MICROTESLA
MAGNETIC FIELD EFFECTS

Reliability. Accuracy. Value.

VISIT MICROTESLA'S MAGNETIC CALIBRATION LAB

CALIBRATION BUILDING

MicroTesla offers a non-mag calibration and magnetics research lab in Northwest Houston.

The lab workspace provides 12K ft.² with a non-magnetic gradient of less than 0.047 nT/ foot.

Laboratory testing qualifies downhole tool magnetic performance across higher temperature ranges. Four (4) calibration stands, two (2) nine-meter Helmholtz coils, three (3) vibration tables and custom designed digitally controlled heater sleeves.

THE NEW DIGITIZED SENSOR

The MicroTesla NDS, New Digitized Sensor, is a completely new "drop-in" replacement sensor for QDT products. It has a one piece chassis made from a solid billet of 6061-T6 aluminum and it uses NO end adapters.

The ends are machined to fit the customers snubber (shock isolator) and MWD controller chassis ends. No end adapters means no "loose" end adapters and no end adapter misalignment.

4AM DIRECTIONAL INSTRUMENT

The MicroTesla MDME 4AM instrument is a brand new, patent pending, directional steering instrument. It incorporates an additional accelerometer and two additional magnetometers for the industry's first 8-axis sensor array.

In addition to the sensor redundancy, the sensor axes are arranged in a skewed array. This skewed array requires a new mathematical treatment which results in optimal sensor outputs in virtually every instrument orientation.

At MicroTesla we are committed to designing, developing, manufacturing and calibrating the most reliable, accurate and valuable directional steering instruments used in the oil and gas industry today.

PRODUCTS WITH PRECISION

MicroTesla's NDS, New Digitized Sensor, is a one PCB, one piece chasis replacement for the MDS, MicroTesla Digitized Sensor.

MicroTesla commercialized the world's first 8-axis, skewed array directional instrument for improved survey accuracy with built-in survey-quality management routines and also offers a complete range of downhole magnetometer-based technologies to meet your application requirements.

NDS
New Digitized Sensor
175ºC
One High Temp Board
One Piece Chassis

NDM
New Digitized Module
175ºC
One High Temp Board
One Piece Chassis

MDME175-XE-HR-4AM
MicroTesla Digitized Module
175ºC
XE Chassis
High-Resolution
4 Accelerometer Array, 4 Magnetometer Array

MASS
MicroTesla Analog Surfacemount Sensor
SiFlex2 Accelerometer
XE Chassis
MicroTesla High-Accuracy MEMS Accelerometer

MDS125T-HR / MSM125-HR
MicroTesla Digitized Sensor and Steering Module
High-Resolution Wireline Steering Tool and Pup

1" MDM175T-XE
MicroTesla Digitized Module
175ºC
1.039" XE Chassis

INB-125T
Inclinometer Near Bit

Roll Test Kit
MicroTesla System for Roll Testing MicroTesla Instruments

EXCEPTIONAL SERVICES

CALIBRATION

Laboratory testing qualifies downhole tool magnetic performance across higher temperature ranges. Four (4) calibration stands, two (2) nine-meter Helmholtz coils, three (3) vibration tables and custom designed digitally controlled heater sleeves.

Each of the calibration stands is physically separated from the other stands to ensure that no magnetic interference occurs between the stands. The Calibration building has storm-water detention basins on three sides and is separated from any roadway approach by more than 600', which provides ample isolation from any transient magnetic interference caused by trucks or cars.

REPAIR

MicroTesla uses trained, experienced, repair technicians to conduct directional instrument evaluations, troubleshooting, and repair. We have a repair cycle time goal of 30 days or less pending customer approvals.

MicroTesla supports all soldering techniques including SN63, SN96, HMP and Gold solder. All repair and rework is completed in conformance with the original equipment specifications.

ENVIRONMENTAL TESTING

All MicroTesla directional instruments are tested at the maximum design temperature during several cycles in our manufacturing process. In addition to thermal soak and thermal cycling all of our tools are calibrated and roll tested at their maximum design temperature. Every directional instrument electronics

MicroTesla uses trained, experienced, repair technicians to conduct directional instrument evaluations, troubleshooting, and repair. We have a repair cycle time goal of 3 board is designed for operations at 175C. If a Customer application requires a lower temperature rating the appropriate calibrations conducted. For example the SiFlex 2 accelerometers have a maximum temperature specification of 125C.

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EXCELLENCE IN ENGINEERING

MicroTesla now offers an environmental board which can be installed into our MDME product. This borad uses accelerometers for shock and vibration monitoring, a precision temperature sensor and high temperature memory.

The MDME can also be equipped with a very, high resolution, analog to digital converter board providing extremely accurate directionalmeasurements.

The 4AM premium directional instrument is designed for drilling applcations where extreme accuracy and very high rig costs support its use.

