



INTERNATIONAL ASSOCIATION OF FIRE FIGHTERS

## NEWS from Fire Fighters

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# IAFF and DHS Select MSA to Build Next-Generation SCBA Prototype

## New Pressure-Vessel Technology of SCBA Will Increase Fire Fighter Safety

*Washington, DC* – The International Association of Fire Fighters (IAFF), under contracts with the U.S. Department of Homeland Security, has selected global safety equipment manufacturer MSA (NYSE: MSA) to build a prototype of a new self-contained breathing apparatus (SCBA).

The IAFF's next-generation SCBA prototype will rely on pressure-vessel technology, which promises to make fire fighting breathing apparatuses smaller, lighter and more efficient than SCBA currently in use. MSA, based in Pittsburgh, Pa., was selected to build the prototype after an extensive solicitation process.

“This is one of the most significant health and safety projects the IAFF has ever undertaken because this new SCBA technology will do more to protect the lives of fire fighters,” IAFF General President Harold A. Schaitberger said.

The IAFF received more than \$2.7 million from the Department of Homeland Security's Science and Technology Directorate (DHS) to fund research and development of a next-generation SCBA. A fully-functional prototype SCBA that incorporates the new pressure-vessel technology is to be field tested in fire and law enforcement departments later this year.

Development of a prototype SCBA by MSA is expected to demonstrate the superiority of new pressure-vessel technology that would replace the single air cylinder design of conventional fire fighting breathing apparatuses. As part of its development efforts, the IAFF and DHS Science and Technology Directorate worked with Vulcore Industrial LLC to create the new pressure-vessel technology to make SCBA lighter with a greatly reduced profile when compared to current SCBA cylinders.

The new technology, referred to as a “flat pack,” uses a special high-temperature lining in place of conventional aluminum liners used in current SCBA cylinders. These linings are then braided with Kevlar and wound with pre-impregnated carbon fiber. The entire array is inside a soft, flexible cover, allowing the design to flex horizontally and vertically at the connection points.

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“This is certainly an exciting endeavor for all of us at MSA,” said William Lambert, MSA president and CEO. “The IAFF has long been an advocate and leader in the effort to advance fire fighter health and safety, and now MSA has the unique opportunity to help support this mission in a very direct way. Needless to say, the opportunity to be involved in the development of revolutionary new SCBA technology – at a ground level with the IAFF – is a partnership of which we are most proud to be associated.”

This first phase of this research and development effort involved extensive testing to support a request for a special permit from the U. S. Department of Transportation to gain clearance to use the technology in SCBA. Approval from the Transportation Department is expected within the next two months, enabling field testing of an SCBA prototype. The timeline for fire service availability is currently under development due to the need for cooperation from the many industry entities instrumental to the commercialization of this revolutionary technology.

*The International Association of Fire Fighters, headquartered in Washington, DC, is the leading advocate in North America for the safety and training of fire fighters and paramedics. The IAFF represents more than 296,000 full-time professional fire fighters and paramedics who protect communities in every state in the United States and throughout Canada. More information is available at [www.iaff.org](http://www.iaff.org)*

*The Science and Technology (S&T) Directorate is the primary research and development arm of the U.S. Department of Homeland Security. The S&T Directorate's mission is to improve homeland security by providing to customers state-of-the-art technology that helps them achieve their missions. S&T customers include the operating components of the Department, state, local, tribal and territorial emergency responders and officials. Under Secretary Dr. Tara O'Toole currently leads the S&T Directorate.*

*Established in 1914, MSA is a global leader in the development, manufacture and supply of safety products that protect people's health and safety. Many MSA products typically integrate any combination of electronics, mechanical systems and advanced materials to protect users against hazardous or life-threatening situations. The company's comprehensive line of products is used by workers around the world in the fire service, oil, gas and petrochemical industry, homeland security, construction, mining and other industries, as well as the military. Principal products include self-contained breathing apparatus, gas masks, gas detection instruments, head protection, ballistic body armor, fall protection devices and thermal imaging cameras. The company also provides a broad range of consumer and contractor safety products through retail channels. These products are marketed and sold under the MSA Safety Works brand. MSA has annual sales of approximately \$1 billion, manufacturing operations in the United States, Europe, Asia and Latin America, and more than 42 international locations. Additional information is available on the company's Web site at [www.msanet.com](http://www.msanet.com)*

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