

# Measurement in the Oil Industry

## Guaranteeing maximum safety at every stage in the oil sector

- Operations in oil fields: drilling and generator sets
- In refineries: thermography and maintenance
- During transport: cathodic protection and equipotentiality

**A complete range of instruments offering  
solutions for all your applications**



## PIPELINES

Made of steel and covered with an anti-corrosive coating, pipelines are designed for transporting oil. To ensure maximum safety, the buried parts of pipelines are also equipped with cathodic protection to prevent chemical or electrochemical corrosion.



### F607 TRMS Multimeter Clamp

- Single and total three-phase power values
- Work on drilling engines operating at 3,000 Acd



### C.A 1727 Contact and no-contact Tachometer

- Maintenance



### C.A 1866 Infrared Thermometer

- No-contact temperature measurement

### MX 57EX ATEX "Gas and Dust" Multimeter

- Explosive atmospheres
- Resettable ATEX instrument



### OX 7204 200 MHz Oscilloscope

- Remote Ethernet communication and storage on SD card
- Probox safety accessories: current, voltage, temperature, weak 4-20 mA / 0-10 V signals

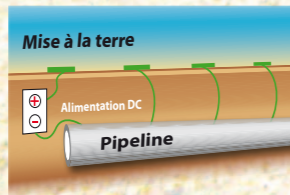


### C.A 8335 AC/DC Power Analyser

- Testing of generator sets
- Recording of all the parameters over one month
- Inrush

## CATHODIC PROTECTION

To reduce the potential of the pipes to the required value, the network is connected at one or more points to the negative pole of a DC current source. This negative voltage is achieved by connecting a DC power supply between the pipeline and the ground, thus creating a current outside the "earthing" flowing through the ground and then in the pipeline. In this situation, the pipeline serves as the cathode for the circuit.



### C.A 6472

- Measurement of earthing, derrick earthing and lightning arrestors up to 5 kHz
- Measurement of cathodic protection
- Equipotentiality testing of earth bonds and lightning arrestors



### C.A 6549

- Insulation measurement up to 5 kV
- Calculation of quality ratios
- Temperature compensation
- Step voltage mode



### C.A 1888 Thermographic Camera MIXVISION

- Checking of fire hazards
- Predictive and preventive maintenance
- Infrared measurement of tank levels and verification of valve positions



### C.A 6415

- Earth loop measurement
- High current or leakage-current measurements
- Alarms function



### MX 59HD Digital Multimeter

- IP67
- Rugged and leakproof

### C.A 6250 Micro-Ohmmeter

- Testing of surface condition and metallization



## EQUIPOTENTIALITY OF THE CHASSIS-EARTHS AND EARTHS

All the metal chassis-earths are bonded together and then bonded to the earth to help protect the installation against arcing. Indeed, the presence of several independent earthing networks close to one another may lead to a significant difference in potential which could prove hazardous for both people and property. If this is the case, the different earth networks must be interconnected, either via the underground earth or by special buried bonds, to ensure equipotentiality.

## C.A 6472

### 5-in 1 Earth and resistivity Tester

- Earth and pylon-earth measurements,
- resistivity, earth coupling, soil potential, resistance and continuity
- Analysis of the frequency behaviour of earth bonds (41 Hz to 5 kHz)



## C.A 6549

### 5 kV Insulation Tester

- Step voltage: 5 steps
- Automatic calculation of the DAR, PI and DD quality ratios
- Measurement of voltage, capacitance and leakage current



## OX 7204

### Portable Oscilloscope for maintenance

- 200 MHz
- 4 isolated channels, 600 V CAT III
- Measurement and recording
- Probix safety accessories: current, voltage, weak signals, temperature
- Ethernet and USB



## MX 57Ex

### 50,000-count TRMS ATEX Multimeter

- 100 % ATEX "Gas and Dust"
- 600 V CAT III
- Resettable ATEX instrument, in explosive and non-explosive environments



## MX 59HD

### IP67 Digital Multimeter

- AC/DC voltage from 500 mV to 600 V
- AC/DC current ranges: 500  $\mu$ A, 5 mA, 50 mA, 500 mA & 10 A



## F607

### TRMS AC, DC and AC+DC Multimeter Clamp

- Up to 2,000 AAC or 3,000 ADC/AC+DC
- Clamping diam. 60 mm
- W, var and VA power measurements
- Harmonic and frequency analysis
- Data recording and Bluetooth communication



## C.A 6250

### 10 A Micro-Ohmmeter

- Chassis-earth continuity testing
- Verification of mechanical bonds
- Range from 1  $\mu$  $\Omega$  to 2500  $\Omega$



## C.A 6415

### Earth and loop-testing Clamp

- Resistance: 0.10  $\Omega$  to 1,200  $\Omega$  (7 cal.)
- Leakage current from 1 mA to 30.00 A
- Battery life of 1,000 measurements each lasting 30 s



## C.A 8335

### AC/DC Power Analyser

- 4 voltage inputs, 4 current inputs
- Inrush
- Checking of generator sets
- Recording of all the parameters simultaneously over a one-month period
- Voltage ratio



## C.A 1888

### MIXVISION Thermographic Camera

- Temperatures from -20  $^{\circ}$ C to +600  $^{\circ}$ C, and +1,500  $^{\circ}$ C (option)
- Measurement of levels in containers
- Storage of 1,000 radiometric images on MiniSD card



## C.A 1866

### Infrared Thermometer

- Large measurement range from -50  $^{\circ}$ C to +1,000  $^{\circ}$ C
- Specially designed for maintenance



## C.A 1727

### Contact and no-contact Tachometer

- Rotation and linear speed
- Range from 6 to 100,000 RPM
- Event counting from 0 to 99,999



## K2

### AC and DC Current Clamp

- Measurement of 4-20 mA signals
- Measurement range from 0.1 mA to 450 mAdc
- Compatible with all Metrix multimeters and from 0.1 mA to 300 mARMS



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