Molspin Ltd.

Partial Anhysteretic Remanant Magnetization Unit

User Manual

PARM Coil

PARM Unit

Molspin Ltd.,
25 Castleton Grove, Newcastle upon Tyne,
Tyne and Wear, England, NE2 2HD.

Telephone: +44 (191) 281 0731
Email : molspin@molspin.com
Web site: http://www.molspin.com

April 2010

Molspin Ltd.

Index

Partial Anhysteretic Remanant Magnetization Unit

Magnetizing rock or environmental samples

Molspin Ltd.

Overview

- The Partial Anhysteretic Remanant Magnetization Unit is an “add-on” unit for the field demagnetizer. The Field Demagnetizer is designed for laboratory usage but can be used in the field (subject to the provision of adequate protection from humidity and an adequate power supply)
- Rock or environmental specimens are magnetized within a field of up to 1 Oersted
- Control over the magnetization field is provided by the control unit
- Control over the demagnetisation field is provided by the Field Demagnetizer
- The unit is attached to the Shielded demagnetizer by way of a 5 way plug.
- The PARM device has two 10 turn potentiometers fitted with counting dials. One of them defines the field at which the PARM field will come on, the other the field at which the PARM field goes off. This flexible system allows the place and range of the PARM field to be set anywhere on the demagnetizing cycle.
- The value of the PARM field (up to one Oersted) is set on a meter. The field only comes on during the reducing phase of the demagnetizing cycle. However a switch allows the field to remain on for the whole cycle if this is desired. In this mode the PARM device becomes a standard ARM device.

Control of the Anhysteretic Remanant Magnetization Unit System

Connections and setting up

1. Connect the P.A.R.M unit to the demagnetizer via the cable that has a 5 way plug on each end.
2. Remove the rotation mechanism and place the P.A.R.M coil into the demagnetizer coil as far as it will go.
3. Connect the P.A.R.M coil to the socket on the back of the control unit.

Performing Partial Anhysteretic Remanant Magnetization

1. Push the rock as far as it will go into the P.A.R.M coil and hold it in place with the stick the end of which will fit into the P.A.R.M coil. If you wish you may put the rock into the other end of the carrier provided it is 22 mm long, in this position the field is applied across a diameter rather than along it.
2. Set the start control to the field at which you would like the field to start and the stop control to the stopping field.
3. With the SET/RUN switch set the P.A.R.M field to the desired field (full scale deflection is 1 Oersted).
4. When all is set and the rock is in the demagnetizer coil change the SET/RUN switch to run and do a demagnetizing run when P.A.R.M will be induced into the rock.
5. If you wish the field to start as soon as the field starts to decrease set the START value greater than the demagnetizing value.

Note: For A.R.M either leave the switch to SET, or set the STOP control to minimum and the START control to a field greater than the maximum field and set the switch to run. The difference is that in this case the rock only experiences the P.A.R.M field during the decreasing phase of the cycle.

Unpacking

Remove the Pulse Magnetizer from the transportation packaging and confirm the following items are enclosed

- Partial Anhysteretic Remanant Magnetization Control Unit
- Partial Anhysteretic Remanant Magnetization Coil and holder (long white plastic tube assembly)
- A Calibration Sample and Sample Holder
- Mains Supply IEC Lead
- User Manual

Specifications

SPECIFICATIONS	
Sample size	2.54cm dia x 2.54cm high (or equivalent environmental pot size)
Magnetisation Field	Up to 1 Oersted (0.0001T).
Power supply	120 or 240 volt AC, 50/60 Hz
Power consumption	<30W
Dimensions	Control Unit - 29cm x 34cm x 7cm Sample Holder and Coil
Weight	2kg

Care and Maintenance

Cleaning the equipment

The outside of the equipment can be wiped down with a soft damp cloth. Obstinate marks can normally be removed with a little abrasive cleaning cream like Cif. Bleaches or acidic cleaners should not be used.
The inside of the coil should be monitored for the build up of particles or other dust/detritus. Such materials may interfere with the results you obtain and should be removed. Do this gently using a vacuum cleaner hose attachment.

