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NEW IPSWICH – When the Apollo 11 astronauts returned to Earth in 1969, after becoming the first men to ever land on the moon, the reentry parachutes and recovery floats chosen by NASA to ensure their safety, was developed by Warwick Mills.

Since that time, the 121-year-old local textile company has been so instrumental in providing NASA state-of-the-art woven textiles, that it was recently featured in NASA's Spinoff Magazine.

"It's a very prestigious thing," said John Cronin, Public Safety Equipment Program Manager for Warwick Mills. "Not every one gets listed in NASA's Spinoff Magazine."

According to Cronin, after Warwick Mills created the special textile that helped the Apollo 11 astronauts land safely, the company started investing in engineering services that would advance existing textile materials.

By the time NASA was ready to launch the Mars Pathfinder in 1997, Warwick Mills had developed a lightweight, flexible fabric that not only could maintain inflation but could also safely enter the hot Mars atmosphere without disintegrating.

Cronin said that the fabric eventually became airbags that ensured the Mars Pathfinder a cushioned landing. "These bags had to have a high level of cut resistance, said Cronin, because the Mars surface is both jagged and rocky.

For the next six years, Cronin said, NASA took a different direction in researching the best way for spacecraft to safely land on a planet. "They tried rockets to slowdown the [spacecraft] before it landed," said Cronin, but that proved dangerous. "They had a miscalculation and crashed. It cost millions of dollars," he said. "After that, they came back to us," said Cronin.

A special test on the fabric, conducted by NASA prior to the 2004 Mars Exploration Rovers, helped seal the deal. "You need to test the crash bags before they go to Mars," said Cronin. "As part of the testing, they had this enormous enclosed structure filled with jagged rocks."

Cronin said the purpose of the enclosed structure was to simulate the gravity within the Mars atmosphere. "They dropped this bag into the simulated martian surface to see if it was able to sustain the impact. They had these lights that take a long time to heat up and cool down," said Cronin. When the fabric evaluators left the test site, Cronin said they didn't turn off the lights. "The lights got incredibly hot and shattered the glass and landed on the test surface," said Cronin, but the fabric remained unaffected.

The test convinced NASA that the fabric developed by Warwick Mills was durable enough to withstand entering the Mars atmosphere, and reentering outer space.

The test also convinced Warwick Mills that the fabric they had developed could be used for manufacturing other items that needed to be tear and puncture proof, such as body armor. "We've been able to successfully transition the best performance features from the crash bags into life-saving equipment for police, corrections and military personnel," said Cronin, and all because the company decided to revolutionize the woven fabric it's been making since 1888.