

SAFETY MEETING TOPIC

This form shall be completed and kept on file

Job Name _____ Location _____ Job No. _____
Meeting Leader _____ Title _____
Date Held _____ Place _____ Time _____
Subject of Meeting PERSONAL FALL ARREST SYSTEMS

SAFETY NETS

When working from an elevated location you must be protected from falling. This can be accomplished through the use of guardrails, Personal Fall Arrest Systems (PFAS) or other barriers. If a PFAS is used, you must know how to use it properly.

A PFAS is used to limit free fall to 6 feet. It consists of an anchorage, connectors, a body harness, lanyard, deceleration device, lifeline, or combinations of these. The straps of the body harness are worn around the thighs, pelvis, waist, chest and shoulders to distribute the force of a fall and reduce the potential for injury. Do not use the body belt as a PFAS. It can only be used as a positioning device. The purpose of a positioning device is to hold you in place while you work on a vertical surface. It must limit a fall to two feet. The D-ring of the harness should be located on your back for connection to a lanyard. The lanyard is a flexible line of rope, wire rope, or strap. It may contain or be connected to a deceleration device. A deceleration device is a mechanism which slows your fall reducing the force on your body. During the arresting of a fall, a lanyard will stretch. The additional stopping distance caused by a deceleration device or stretching of the lanyard may be very significant. Check the total distance with the vendor.

The lanyard/deceleration device is connected to a lifeline or directly to an anchorage point. There are two types of lifelines. A vertical lifeline consists of a rope or cable for connection to an anchorage point. Each employee must have a separate vertical lifeline. A horizontal lifeline stretches between two anchorage points and serves as an anchorage for one or more lanyards or vertical lines.

Always make sure the PFAS is suited to the work environment. The presence of acids, dirt, moisture, oil, etc., and their effect on the system, should be evaluated. Protect systems from damage which may be caused by work operations such as chemical cleaning and sandblasting. Hot or cold environments may also have an affect on the system. Wire rope should not be used where an electrical hazard may be present.

Inspect a PFAS before use. Check for distorted hooks or faulty hook springs, tongues, unfitted to the shoulder buckles, loose or damaged mountings; non-functioning parts; or wearing or internal deterioration in the ropes. Any part which has been altered, damaged or has other wear, such as cuts, tears, abrasions, mold, or undue stretching is defective. Defective systems must be tagged "Do Not Use," or destroyed. PFASs that have been subjected to a fall must be removed from service.

Never mix parts or different systems. Not all parts are compatible. Any substitutions or changes to a PFAS should be fully evaluated by a competent person.

Use an appropriate anchorage point. This is one of the most important aspects of a PFAS. Anchorage points must not deflect greater than 0.04 inches when a force of 2,250 pounds is applied. The following are anchorage points which may be used. Anchorage points purposely built into the structure which was designed by a registered professional engineer or other qualified person. Steel members or I-beams may be used if an acceptable strap is available for the connection (a lanyard with a snap hook clipped onto itself may NOT be used). Guardrails or railings may be used if they have been designed for use as an anchor point. Masonry or wood railings may be used if they have been designed for use as an anchor point. Masonry or wood members can only be used if the attachment point is substantial and precautions have been taken to assure that bolts or other connectors will not pull through. All anchor points should be checked by a qualified person and must meet OSHA standards.

Use care when tying off. A knot in a rope lanyard or lifeline can reduce the strength of the system by 50% or more. When placed around an "H" or "I" beam, its strength may be reduced as much as 70%. Use material which provides the proper protection such as a webbing lanyard or wire core lifeline. The angle of attachment to a horizontal lifeline can also reduce the strength. A sag line of 15 degrees, changes the force to about 2:1. At 5 degrees, it is about 6:1. Horizontal lifeline systems must be designed by qualified persons.

A final consideration is the location of the tie-off. Think of the path of a potential fall. Consider the hazards of obstructions. Use a tie-off which reduces or eliminates swinging.

If a fall does occur, rescue should begin as soon as possible. Injuries may have occurred. If an individual is suspended for a period of time, other injuries may occur from the restriction of blood flow to the body caused by the harness. Become familiar with all rescue procedures.