Buisier Engineering conducts fire suppresion systems appraisal, design and engineering for the oil and gas industry according to latest NFPA and Industry Standards.

Design of Fire Suppression Systems in Oil & Gas Fields

Flammable and combustible fluids and gases found in oil and gas fields present a fire hazard which could potential destruct the facilities assets, pollute the environment and endanger lives. Buisier Engineering conducts fire suppression systems appraisal, design and engineering for the oil and gas industry. To prevent fire from happening and extinguish said fire when it occurs the facility must be protected with a fire suppression system. A fire suppression system consists of the following equipment.

•Monitoring and Alarm System which alerts the work force in case of fire, consists of heat and flame detectors, gas and vapor sensors, and alarm control panel.

•Water based Fire Suppression System which includes a water source, water storage system, pumps, piping, foam tanks and proportioners, fixed delivery systems such as manifolds, sprinklers, foam chambers, monitors and mobile delivery systems for foam and cooling water such as mobile pumps and monitors.

•None-water based fire suppression system that includes dry chemical agents, CO2, and other none-aqueous firefighting material.

•Dykes and drainage systems for purging water and foam used in a fire event.

The design of fire suppression systems for Oil & Gas fields, which is conducted according to NFPA standards, progresses in the following manner:

•Identification of fire zones in the field where fire can break out.

•Characterizing each zone, type of hazardous material, liquid or gas, flash point, quantity, storage vessel size, storage pressure and distance from water source.

•Assuming Fire Scenarios for each zone, calculating the required foam and cooling water for each zone according to NFPA standards.

•The Fire Zone with the highest required quantities of Foam and cooling water is considered as the worst-case fire scenario (WCFS).

•The quantities required for the (WCFS) will be considered the design base for the storage, pumping and delivery systems for the field.

•Water source, storage tank design, pumping, piping and application equipment of foam and cooling water are designed.

•Civil, mechanical, electrical, control and environmental aspects are accomplished to complement the design package.

•Construction progression is configured for the contractor, to keep fire suppression capabilitiesready for functioning during the construction period, while hazardous classification of the site will prevent fire because of the construction work.

For more information about our Inspection & Testing Services
Please email us at info@buisiereng.com