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breaking strength of web slings. Polyester web slings lost up to 30% of their strength during the first 12 months of exposure, after which the strength loss leveled off. Nylon web slings showed a strength loss of up to 50%-60% after 36 months of exposure with no indication of leveling off. This report is available for purchase at www.wstda.com. The important question is this: Should web slings be given a maximum life expectancy like the 5 year shelf life of synthetic fall protection gear?

The other most common synthetic sling is called a roundsling. These products have a strength bearing core inside a protective cover or jacket. It has always been assumed that the roundsling cover, no matter the thickness or color, protected the load bearing core from UV degradation. Only recently has it been discovered that there is a wide variance in the UV protection levels provided by different roundsling covers. Testing has found that while some covers provide adequate protection, others do not. Since ultraviolet



Fast® Inspection System, US Patent #7,661,737. Foreign Patents Pending

light can cause loss of strength to synthetic fibers and is essentially hidden damage similar to the corrosion of steel, the inspector needs education to recognize the issues involved.

The following chart displays test results of UV degradation to varying roundsling cores and covers used by riggers around the world. This testing was requested by Slingmax® Rigging Solutions and conducted independently by Murdock Webbing Company in the United States and DSM in The Netherlands. Murdock Webbing performed UV testing and residual strength testing was done by DSM Dyneema®. Despite being much more expensive than our initial “flashlight testing,” it shows the same basic results. The field test of any cover may be quite simple. If you hold a flashlight against the cover and do not see light shining through the other side, it’s a good sign.

A study of the above chart shows the vast difference in the protection afforded by various types of roundsling covers. The dark green Covermax® is much thicker than other roundsling covers and therefore, the loss of the sling’s core strength is negligible. Roundslings protected by the thinner lighter colored covers lost the most core strength.

The next question is this: Is there a mechanical way to determine “hidden” UV damage in a roundsling? The answer is yes! On February 16, 2010 the United States issued a patent to Slingmax® Rigging Solutions (US #7,661,737) for a pre-failure warning indication system for all roundslings.

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