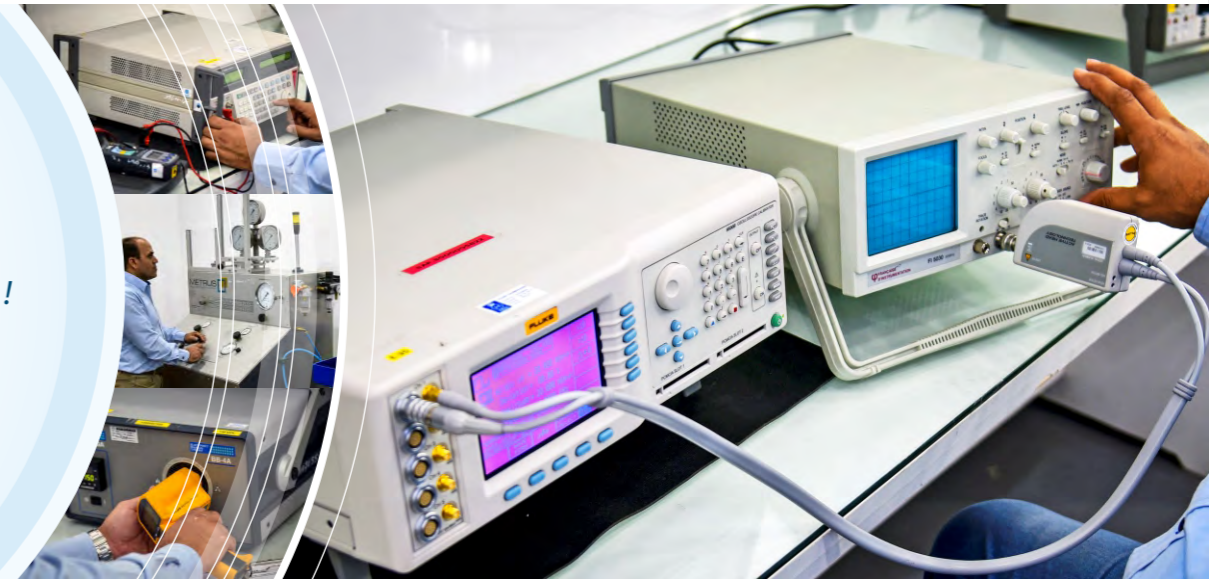


www.alfanar-calibration.com



We Calibrate Perfection !



P.O. Box 86544, Riyadh 11632, Kingdom of Saudi Arabia
T: +966 920 006 111 Service enquiries: 4299, 4295, 4296
Sales enquiries: +966 504943042; 564413353
F: + 966 11 494 5474 E: atc.sales@alfanar.com; ahmed.omer@alfanar.com

LAB | Ali Bejadi Road, Behind Taqdeer Center
Al Remal District, Riyadh

DAMMAM | P : +966 920006111, extn : 4297, 4280
F : +966 13 8265349, extn : 105
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Mobile no : +966 565304250

www.alfanar-calibration.com

Our commitment to
quality makes a difference
you can measure

Calibration Lab

alfanar Calibration Laboratory, a GAC and IAS accredited and an ISO 17025 certified laboratory, is a well-equipped, electrical and mechanical instrument and equipment calibration center.

alfanar Calibration Laboratory guarantees the efficiency of your instrument and test equipment and provides, full-service lab and on-site services. For accurate and reliable results, we have invested significantly in hi-tech and modern equipment that conform to international standards.

The lab's calibration services conform to the highest regulatory and audit requirements of various industries, like Utilities, Oil & Gas, Food & Beverage Industry, Aerospace and Transportation, Heavy Industries, Manufacturing Industries, Petrochemicals, etc... Our Calibration services are technically evaluated and approved by Utilities and major clients.

alfanar Calibration Lab is a specialized independent unit within alfanar Engineering Services which is a part of the alfanar group of companies.



