

Method of Determining Strength Retention in Chemical Environments

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The SLINGMAX® catalog has information on the chemical tolerances of the fibers used in Twin-Path® slings. The Environmental Considerations section of the catalog contains the results of tests done by the manufacturers of the fibers. But if there is an inquiry about a chemical not listed in the catalog, how can the strength retention of a Twin-Path® sling be determined?

One easy method is to provide the end user with a small Twin-Path® sling, typically a TPXC 1000 x 3' to place in the environment under the same loading conditions as the rest of the rigging. After a mutually agreed time period, the sling will be returned to the dealer for a break test. The results of the break test will be shared with the end user and with the SLINGMAX® office.

SLINGMAX® has requested such information from the fiber manufacturers but the response is generally that they cannot do testing on all temperatures and/or concentrations of acids. Therefore the responses from the manufacturers are educated guesses.

EXAMPLE:

A refinery maintenance called a SLINGMAX® dealer to ask if his Twin-Path® slings would be okay remaining connected to a large piece of equipment "in almost boiling diesel fuel for 24 hours" to degrease it. That chemical environment is not covered in the catalog information.

The maintenance manager received a TPXC 1000 x 3' from the dealer at no charge. The list price on this sling (year 2002) is \$71.04. The manufactured cost of the sling is a small price to pay for the additional knowledge gained from the testing after the sling is exposed to the degreasing conditions.

The refinery manager noted that the sling was submerged for 24 hours in 190° F diesel fuel. It was not loaded because the slings lifting the equipment were not loaded during the cleaning. The sling was an oily mess when it was returned to the dealer. Initially a proof test was done and the sling passed. Then the sling sat unused for four months because in the refinery, the slings are used infrequently.

The break test showed that the sling had not lost any strength. After that, the customer knew that he could lift the equipment with his Twin-Path® slings and leave them attached during the cleaning process, thus saving him time and manpower for the job.

The information was transmitted to SLINGMAX® and is shared with all dealers.