

procedures developed by the CCMAT replace a collection of ad hoc procedures used in the past that did not provide an accurate indication of the degree of protection that could be expected from protective clothing ensembles.

- *Improved prosthetic foot*

A CCMAT contract, awarded to Niagara Prosthetics and Orthotics Corporation of St. Catharines, Ontario, has resulted in the development of a low cost, high performance, injection molded prosthetic foot. The design is intended to overcome shortcomings of current commercial devices, such as poor performance on rough ground and susceptibility to fatigue failure. The cost of the foot will be greatly reduced by the use of specialized materials and manufacturing methods. The Niagara Foot is scheduled for clinical evaluation at the Thailand Mine Action Centre in November 2001.

Research and development

The CCMAT's research and development program is focussed on detection and neutralization of anti-personnel mines, providing better protection for deminers and improving mine clearance through enabling technologies and greater automation. The

program is carried out in-house and through contracts with industry. Some examples of the research and development program's work include:

- *Detection*

In spite of rapid technological advances, detecting anti-personnel mines remains a difficult technical challenge. Fielding improved detection equipment could result in substantial savings in clearance resources. The following research advances made at the CCMAT show promise of fieldable products:

- Hyperspectral imaging is a promising technology for aerial mapping of mine-affected ground. A prototype imager is in development.
- The feasibility of hyperspectral imaging for tripwire detection has been demonstrated and a prototype is being developed.
- A sonar device that can be used to detect mines under water has been developed by Guigné International Ltd. of Paradise, Newfoundland. The device was successfully evaluated by the CCMAT and a practical instrument is being developed for the detection of mines submerged in waterways and flooded areas.



DRES Photo Instrumentation Group