Understanding Rope Access

Despite its excellent safety record, rope access is often perceived as a dangerous or extreme activity, even by professionals in the work at height industry. While certainly technical in nature, rope access can better be understood as an intuitive and logical approach to work at height safety.

Limited free fall potential and the rope access backup system

If offered the choice between accidentally falling or not falling at all, which would you choose? What if the choice was between accidently falling a greater or lesser distance?

This simple rhetorical exercise illustrates an important, obvious truth. When working at height, if faced with the potential to fall, a fall protection system should be implemented that minimizes that potential to as small a distance as possible. The importance of this concept is defined by the term ***limited free fall potential***, which is integral in SPRAT's definition of rope access and the ***backup system*** requirements and recommendations found in SPRAT's *Safe Practices for Rope Access Work*.

Shorter free fall distances lead to reduced risk of injury, as the resulting force and clearance distance involved in stopping the fall are both reduced. With the reduction of these risks, the potential for self-rescue from a fall event is increased. ***Anchorage system*** strength requirements are also reduced, thus further increasing options to implement a ***backup system*** with ***limited free fall potential***.

Pairing the rope access main system with the backup system

While accessing some locations with only a ***backup system*** may at times be warranted, any free fall potential still presents some risk. Many surfaces and structures expose a worker to an increased likelihood of error while moving at height.

The ***main system*** in rope access complements the ***backup system*** by providing the safety of a hands-free work positioning system, historically only used when a worker arrives at their work location, and extends that functionality while accessing and leaving the work location. In some work environments, suitable structures to climb are frequently unavailable.

The completed ***rope access system*** allows accessing work locations that are frequently unavailable via other means. The ***rope systems*** used to make both the ***main*** and ***backup systems*** are interchangeable, further increasing the versatility of a ***rope access system***. Multiple pairs of ***main*** and ***backup systems*** may be employed to provide for horizontal movement and positioning, thus extending the ability of a worker to access locations in all directions, all while being protected from any fall or pendulum event.

The importance of training and a certification

As work at height environments are highly variable, where even one location may present different hazards on a daily basis, a team of workers equipped with a knowledge base and skill set to safely adapt ***rope access systems*** to a changing work environment is better suited to safely complete their work more efficiently and to perform the ***rescue*** of a co-worker, should the need arise.

Becoming proficient in the application of ***rope access systems*** is an undertaking that requires competent training and mentorship. Training is the solution for proper implementation of fall protection systems and for preventing foreseeable misuse of equipment. While consensus standards assist in this process, there is no substitution for the knowledge of the worker, verified via a consistent set of performance-based criteria.

SPRAT's *Certification Requirements for Rope Access Work* provides a baseline of theoretical knowledge and a practical skill set for a worker to become a ***rope access technician***. The standard prescribes a three-tiered certification system with a framework for verifying these requirements on a periodic basis, providing a pathway to demonstrate more advanced knowledge and skills as experience is gained with this work method.

The sum of the parts and the rope access program

When the ***limited free fall potential*** of the ***backup system***, the versatility added by the ***main system***, and the high training and performance benchmark required of a ***rope access technician*** are all combined with the pre-job planning, provision for prompt rescue, and work site supervision requirements of the rope access program in SPRAT's *Safe Practices for Rope Access Work*, the end result is a safe, efficient work method adaptable to most work at height environments that reduces the overall exposure to risks associated with working at height.

SPRAT Public Documentation