# ONLINE MEASUREMENT INSTRUMENTS

- **Specific Gravity Transmitter/Probe (Compact & Remote):** Intelligence, Advanced graphics, RS 485, Modbus, PID Control, Relays options
- **Dissolved Oxygen Transmitter/Probe:** Intelligence, Advanced graphics, RS 485, Modbus
- **Conductivity Transmitter/Probe:** Intelligence, Advanced graphics, RS 485, Modbus
- **PH/ORP Transmitter/Probe:** Intelligence, Advanced graphics, RS 485, Modbus, PID Control, Relays options
- **Residual Chlorine/Ozone Transmitter/Probe:** Intelligence, Advanced graphics, RS 485, Modbus
- **ION Transmitter/Probe:** Intelligence, Advanced graphics, RS 485, Modbus
- **Turbidity & Suspended Solids Transmitter/Probe:** Intelligence, Advanced graphics, RS 485, Modbus

# ELECTRICAL APPARATUS ANALYSIS, DIAGNOSTIC & MONITORING DEVICES

- **Circuit breaker Diagnostics/Test Devices and software (TDR900, TDR9100, TDR900, T-Doble Software):**
- **Dissolved Gas Analysis Monitors (DOBLE DELPHI):** Provides early warning signs of problems such as overheating, insulation degradation or mechanical movement within the unit.
- **Dissolved water in Oil Monitor and Online Moisture Monitor (DOMINO):** Provides reliable measurement of the water content of electrical insulating liquids and other types of oils.
- **Intelligent Diagnostic Device (IDD):** Continuous Online Intelligent Diagnostic Devices for Power System Apparatus, Moisture in Transformers, Bushings & CTs and Dissolved Gas in Oil
- **Leakage Current Monitor (LCM500):** A complete system for condition monitoring of your metal oxide surge arresters (MOSAs)

# CONTINUOUS ONLINE DIAGNOSTIC SYSTEMS

- **INSULATION ANALYSER (M4100):** Measures the power factor/tangent delta, Capacitance along with a number of other essential values of high Voltage Substation apparatus and under conditions of high electrostatic and
- DTA Software: Works with the M4100
- **OIL MINERAL ANALYZERS (DOMINO & DOBLE DELPHI)**
- **PARTIAL DISCHARGE TESTING SOLUTIONS (ANALYZERS, SURVEY, TESTING TOOLS)**
  - Partial Discharge Surveyor (PDS100): Handheld Device for Surveying & Detecting sources of Partial Discharge (PD) and external interferences around HV apparatus.
  - Dielectric Fault Analyzer for Gas Insulated Substations and Cable Applications (DFA100): handheld, battery-powered instrument for monitoring non-intrusive, in-service acoustic signals produced by partial discharge and loose components of Gas Insulated Substations (GIS) and Cable accessories.
  - Dielectric Fault Analyzer (DFA500): Portable, battery-powered instrument for measuring non-intrusive, in-service acoustic signals and radio frequency interference (RFI) in the UHF (ultra high frequency) band produced by partial discharge and loose components. Detect faults in grounded SF6 gas-insulated substations (GIS).
  - Partial Discharge Analyzer (PD-Smart)
  - Partial Discharge Analyzer (LDS-6)
- **SURGE ARRESTER MONITOR (LCM500)**
- **SWEET FREQUENCY RESPONSE ANALYZER (M5000, M5300, M5400 Series and Software)**: Detect hidden transformer faults using sweep frequency response analysis (SFRA)
- **TRANSFORMER DIAGNOSTIC (M4100 4th GEN, M7100)**
- **PROTECTION DIANOSTIC/SYSTEM TESTING**
  - Field Calibration Unit (F6080)
  - Current Probe (AC/DC)
  - Power System Simulator (F6150SV & F6150e) – For testing protection relay
  - Power System Simulator interface (F6350)
  - High Power Current Amplifier (F6300)
  - Testing Interface (F5850 IntelliRupter)
  - External Input/Output Unit (F6816)
  - Recloser Interface Unit (F5814)
- **SOFTWARES:** 
  - F6Te (Automated testing of individual relays), ProTest (Test system for protection relay), Protection Web (Asset Management), F6 Multi Amplifier Configurator Software and Protection Suite (protection testing, data management, and compliance reporting)
PETROLEUM TESTING EQUIPMENTS

- **VISCOCITY** – Ultra precise cooling & heating bath for Kinematic Viscosity Determination with glass capillary viscometers at low temperatures, according to ASTM D445, ISO 3104, IP 71 and related specifications (L910 & L912 MODELS)
- **FLASH POINT TESTER (AUTOMATIC & SEMI-AUTOMATIC) ACCORDING TO PENSKY MARTENS METHOD & CLEVELAND METHOD** (ASTM D 93 A&B, ISO 2719, ISO 2596, IP 34, GOST 6356) – (LP 093A, LP092A, LP092S, LP093S MODELS)
- **VAPOUR PRESSURE – REID VAPOUR PRESSURE TESTER** - according to ASTM D323, D1267; ISO 3007, 4256 (LT820 MODEL)
- **DENSITY** – Temperature bath for Density/Specific Gravity Determination according to ASTM D287, D1298, D6074, D6158, IP 160, ISO 3675 and other spec. (LT 810 MODEL)
- **DISTILLATION** : for the atmospheric distillation of petroleum products (group 0, 1, 2, 3, 4) according to ASTM D 86, ISO 3405 and similar standards – (LP086 & LP086A MODELS)
- **COLD FILTER/PLUGGING POINT** - Fully-automatic tester for cold filter plugging point of diesel and heating fuels (ASTM D 6371, EN 116, GOST 22254-92) – (LP6371A MODEL)
- **EXISTENT GUM CONTENT** – Solid block bath apparatuf for determining existent gum content in gasoline fuels by the Jet Evaporation method according to ASTM D381, ISO 6246 and related specifications (LP381 MODELS)