Maintenance

Your Partial Anhysteretic Remanant Magnetization Unit should require no maintenance.

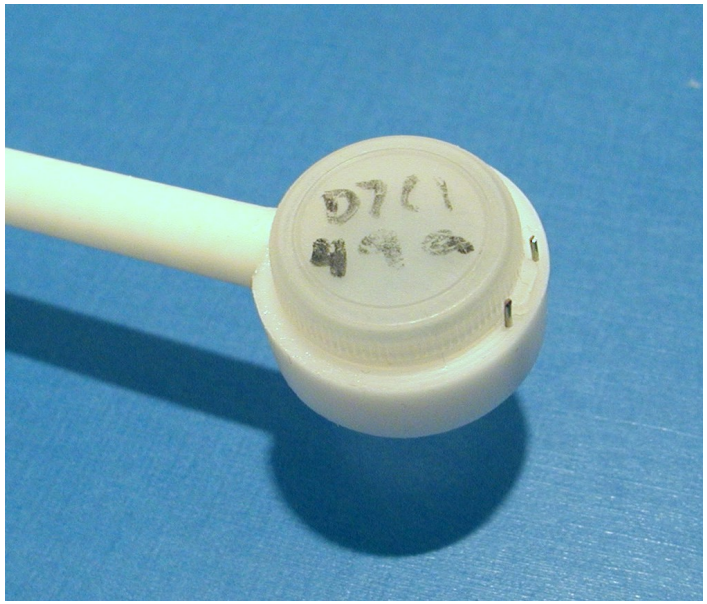
Dos and Don'ts:-

Some of the following apply primarily to the Field Demagnetizer which the Anhysteretic Remanant Magnetization Unit will be used in conjunction with

Do protect the field de-magnetizer from moisture or very high humidity - it is not waterproof!
Do operate in a dry environment - it is mains powered.
Do be careful when moving or handling the field demagnetizer - it is very heavy!
Don't operate the unit with the top dis-assembled from the base..
Don't put items other than the samples in the field demagnetizer or the ARM assembly—you may damage the units, produce unexpected results or potentially harm a fellow worker.
Don't put metal objects, tools, magnets or magnetized tools in the field demagnetizer.
Don't attempt to service this equipment - dangerous voltages and currents inside!

Environmental Adaptor

If you are intending the unit to be used in the study of environmental magnetism, you may be interested in the adaptor for environmental sample pots. This adaptor only takes the nominal 1” (2.54cm) diameter x 1” (2.54cm) high acrylic pot. Our website indicates where such pots may be obtained.



Contacts

Molspin Ltd.

Molspin Ltd.

Address:
25 Castleton Grove,
Newcastle upon Tyne,
Tyne and Wear,
England,
NE2 2HD

Telephone: +44 (191) 281 0731
Fax: +44 (191) 257 5700
Email: molspin@molspin.com
Website: http://www.molspin.com

USA Agent

Address: 2075 Corte del Norgal,
Suite T,
Carlsbad, CA,
USA, 92011.
Telephone: (800) 272 –4327
Fax: (760) 431– 0904
Website: http://www.ascsci.com/pcat.html

Indian Agent

Maksur Analytical Systems
Address: Plot No. 121,
Pandurang Apartment,
Kansai Section,
Ambarnath-East,
Thane-421501,
India.
Telephone.: +91-251-2602384
Fax: +91-251-2602392
E-mail: sales@maksur.com
Web: http://www.maksur.com

Chinese Agent

Magnetic Brook Scientific Ltd

Address: Rm508,
Huatong Building A, No. 19A,
Rd West Chegongzhuang,
Haidian District,
Beijing,
China.

Telephone: +86 10 684 87691
Fax: + 86 10 687 00626
Email: sales@eusci.com
Website: http://www.eusci.com

Molspin Ltd.

Molspin Ltd.,

25 Castleton Grove,

Newcastle upon Tyne,

Tyne and Wear,

England,

NE2 2HD.

Telephone: +44 (191) 281 0731

Fax : +44 (191) 257 5700

Email : molspin@molspin.com

Web site: http://www.molspin.com