Our Competitive Edge



- Our laboratories are environmentally controlled, ensuring the correct atmosphere for the precise measurements.
- Calibrate a wide range of electrical or mechanical instrument and equipment in our centralized facility
- Our Laboratory's ultramodern facility is accredited by International Accreditation Service (IAS) and the Gulf Accreditation Committee (GAC)
- Our services are in full compliance with the ISO IEC 17025 Standards
- Every measuring instrument calibrated/recalibrated by alfanar Calibration Lab receives a certificate listing the calibration result and uncertainties. Further, the records are maintained for at least 5 years enabling us to send you periodical reminders
- Our trained technicians can: Calibrate instruments ranging from the simplest meter to the most complex multifunction calibrator. If defective it can be sent to the centralized workshop for repair

Accreditation & Approvals



Generation Engineering and Projects Sector
Tel: 011-80-77100
Fax: 011-80-77101
Email: EPGPED@SE.COM.SA

Date : 13/03/2014 Ref # 02050 - - 14
To : Alfanar Calibration Laboratory.(ACL)

Attn. : Rayan Abdul Hadi
Fax : 011 4945474
Phone : 92000661/4375/4957
E-mail : at@alfanar.com

CC: Generation and Distribution Contract Division (CREGDDV@se.com.sa)

Subject : Alfanar Calibration Lab., Prequalification Request

Reference to the above mentioned subject, Saudi Electricity Company is pleased to inform you that, the prequalification request of **Alfanar Calibration Lab., Saudi Arabia/ Riyadh** as a Subcontractor is technically accepted to Saudi Electricity Company, Generation Engineering and Projects Sector as per the following:

No.	Qualification Scope	Limitations	Conditions
1	Calibration of Electrical and Mechanical Instruments	No Limitations	No Conditions

SAUDI ARAMCO
MECHANICAL SERVICES SHOPS DEPARTMENT
Contract Repair Operations Unit
Box 65, Dhahran Tel: 872-3266, Fax 876-2019
March 11, 2014

CROU: 10/2014

TECHNICAL EVALUATION OF AL-FANAR CALIBRATION LAB

Wael El-Akkawi, General Manager
ATS Saudi Arabia Co.
Jubail Industrial City
P. O Box 35388, Jubail
Kingdom of Saudi Arabia
Tel No: +966 3 341-8777
Fax No.: +966 3 341-5639

Reference to your request to Saudi Aramco/MSSD in your letter dated December 21, 2013 to evaluate your capability for Lab Calibration, your submitted documents were technically reviewed and your repair facility were found technically capable to perform the following:

Laboratory Calibration Services



Our focus and commitment to excellence have made us one of the largest and leading calibration and repair solutions provider in the region.

We attribute our success to the modern techniques, value for money and the quality driven service!

In addition, our high-quality calibration laboratory services include documentation to satisfy your industry and regulatory or audit requirements.

Our well-equipped lab implements the use of various parameters to ensure that the instrument sent to us for calibration and repair are thoroughly checked and rectified so that you can be assured of an optimum accuracy on the machines that we have calibrated at our lab.

Huge investment in manpower to guarantee resource availability for on-site work & loop check.



Electrical

Calibration Range:

- AC/DC volt up to 1000V;
- AC/DC current up to 10 A direct & 1000 A clamped;
- Resistance up to 100 GΩ;
- Frequency measurement up to 3 Ghz;
- Capacitance up to 1 mF.

Calibration Method Used:

EURAMET cg-15-version 3.0 (02/2015)

Some Equipment /
Instrument
Calibrated

In Lab

- Multifunction calibrators
- Precision Multimeters
- Oscilloscopes

- Power & energy meters
- Insulation testers

On Site

- HV Machines
- HV Trailers
- Tan Delta Equipment



Temperature

Calibration Range:

- -100°C Up to 700°C.
- Infrared thermometer up to 900°C.
- Humidity.

Calibration Method Used:

ITS-90

Some Equipment /
Instrument
Calibrated

In Lab

- Ovens
- Thermographic Cameras
- IR Temperature equipment

On Site

- Ovens
- Thermographic Cameras
- IR Temperature equipment



Pressure

Calibration Range:

- -1 bar Up to 1400 bar Hydraulic;
- -1 bar up to 200 bar pneumatic.

