

Oil, Gas & Energy Facilities Testing

Independent verification of power quality, earthing and electrical asset integrity for refineries, terminals, gas plants and power stations in Syria



From substation busbars to tank-farm earthing and motor-control — independent measurement against international standards.

Syria's refineries, gas processing plants, tank farms, pipeline pumping stations and conventional power stations are coming back into full operation after years of disrupted maintenance, partial isolation and improvised repairs. In facilities that handle flammable products and high-voltage systems side by side, an undetected earthing fault, a hot connection or unstable voltage is not a maintenance problem — it is the trigger of a major-incident event. Mizan provides the independent power-quality, earthing and thermographic testing — together with the calibration of safety-critical instruments — that operators, EPC contractors, regulators and insurers need to confirm that every electrical and protection system is safe, stable and compliant.

Why It Matters

Energy facilities concentrate the highest-consequence electrical risks in industry:

- Voltage dips and harmonic distortion trip critical motors and shut down whole processing trains.
- Weak earthing and missing bonding turn a single lightning strike or fault into a tank-farm or substation incident.
- Hot joints, ageing insulation and uncalibrated safety instruments fail silently — until they don't.

What We Verify

Mizan inspects, measures and verifies the full electrical and protection chain:

- Power quality and system stability at incomers, substations and large drives.
- Earthing, grounding and lightning protection across substations and tank farms.
- Thermal condition of electrical assets and the calibration of safety-critical instruments.

In oil, gas and power, the difference between a routine day and a major incident is often a single measurement — taken in time, by the right instrument, against the right standard.



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Scope of Services

A structured testing and verification programme covering refineries, gas processing, terminals, pipelines and power stations, delivered on site with calibrated instruments and qualified HV / Ex-trained engineers.

- **Power Quality & System Stability Testing**
 - Class-A power-quality survey at substations, MCCs and large drives per IEC 61000-4-30.
 - Voltage-quality assessment at the point of supply per EN 50160.
 - Harmonic-distortion limit verification at the point of common coupling per IEEE 519.
 - Short-circuit and protection coordination review per IEC 60909.
- **Earthing, Grounding & Lightning Protection**
 - Substation earth-grid impedance and step / touch voltage measurement per IEEE 80 / IEEE 81.
 - Lightning-protection inspection of buildings, substations and overhead lines per IEC 62305.
 - Lightning and static protection of aboveground storage tanks per API RP 545.
 - Hazardous-area earthing, bonding and equipotential verification per IEC 60079-14.
- **Thermal Inspection & Calibration Services**
 - Thermographic survey of transformers, switchgear, MCCs and motors per ISO 18434.
 - Periodic inspection of installations in explosive atmospheres per IEC 60079-17.
 - Calibration of pressure, temperature and electrical safety instruments per ISO 10012.
 - Uncertainty evaluation and conformity reporting per the GUM (ISO/IEC Guide 98-3).

Technical Reports to IEC, EN, IEEE & ISO Standards

Every campaign is documented in a structured report that ties each measurement to the standard it verifies, flags non-conformities and gives the operator a clear corrective-action path before re-start or re-test.

The technical reports issued by Mizan include the following:

- IEC 61000-4-30 Class-A power-quality measurement campaign report.
- EN 50160 voltage-quality assessment at the point of supply.
- IEEE 519 harmonic-distortion limit-verification report.
- IEEE 80 / IEEE 81 substation earthing, step and touch voltage report.
- IEC 62305 lightning-protection inspection report.
- API RP 545 storage-tank lightning and static-protection report.
- IEC 60079-14 / IEC 60079-17 hazardous-area electrical inspection report.
- ISO 18434 thermographic survey report and ISO 10012 calibration certificates.



As part of custody transfer, technicians routinely calibrate all the pressure and temperature transmitters involved in the flow of oil & gas

Stable power, sound earthing, traceable calibration — the measurable foundation of safe and reliable energy operations.



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