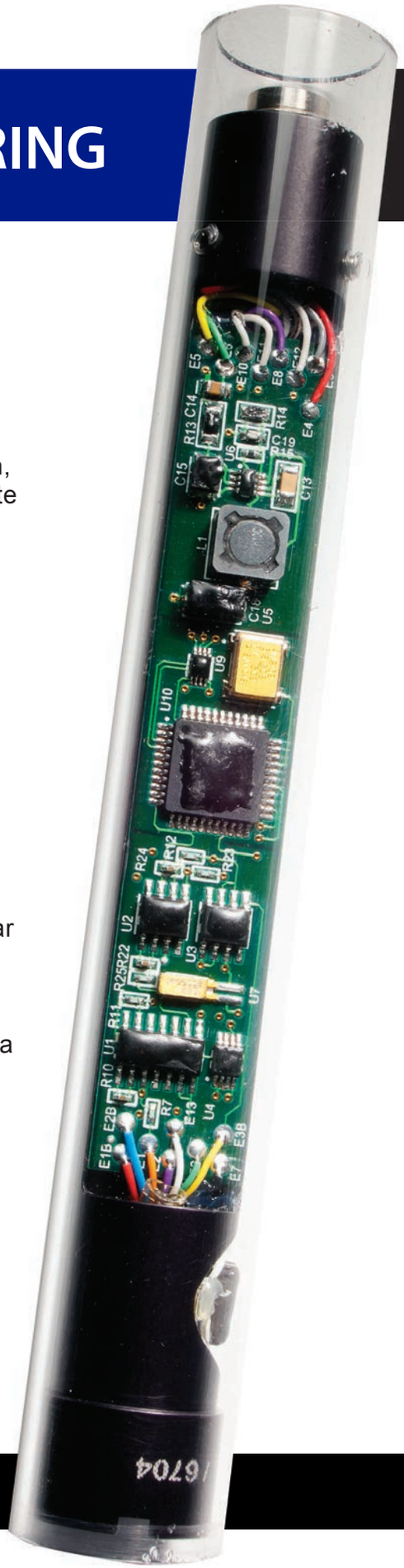
The 4AM has (8) sensors, four magnetometers and four accelerometers mounted in a patented, skewed, co-planar array. The data from the (8) sensors is compensated, and then the corrected 8 axis data is used to compute an equivalent 6 axis data set which is then used to calculate the drillers angles.

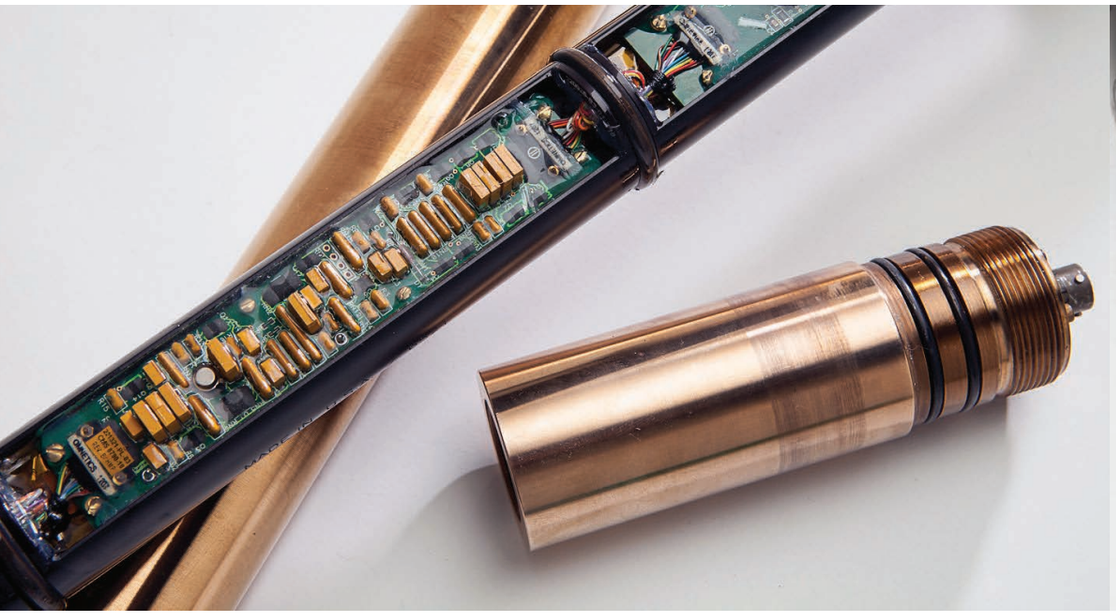
Continuous rotation of the BHA at a fixed depth, for about 3 minutes, provides that data necessary to compute short collar and sag corrections without time consuming, costly, cluster shots or conventional multi-station analysis.

Last but not least, the groundbreaking NDS brings MicroTesla accuracy and reliability to our customers “on a budget”.

This one-piece chassis, one board tools takes advantage of high-temperature, electronic compontents and asingular engineering focus on simplification and consolidation.

This instrument is 100% compatible with the QDT “drop-in” familty of directional steering instruments used in the independent MWD business.





OUR HISTORY

MicroTesla is committed to providing the oil and gas industry with the very highest level of directional instrument performance based on our principles of reliability, accuracy and value.

MicroTesla LTD was started in 2000, providing directional instrument repair and calibration services to companies using Measurement While Drilling (MWD) tools.

We grew from a repair and calibration service to a subcontract manufacturer of directional steering instruments.

Our expertise and business continued to grow and soon included the design of a drop-in replacement directional sensor and then on to the development of the industry standard magnetometer and our own directional steering instruments.

MicroTesla is committed to innovation in directional steering instrumentation.

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