

## Residual Magnetic Field Measurement on Military Equipment

Edition 01/13

February 2013

### MAGNETOMAT® 1.782

MAGNETOMAT client software

#### The requirements

Navy Mine divers have to rely on non-magnetic diving equipment and tools. Only the use of such will allow them to come near a magnetically fused mine.

The requirements for NATO on this are laid down in STANAG 2897.

Similar requirements are impressed on filters for NBC protective mask by the German Military Procurement Office in TL 4240.

Residual field measurement of non-magnetic components complying with “STANAG 2897 Allied Explosive Ordnance Disposal Publication-7, EOD Equipment Requirements and Equipment, Class A” (In NATO a Standardization Agreement (STANAG) defines processes, procedures, terms, and conditions for common military or technical procedures or equipment between the member countries of the alliance)

“Bundesamt für Wehrtechnik und Beschaffung, Technische Lieferbedingungen, Schraubfilter, nicht magnetisierbar, für ABC-Schutzmaske TL4240-016.

#### Mine diver equipment



Sea mine scuba diver  
photo Draeger



Test object diving  
apparatus  
photo Draeger



Test object full facemask  
photo Draeger



Test object ABC full  
facemask  
photo Draeger

#### Application Setup

Parts/Components of the diving suit as well as non-magnetic tools should be measured rapidly and with high precision. They are rotated manually on the surface of the non-magnetic table around their axes above the single axis differential probe which is mounted under the table top. This movement should take place in the measurement axis of the probe which is marked in the center of the table top by crosshair. The differential probe assembly can be moved in such a way that it can be positioned between 10 cm and 12,5 cm distance relative to the components surface on the table top.

For STANAG 2897 Class A, Limit Value max. 5 nT measured at 10 cm distance between object surface and probe.

For TL4240-016, Limit Value max 0,02 A/m (25 nT) at 12,5 cm between object surface and probe



Non-magnetic Table with Differential Probe



Differential Probe



Sensor electronic 100  $\mu$ T Laboratory



Notebook PC with HotSpot Software Client  
MAGNETOMAT

The “HotSpot Software Client “MAGNETOMAT” is used to display the measurement results,. This analysis software has the emphasis on the continuous, digital display of the current, maximum, minimum and difference between maximum and minimum values.

### **The solution supplied**

- Non-magnetic table with height adjustable probe mount
- Single Axis Differential Probe with 200 mm base spacing
- Sensor electronic 100  $\mu$ T Laboratory
- HotSpot Software Client MAGNETOMAT
- Notebook PC