



Al-Ahleia Testing Laboratories





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## ABOUT US



To lead our field in innovation, quality and customer service.

Al-Ahleia Testing Laboratories provide a wide range of test services for various electrical equipment.

We offer a comprehensive and practical approach built around international testing standards.

Combining our multidisciplinary expert staff with state of the art testing facilities gives us a unique advantage to help clients assess, test and demonstrate their products and systems.



# LOW VOLTAGE SWITCHGEAR & BUS DUCT

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Verification of Temperature Rise Test up to 5000A

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Verification of Dielectric Properties

- a. Power Frequency Withstand Voltage up to 4.5kV
  - b. Impulse Withstand Voltage up to 20kVp
  - c. Insulation Resistance Test up to 5kV / 950GΩ
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Verification of Clearance and Creepage Distances

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Verification of Degree of Protection up to IP55

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Verification of Strength of Materials and Parts  
(Lifting) up to 5000kg - Switchgear

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Verification of Mechanical Operation - Switchgear

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Verification of Structure Strength up to 5000 Kg - L.V  
Bus Duct

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Verification of Resistance to Crushing up to 5000 Kg  
- L.V Bus Duct

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# SWITCHGEAR LABORATORY



VERIFICATION OF DEGREE OF PROTECTION UP TO IP55



IMPULSE WITH STAND — UP TO 20 KVP



TIGHTNESS TEST OF GAS FILLED SWITCHGEAR



VERIFICATION OF STRENGTH OF MATERIALS AND PARTS (LIFTING) UP TO 5000KG



Al-Ahleia Testing Laboratories conducts various type tests as per international standards.

## MEDIUM VOLTAGE SWITCHGEAR & BUS DUCT

Temperature Rise Test up to 5000A

Dielectric Test on main circuit

- a. Power Frequency withstand voltage – up to 110 kV
- b. Impulse withstand voltage – Up to 350 kV peak
- c. Insulation resistance test – Up to 5 kV/ 950 GΩ

Dielectric test on auxiliary and control circuit

- a. Power Frequency withstand voltage – Up to 4.5 kV
- b. Insulation resistance test – Up to 5 kV / 950 GΩ

Verification of Degree of Protection up to IP55

Measurement of resistance of main circuit - Switchgear

Mechanical Operation & Endurance Test - Switchgear

Partial Discharge Test - Switchgear

Tests to Prove the Strength of Gas Filled Compartment  
up to 6 bar Gauge Pressure - Switchgear

Tightness Test of Gas Filled Switchgear - Switchgear





# SWITCHGEAR LABORATORY





# ACCREDITATION



## UKAS ACCREDITATION

Accreditation by UKAS demonstrates the competence, impartiality and performance capability of Al-Ahleia Testing Laboratories.

# Certificate of Accreditation



**Al-Ahleia Switchgear Co., K.S.C.C.**

Testing Laboratory No. 7782

**Is accredited in accordance with International Standard ISO/IEC 17025:2017 – General Requirements for the competence of testing and calibration laboratories.**

This accreditation demonstrates technical competence for a defined scope specified in the schedule to this certificate, and the operation of a management system (refer joint ISO-ILAC-IAF Communiqué dated April 2017). The schedule to this certificate is an essential accreditation document and from time to time may be revised and reissued.

The most recent issue of the schedule of accreditation, which bears the same accreditation number as this certificate, is available from [www.ukas.com](http://www.ukas.com).

This accreditation is subject to continuing conformity with United Kingdom Accreditation Service requirements.



**Matt Gantley**, *Chief Executive Officer*  
United Kingdom Accreditation Service

Initial Accreditation: 17 March 2014  
Certificate Issued: 25 January 2024



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UKAS is appointed as the sole national accreditation body for the UK by The Accreditation Regulations 2009 (SI No 3155/2009) and operates under a Memorandum of Understanding (MoU) with the Department for Business and Trade (DBT).





## ASTA RECOGNITION

Al-Ahleia Testing Laboratories are ASTA Recognized as RTL Level 4.

The ASTA Certification provides an independent compliance test certificate accepted by all.



Total Quality. Assured.

### Intertek RTL Level 4

### ASTA Recognized Laboratory

The following organization has been assessed and found to comply with the relevant requirements of ISO/IEC 17025: 2017 and the Intertek Recognized Laboratory Program Manual and accepted by Intertek as a Level 4 Recognized Testing Laboratory

Al-Ahleia Switchgear Co. K.S.C.C.  
P.O. Box 25876  
Safat 13119  
Kuwait

and is hereby authorised to undertake test work for ASTA certification purposes for the product types and standards identified on the endorsement forming part of this document.