Calibration Method Used:

BS EN 837-1:1998

Some Equipment /
Instrument
Calibrated

In Lab

- Dead Weight Testers
- Pressure Gauges
- Calibrators

On Site

- Dead Weight Testers
- Pressure Gauges
- Calibrators

Additional Capabilities



Torque

Calibration Range:

- Up to 65 Nm generation
- Up to 1500 Nm generation;
- Up to 3000 Nm measuring

Calibration Method Used:

BS EN 6789:2003

Some Equipment /
Instrument
Calibrated

In Lab

- Torque testers
- Torque transducers
- Torque wrenches

On Site

- Torque wrenches



Mass

Calibration Range:

- 1 mg up to 1000 kg.

Calibration Method Used:

OIML R111-1 2004 (E)

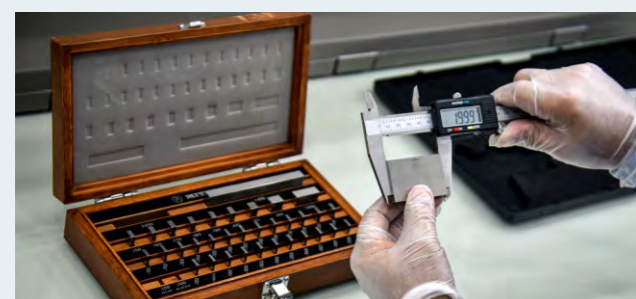
Some Equipment /
Instrument
Calibrated

In Lab

- Standard weights
- Weighing balances

On Site

- Forklifts
- Platform Weighing Scales
- Cranes
- Heavy Chains



Dimension

Calibration Range:

- Up to 1000 mm.

Calibration Method Used:

DIN 862, 863

Some Equipment /
Instrument
Calibrated

In Lab

- Micrometers & Vernier calipers
- Depth & height gages

On Site

- Micrometers & Vernier calipers
- Depth & height gages

Parameter	Calibration Range
High voltage	Up to 150 kV AC/DC
Sound level	94 & 114 dB
Vibration	Displacement, velocity & acceleration
PH	PH No. 4 & 7
Coating thickness	24.1, 49.6, 124.8, 249.2, 504 & 1028 μ m
Tachometer	Up to 6000 rpm
Light Meter	Up to 20000 LUX
Tensile	Up to 25 Ton
TAN DELTA	Up to 10.5
Safety valves	Up to 600 bar hydraulic, 300 bar pneumatic & 16" size
Hot loop test	-
I & C onsite calibration	-
Energy meter calibration	From various manufacturers
Power measurements including harmonics	-
Sf6 equipment	-
Gas analyzers	-
Inspection & repair	-

Onsite **Calibration & Loop Checking** and **Instrumentation** Services



alfanar calibration has the capability to service and calibrate a range of instruments at your own premises resulting in reduced turnaround time and improved efficiency. Our field service engineers to visit your facility and promptly calibrate your test equipment for accurate and precise performance.

- Capable of set up on-site lab
- Calibration of complete plant Hot Loop test and I&C package
- With a large resource of technical staff, mobilization of the team is available on short notice
- Our generous investments in assets and resources enables us to handle multiple activities parallelly
- Mobility to provide timely service to your facility
- On-site calibration and certification of process control instruments
- On-site calibration and related services during Plant shutdown and maintenance
- Capable of providing multiple workforces at 24/7 including night shifts to meet tight schedule

System Loop Checks:

All Calibration Services include complete control loop checking. The entire control and/or monitoring system of a process, from the input/process sensing device to the control and monitoring units to the final output device, is checked for proper operation & calibration including the provision of process calibrators and field communicator or any other required tools.

**Huge resources
to provide timely service
at your facility**

Asset Management & Recalibration Reminder Service

Industries Serviced



Through the use of advanced asset management and software we are able to offer a service which keeps track of calibration dates for equipment and for sending out the reminder reports. This is part of our commitment to calibrating equipment on time, to ensure peace of mind but most importantly to enable clients to make the right decision at the right time. Moreover, the service contracts are tailored to our meet customer's Instrumentation Service needs.

