Cooling system could aid emergency personnel in high-heat heat conditions

January 26 2005

Researchers at the Department of Energy's Oak Ridge National Laboratory are working on an insulation system that firefighters and other emergency personnel can wear to provide cool insulation when they are working in very hot conditions.
James Klett of ORNL's Metals and Ceramics Division said the cartridge-based integrated cooling system would allow emergency personnel to work longer in uncomfortably high-heat conditions.

"This is originally designed to be a system that will work with firefighters, so that when a firefighter leaves a building after his bottle runs dry, you can change the bottle and change out the cooling cartridge at the same time," Klett said. "The object is to not only provide cooling to the firefighters, but to dry them out so they don't get severe steam burns."

Klett said the system could help more than just emergency personnel.

"The advantages are this can be directly applied to other people that need cooling systems, such as haz-mat, first responders, people in extreme situations, NASCAR drivers, helicopter pilots and even down to Disney characters," Klett said. "Personnel who wear these suits get overheated very quickly during the summer months and we can provide them with some relief."

Klett added the system can be easily interchanged to enable personnel working in very cold temperatures to get insulated heat.

Source: ORNL