Agreement number	2014-RTL-L4-80
Issue number:	4
Original issue date:	January 2015
Expiry date:	31 December 2026

R.W. Hayward



15 February 2023

Name

Signature

Date

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Intertek Page 1 of 2 doc ref TF-ASTA-RTL-01 23/03/2021



# **DISTRIBUTION AND POWER TRANSFORMERS**

## **(OIL FILLED TYPE & CAST RESIN TYPE)**

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Temperature Rise Test up to 50MVA

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Dielectric Test on Main Circuit

- a. Power Frequency Withstand Voltage up to 450kV
  - b. Lightning Impulse Voltage / Chopped Wave up to 900kVp
  - c. Insulation Resistance Test up to 5kV / 950GΩ
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Induced AC Voltage Test with Partial Discharge Measurement

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Sound Level Test

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Sweep Frequency Response Analysis

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Measurement of Voltage Ratio & Check of Phase Displacement

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Measurement of Winding Resistance

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Measurement of Oil BDV up to 100kV

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Measurement of Dissolved Gases in Oil

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Measurement of Capacitance and Tan  $\delta$  of Oil and Transformer

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Hydraulic Pressure Deflection / Pressure Test on Transformer and Cable Box / Vacuum Deflection

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Measurement of No Load Loss and Current with Testing Facility of 1000kVA Regulator,  
500kVA Intermediate Transformer (33-22-11 kV)

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Measurement of Zero Phase Sequence Impedance

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Measurement of Short Circuit Impedance and Load Loss with Testing Facility of 1000kVA Regulator,  
1000kVA Intermediate Transformer (1.1kV to 11.5kV) and HT Capacitor 16.5 MVAR

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Test on On-Load Tap Changer

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Leak Testing with Pressure for Oil Filled Transformer

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Verification of Degree of Protection up to IP55

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# TRANSFORMER LABORATORY



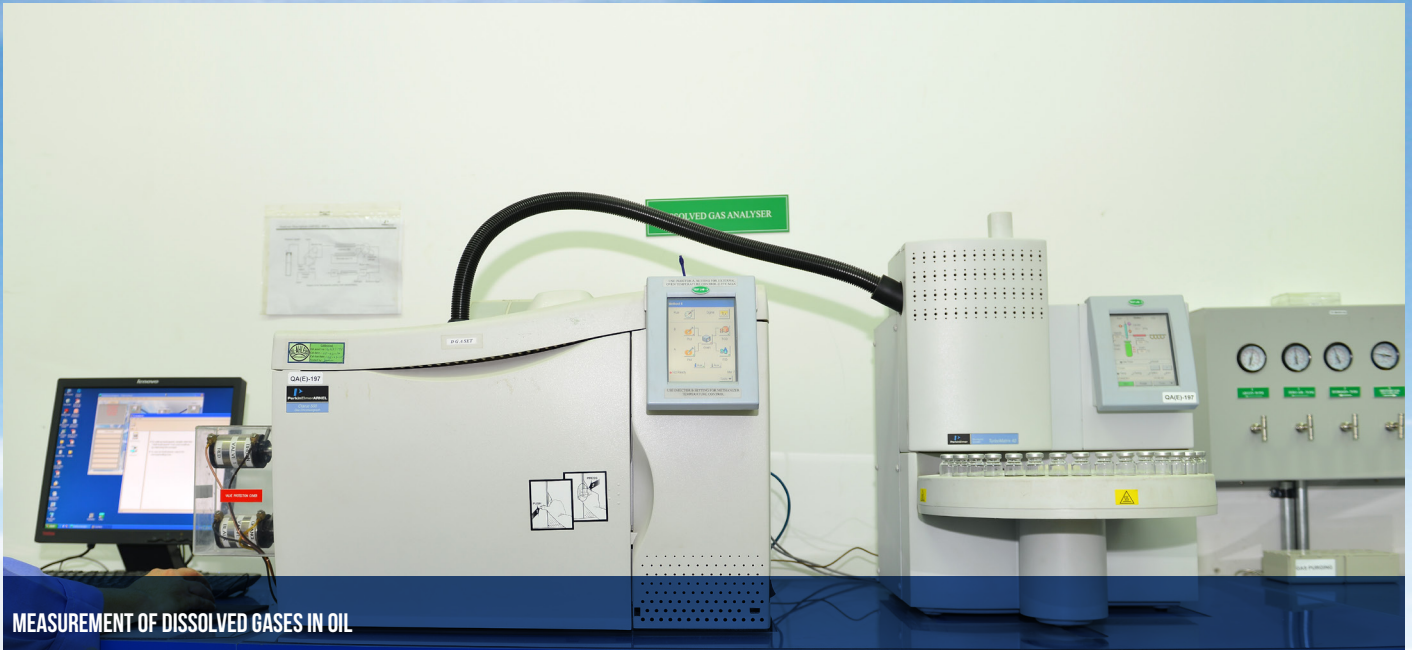
LIGHTNING IMPULSE VOLTAGE / CHOPPED WAVE UP TO 900KVP



LIGHTNING IMPULSE VOLTAGE / CHOPPED WAVE UP TO 900KVP



# TRANSFORMER LABORATORY



MEASUREMENT OF DISSOLVED GASES IN OIL



INDUCED AC VOLTAGE TEST (ACSD) WITH PARTIAL DISCHARGE MEASUREMENT



SOUND LEVEL TEST



# TRANSFORMER LABORATORY

Al-Ahleia Testing Laboratories is one of the first laboratories in the middle east to be accredited by UKAS (United Kingdom Accreditation Service) & recognized by ASTA (ASTA Recognized Laboratory / Intertek).



