# Fall Hazards and Fall Protection Oil and Gas

## WHAT'S AT STAKE?

The oil and gas industry continue to advance as engineers and safety professionals are able to produce creative and ergonomic ways to access oil and gas reserves. As the oil and gas industry continues to expand, keeping oil and gas workers safe is the top priority.

## WHAT'S THE DANGER?

Oil and gas Workers are mentally touch but the **oil and gas industry** is very dangerous because workers are often exposed to chemical, physical, and biological hazards, such as toxics, extreme temperatures, and bacteria. Workers are also exposed to contact injuries, fires and explosions, falls, and confined space issues.

Few industries require more fall protection equipment than the **oil and gas industry**. In North America, between 2003 and 2013, more than 1,100 workers in the **oil and gas sector** were killed in workplace accidents, which is an average of more than a hundred deaths a year.

**Specific Dangerous Work**

The work accomplished on an **oil rig** is considered one of the most at risk in the industry. The workers put in long hours and perform dangerous tasks in harsh environments. Regularly, the workers must climb a derrick ladder to access different areas of the rig. Consequently, many workers climb up to altitudes that are often 100 feet high, numerous times a day. The ladder may be greasy, icy or extremely narrow, which can lead to a fall. Ladders are often offset, forcing workers to switch from one fixed ladder to another. This transition may pose challenges to fall protection

systems as workers must be protected the entire time.

**More Risk to Fall Protection System**

Prolonged exposure to materials found in petrochemical plants may cause important health and safety risks to maintenance personnel.

Due to the corrosive effects of salt, and the constant motion of an oil rig at sea, the fall protection systems are subject to corrosive and caustic substances. The durability of materials is a crucial consideration during system design. The anti-spark synthetic cable systems are often required in petrochemical applications to minimize the risks of sparks and accidental explosions.

**Specific Fall Hazards in the Oil and Gas Industry**

- Climbing the derrick ladder.
- Transitioning from the derrick ladder to the derrick.
- Swing fall
- Inclement weather.
- Entanglement of the SRL in moving machinery parts.
- Adequate fall clearance for low applications, such as pipe racks.
- Specialized fall arrest equipment, such as for welding.
- Environmental challenges, such as poor lighting and greasy pipes.
- Hindered movement due to tight spaces.
- Often entering dangerous, complicated areas not accessed frequently.
- Entrapment hazards.

# HOW TO PROTECT YOURSELF

OSHA takes the lead in requiring employers to provide the following in the workplace.

- Provide working conditions that are free of known dangers.
- Keep floors in work areas in a clean and sanitary condition.
- Select and provide required personal protective equipment at

no cost to workers.
- Train workers about job hazards in a language that they can understand.

**The standard fall protection system in the oil and gas industry should consist of:**

- a self-retracting lanyard (SRL).
- secondary protection with another SRL attached to a different anchor point.
- an oil and gas specific full-body harness.
- descent devices to provide a quick, safe escape for emergencies.
- trauma relief straps for post-fall arrest.

**Fall Protection Training – Three Levels**

Because of the dangerous nature of the oil and gas industry, proper fall protection training is very important. There are three basic levels of training: **competent person, qualified person, and authorized person.** OSHA defines a **competent** person as "one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them." Every team leader, rescue team leader, and day-to-day supervisor should be certified as a competent person because they must ensure that workers are following the proper fall protection procedures.

OSHA defines a **qualified person** as "one who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his ability to solve or resolve problems relating to the subject matter, the work, or the project." The qualified person should understand all fall protection standards, equipment, and systems used at the workplace. The qualified person's main responsibilities include supervising the design, selection, installation, and inspection of certified anchorages and lifelines and participating in accident investigations.

OSHA defines an **authorized person** as "a person approved or

assigned by the employer to perform a specific type of duty or duties or to be at a specific location or locations at the jobsite.” Authorized person certification is the basic level of fall protection training that every oil and gas worker must have if they work at height. Certified authorized persons should be taught how to recognize and eliminate or control fall hazards, how to use written fall protection procedures, and how to understand and follow fall protection regulations, employee roles and responsibilities under these regulations, and post-fall rescue procedures. Through proper training and proper use of equipment, oil and gas hazards can be avoided and conquered, and more importantly, oil and gas workers can be kept safe.

## FINAL WORD

When employees are working on derricks, make sure they are tied off properly. Train them on the hazards of the job. Train them how to use the fall protection equipment. Train them never to take risks when it comes to fall protection safety.