

One of the smaller and perhaps less well known companies within the Denel Group is Mechem. Insights takes a look at this interesting and innovative company.



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COMPANY FOCUS MECHEM

by Howard Thacker

The core business of Mechem is the international provision of mine action services and contraband detection.

These high-tech terms essentially refer to the location and destruction of land mines and unexploded ordnance. Mechem also carries out stock pile destruction, mine risk education, landmine victim assistance, battle area clearance and mine ban advocacy. An important new area is the detection of illegal goods such as drugs, explosives, and animal products - mainly ivory and rhino horn.

Mechem was originally founded in 1960 as the Applied Chemistry Unit (ACU) of the Council for Scientific and Industrial Research (CSIR), where its focus was primarily research and development.

With the cessation of military activities in Southern Africa in the early 1990s, Mechem decided to shift its focus from a research facility to that of a commercially-driven company supplying demining and contraband detection services to the international marketplace.

Demining

The United Nations estimates that there are around 110 million landmines scattered across more than 70 countries. Up to 100 million of these landmines are small anti-personnel mines that cannot distinguish between the footfall of a soldier and that of an innocent child.

The clearing of these landmines not only removes the danger to human life, but also releases commercially viable farming land for the safe cultivation of crops, thereby helping to alleviate hunger and reduce poverty.

The United Nations, together with international donors and non-governmental organisations (NGOs), contract companies such as Mechem to help clear mined areas in former, and even some current, conflict areas.

The company has carried out road and area clearance in Afghanistan, Sudan, Eritrea, the DRC, Bosnia, Croatia, Taiwan, Iraq; and closer to home, Angola and Mozambique.

Mechem follows a systematic approach to each contract, tailoring the solutions to the problem. This approach has led Mechem to develop a portfolio of demining solutions covering:

- Manual demining technology
- Vehicle-mounted demining technology
- Mechanical demining technology
- Vapour detection technology
- Protective clothing and equipment
- Victim assistance technology

Contraband Detection

Using the experience gained in the technique of air sampling for the detection of landmines, Mechem further developed the technique through the Mechem Explosives and Drug Detection System (MEDDS) to detect the presence of drugs, weapons and explosives, and prohibited animal products.

The system is ideal for checking the contents of vehicles, road freight and shipping containers as the contents do not have to be unpacked or visually inspected.

Air is drawn from the shipping container or vehicle via a simple vacuum system and the odour is retained in a small filter collection tube. The tube is then taken to a specially trained dog working in a controlled environment to confirm whether or not prohibited substances are present in the sample.

In this manner, large quantities of shipping containers, train carriages or road freight can be quickly sampled, with only those containers/items that have been positively identified as having a suspect odour being opened. Even potential car bombs can be checked by drawing air through a door keyhole.

Mechanical demining in action - a Mechem Casspir in Afghanistan.

A look at what's happening in and around Denel

With no end in sight to the global landmine issue and the on-going problems of smuggling and drug trafficking in southern Africa, Mechem is ideally positioned to assist NGOs and the authorities with its innovative and comprehensive solutions.



One of Mechem's dog trainers with a new breed undergoing evaluation - the Australian Cattle Dog.



Did You Know?

Mechem has developed an artificial foot - The Afrifoot - to help landmine victims regain their mobility. A victim assistance programme, initiated on behalf of Eskom, was piloted in Angola and has so far assisted more than 100 people.

As part of its anti-landmine solutions Mechem has also developed mine-protected vehicles for the safe transportation of personnel. These vehicles are now in service worldwide.

Like to know more? Contact:

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