk assessments during a facility design, as well as prior to construction and during operation.
The authorities require that the hazard studies be recorded and acted-upon, and that they be subject to management audit and approval.

SOLUTION

What is HAZOP?
HAZOP study is well-proven structured team-based method for hazard identification at process design completion or for planned modifications. The technique makes detailed examination of the process and engineering intention of new or existing facilities to assess the hazard potential of operation outside the design intention, or malfunction of individual items of equipment and their consequential effects on the facility as a whole.
HAZOP is led by an experienced facilitator. For an oil & gas project, a core team would typically include personnel from Process, Instruments, Machines, Project Engineering, and Operations, and it might require the involvement of process technologists, environmental specialists and corporate Health & Safety and Environment (HSE) staff for some parts of the work.

What are the key benefits?
Comprehensive hazard identification is the cornerstone of effective risk management since if a hazard has not been identified then measures can not be put in place to mitigate the risk. A hazard that has been overlooked can have a significant impact on the overall success of the venture. An effective HAZOP provides the most penetrating design review, covering safety, environment, operations, and maintenance.

HAZOP ensures that:
- Potential deviations from intended design function are identified and corrected;
- HSE process and equipment hazards are revealed;
- Actions for necessary process or instrumentation improvements can planned;
- Action responses are auditable by Managements and Legislative Inspectorates.

WHY CHOOSE BUREAU VERITAS ?

Bureau Veritas has planned, managed, delivered, and reported hundreds of HAZOP studies throughout the world. In many cases these have then been followed by response tracking and response validation, to help ensure that the project is sufficiently acceptable for design completion, procurement, and construction.

Bureau Veritas also has experience in providing personnel to participate in HAZOP studies as engineer or HSE specialist when that is appropriate to the client or designer.

RELATED SERVICES

- HAZID & Process Hazard Analysis
- OPEX hazard review
- Safety Related Systems
- Fire and explosion assessment
- Hazardous Area Classification (ATEX)
- Firewater systems design review
- Noise, BAT, & EIA studies
- Safety case services
- Emergency preparedness, ESSA

Move Forward with Confidence

OUR APPROACH

Bureau Veritas believes that hazard study is an integral part of the design of oil & gas facilities.

Bureau Veritas offers hazard study leadership services across all phases of plant design, from feasibility and FEED, to detailed design, and to construction and commissioning. Bureau Veritas often takes full responsibility for HAZOP study recording and reporting, so that administrative burdens on designer and client personnel are minimized.

Bureau Veritas also offers attendance at designer/ client project meetings, so that an overview of all HSE issues is available at the meetings, and so that timely advice can be sourced when specialist hazard information may be needed.

FAQ

How long does a HAZOP study take?
For the installation of an oil & gas unit on an existing site, each P&ID (piping & instrumentation diagram) might take 5 or 6 hours to study. For the installation of a major new unit on an existing refinery or of the topsides on an offshore platform, 6 to 8 weeks may be required.

Can you advise us what types of hazard study and risk assessment are required for our project and our location?
Yes, we can advise on legislative requirements, legislative changes, and good practice compliance in most parts of the world.

CLIENT REFERENCES

Bureau Veritas HAZOP studies

- ADMA OPCO – flare modifications (FEED)
- ADMA OPCO – gas processing facilities
- AGIP – design appraisal of offshore development
- BG Exploration – offshore platform FEED
- CNOOC – wellhead platform and pipeline
- Dragon Oil – upgrade of production (FEED)
- KFELS – Human HAZOP for jack up rig
- NAFTEC – entire refinery
- NDC – drilling rig operations
- Petrobras – gas compression stations
- Technip – oil storage and transfer terminal
- Tenaga National – dual fuel power turbine plant
- ZADCO – dehydration facilities

CONTACT

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FOR MORE INFORMATION

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