



The Mechem division of Denel (Pty.) Ltd., South Africa, has a history going back to the late 1960s, when it was a unit of the South African Council for Scientific and Industrial Research. Specializing in landmine detection, demining and UXO disposal, Mechem also offers contract research and development, well-equipped laboratories and an explosive test range, which is used for the development and evaluation of equipment and augments workshops.

Mechem has designed mine-protected vehicles, including the Casspir and Mamba, which are used for demining, and provided safe and reliable transport for operations. Recent developments include add-on armor systems against SSF mines and modifications to the Schiebel VAMIDS metal detector systems, which enables it to detect and mark the position of mines with minimal metal content.

Explosive Detection Systems

Unlike metal detection systems, the Mechem Explosive and Drug Detection System (MEDDS) combines the mechanical concentration of explosive vapors with the acute sense of smell of trained dogs. By using a team of

dogs to check MEDDS sample tubes, it is possible to predict the presence of explosives in the sectors of a mine field. MEDDS is used to indicate the presence or absence of vapor, which can emanate from stray ammo, a weapons cache, UXO or a mine.

Mechem has developed a non-magnetic triller, or pushed trolley, with a Schiebel VAMIDS array coupled to a computer operated marking system, which paints on the spots where mines are found. The system, mounted on a Casspir, has completed field trials by auditing cleared mine fields in Mozambique.

The International Counter-mine and Canine Training Institute (ICCTI)

Funded by donors, this school provides training in all aspects of mine detection and clearance. The intention is to enable mine-infested countries to become self-sufficient in demining. Training is offered through a variety of standardized courses. Specific courses can also be designed to meet with client requirements, which may include UXO and terror bomb disposal



Mechem Casspir on a U.N. contract.
Photo c/o Mechem

techniques. Standard courses include the following:

Basic Demining Course:

- Mine Awareness
- First Aid
- Metal detection
- Detection with a prodder
- International mine and munitions identification
- Explosive characteristics
- Driver training
- Communications

Advanced Demining Course:

- Vapor detection-MEDDS sampling
- Rendering safe of mines and UXO
- MEDDS dog and handler training
- Search dog and handler training
- Communications
- Operational medical care
- Supervision
- Quality assurance
- Statistics
- Logistic support procedures
- Vehicle and mechanical maintenance

Mine Surveys

Permanent staff is available for surveying and gathering information about known or suspected mine fields. At the conclusion of an initial survey, Mechem can report the estimated extent of the problem and offer a selection of solutions adapted to the local terrain of the mine field.

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