

Cool Vest

In some industrial environments, very high temperatures limit the time an employee can work and this reduces company productivity. An example: in the containment area of a nuclear electric utility, temperatures run as high as 160 degrees Fahrenheit; technicians who must enter the area to make repairs can tolerate the heat for only short periods, which prolongs the repair time. Another example: employees of a chemical plant in Texas wear "slicker suits" as protection against acids and caustic chemicals made at the facility; wearing this equipment while working outdoors at temperatures up to 100 degrees, a worker could suffer dehydration.

A productivity-enhancing answer to these problems is being manufactured by ILC Dover, Frederica, Delaware, a division of ILC Industries, Inc. Called the Cool Vest™, it is a lightweight cooling garment designed to eliminate the harmful effects of heat stress; the vest increases tolerance time in hot environments by almost 300 percent. It incorporates technology developed by ILC Dover in the design, development and manufacture of space suits for the Apollo, Skylab and Space Shuttle programs.

In the photo, the Cool Vest is worn by a technician of the Baltimore Gas & Electric Company facility at Calvert Cliffs, Maryland. Made of urethane-coated nylon, it works to keep the body cool, circulating chilled water throughout the lining by means of a small battery-powered pump. A pocket—worn at back in this photo—houses the pump, battery and the coolant, which can be ice or a frozen gel; a valve control allows temperature regulation. The vest may be worn externally as shown or under a protective garment. The version pictured is self-contained and portable for unrestrained movement; an alternative version, for use where extended mobility is not required, has an umbilical line attached to an external source of coolant, such as a standard water tap. Customers report that the Cool Vest pays for itself in increased productivity and provides a bonus in improved employee morale.

ILC Dover is producing a related garment based on the same technology. Called the Vari-Temp Tube Suit, it is a form-fitting undergarment with a network of soft, flexible tubing through which either cooling or warming fluid is circulated to maintain comfortable body temperature. Liquid from a permanent water supply or a portable closed-loop system enters the suit, flows around the body and exits through an umbilical line.

™ Cool Vest is a trademark of ILC Industries, Inc.