SWEEP FREQUENCY RESPONSE ANALYSIS



# TRANSFORMER LABORATORY



MEASUREMENT OF CAPACITANCE AND  $\tan \delta$  OF OIL AND TRANSFORMER



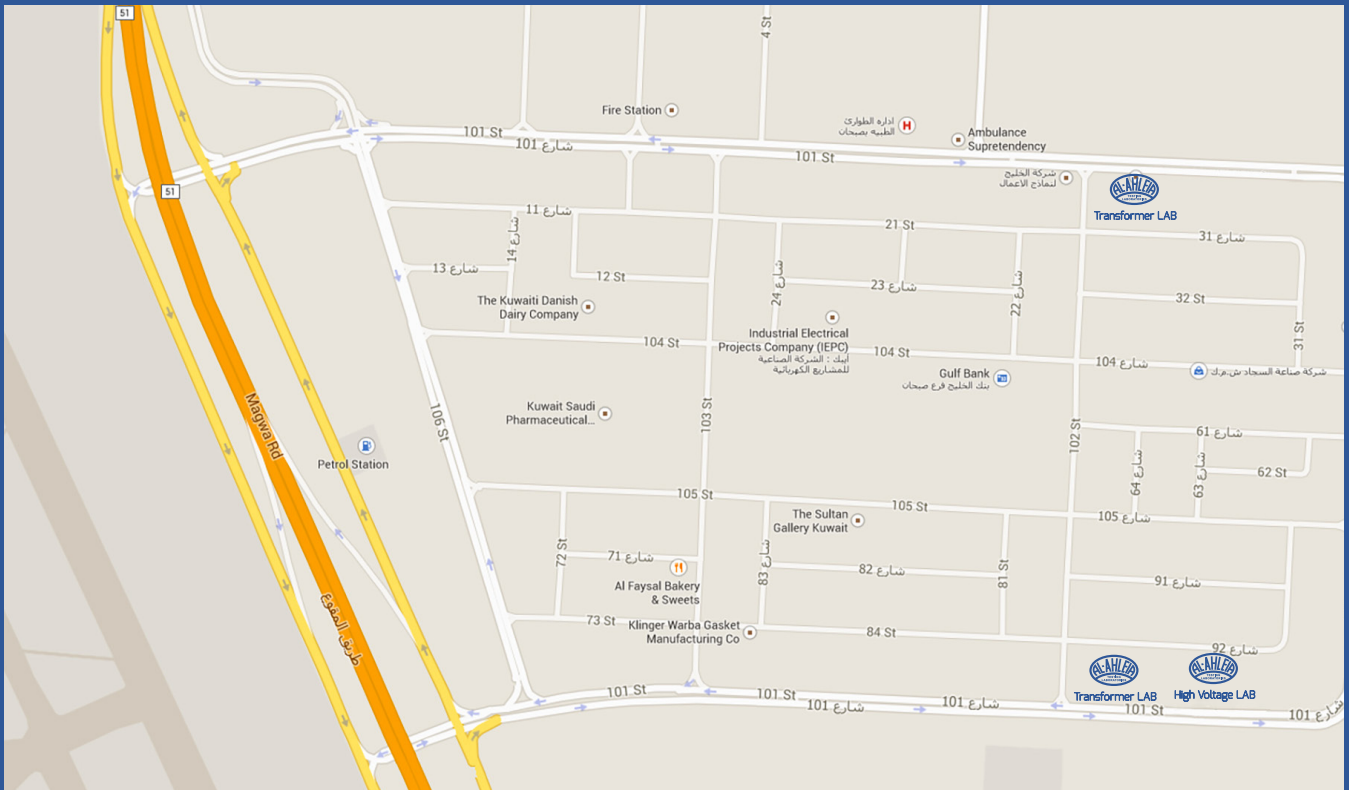
TEMPERATURE RISE TEST UP TO 50MVA



MEASUREMENT OF SHORT CIRCUIT IMPEDANCE AND LOAD LOSS WITH TESTING FACILITY OF 1000KVA REGULATOR, 1000KVA INTERMEDIATE TRANSFORMER (1.1KV TO 11.5KV) AND HT CAPACITOR 16.5 MVAR



# OUR TEAM





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Testing Laboratories

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MARCH 2024

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