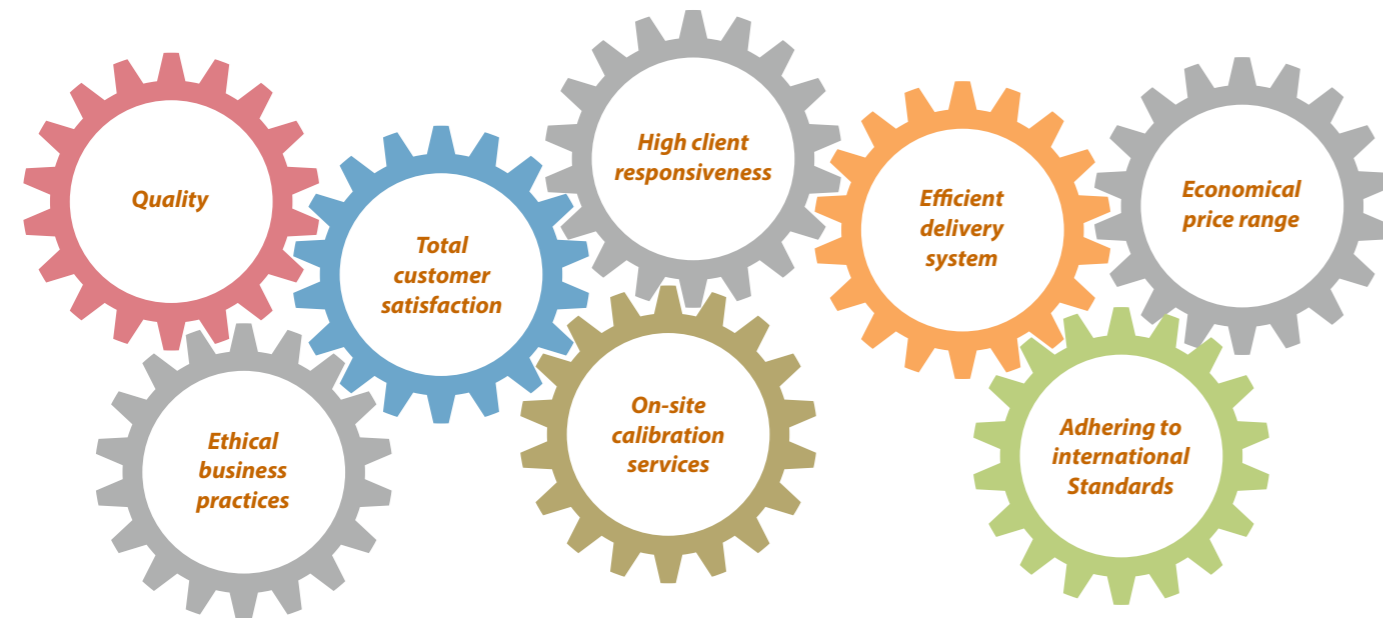
Each calibrated equipment or instrument is documented and recorded in our systems and is available for a period of 5 years. This will ensure to keep a periodic track of the service intervals of your instrument.

- | | |
|--|--|
| ▶ Utilities | ▶ Plastic and Paper Industry |
| ▶ Oil & Gas | ▶ Steel Factory |
| ▶ Petrochemicals | ▶ Ceramic Industry |
| ▶ Construction industry | ▶ Precast and cement Industries |
| ▶ Moulds factory | ▶ Food & Beverages |
| ▶ Transformer factory | ▶ Healthcare |
| ▶ Low Voltage & Medium Voltage Switchgear | ▶ Education |
| ▶ Cable Factories | ▶ Aero & Transportation |

Operational Excellence



For accurate and reliable results, we have invested significantly in hi-tech and modern equipment that conform to international standards and are approved and supported by leading manufacturers. The Lab's calibration services conform to the regulatory and audit requirements of your industry!



Our Major Clients



alfanar Calibration Laboratory is also an authorised center for major OEMs like **MEGGER** and **Chauvin Arnoux**