
Newsletter Problem

Look at the page from the NATO Industrial Advisory Group Newsletter.



This article reports on a meeting held at the Defence Research Establishment Suffield (DRES) in Alberta.

Question 1 What was the subject of the presentations and demonstrations at this meeting?

Question 2 Highlight, underline, or circle the words in the article that identify the equipment shown in photographs A and B.

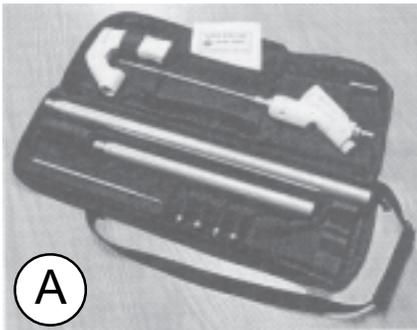
mark the article

Question 3 How does the *Smart Probe* distinguish between rocks and mines?

Question 4 What feature of newer land-mines makes detecting them difficult?

The next day the Group returned to DRES for further presentations and demonstrations by US and Canadian firms involved in detection and neutralization of mines. The US NATO representative gave a presentation on two hand-held mine detectors currently being evaluated by the US DoD for detecting non/low metallic mines. The two US firms developing the products are Coleman Research Corporation with a modification to the AN-19/2 Mine Detecting set with a Drop-In Ground Penetrating Radar System (DIGS) and GDE Systems Ground Penetrating Radar using a balanced bridge sensor. Later in the day, the participants were given the opportunity to see these products in actual scenarios and to try out the machines themselves.

DEW Engineering, Ottawa, Ontario



provided an interesting presentation and demonstration of the newly developed "Smart Probe." This instrumented prod-der, developed by DRES and manufac-tured and distributed by DEW Engineer-ing, once in contact with a "tar-get" sends an interrogating ultra-sonic pulse down the needle. The return echo is digitized and pro-cessed to identify the materiel contacted. As a result mines can be distinguished from rocks, for example, without excavation.



Once the presentation and demon-strations of the more conventional modes of detection were completed, the Group turned their attention to the Improved Landmine Detector Project underway in DRES and in conjunction with Computing Devices Canada Ltd. This project is develop-ing a teleoperated multi-sensor vehicle-mounted mine detector for low metal content and non-metallic mines for a peacekeeping role on roads and tracks.



Answers - Newsletter Problem

1. *What was the subject of the presentations and demonstrations at this meeting?*
Landmine detection equipment
2. *Highlight, underline or circle the words in the article that identify the equipment shown in photographs A and B.*
Smart Probe should be marked.
3. *How does the Smart Probe distinguish between rocks and mines?*
It sends an ultrasonic pulse or sound. The echo is digitized and processed to identify whatever is contacted
4. *What feature of newer landmines makes detecting them difficult?*
New mines are **low metal content or contain no metal** (mentioned two times)

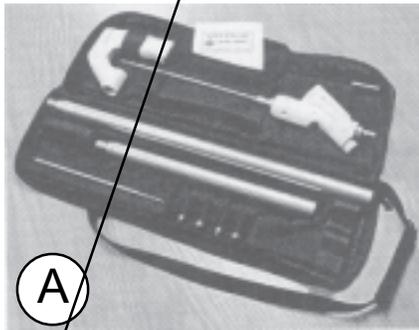
Testing reading and document use skills at several levels.

TOWES items are developed to ‘probe’ reading skills at all levels. Surprisingly, it is easier to write questions that test reading at a higher level than to write questions that test reading at a more fundamental level. Test items follow from an accurate description of the complexity of document and reading tasks using the five point scale developed for the International Adult Literacy Survey. In recent years, health and safety requirements, new processes, and new technology have driven the requirements for reading in most jobs. Increased reading demand is closely associated with increasing job responsibilities. We are also aware that the same document can be read and used for several purposes each of which demands different kinds of reading skills; there is a significant difference between checking a form to see that a reason has been given and deciding whether the reason given is adequate.

The questions in this problem set are clearly more demanding than the questions in the ‘Meal Tray’ problem. However, the type of information being requested is fairly concrete and this limits the complexity. A more demanding question might ask about the similarities in the methods for detecting nonmetallic landmines.

The next day the Group DRES for further presentations by US and Canada involved in detection and mines. The US NATO requested a presentation on two hand detectors currently being the US DoD for detecting metallic mines. The two US firms the products are Coleman Corporation with a modified AN-19/2 Mine Detecting set with a Drop-In Ground Penetrating Radar System (DIGS) and GDE Systems Ground Penetrating Radar using a balanced bridge sensor. Later in the day, the participants were given the opportunity to see these products in actual scenarios and to try out the machines themselves.

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provided an interesting presentation and demonstration of the newly developed "Smart Probe." This instrumented probe, developed by DRES and manufactured and distributed by DEW Engineering, once in contact with a "target" sends an interrogating ultrasonic pulse down the needle. The return echo is digitized and processed to identify the material contacted. As a result mines can be distinguished from rocks, for example, without excavation.

Q2 Identify the similarities between photo A and B. **Recognize** A as a packed version of B. The 'probing' action shown in B hints at the name of the object.

Infer that this device is better described as a 'probe' than 'penetrating radar.' The latter is a reasonable 'distractor' and will be chosen by individuals with less developed reading skills.

Contrast 'probe' with 'vehicle mounted' and infer that the second term better describes the device in photo C.



Once the presentation and demonstrations of the more conventional modes of detection were completed, the Group turned their attention to the Improved Landmine Detector Project underway in DRES and in conjunction with Computing Devices Canada Ltd. This project is developing a teleoperated multi-sensor vehicle-mounted mine detector for low metal content and nonmetallic mines for a peacekeeping role on roads and tracks.

