



**INTERNATIONAL ELECTROTECHNICAL COMMISSION SYSTEM FOR
CERTIFICATION TO STANDARDS RELATING TO EQUIPMENT FOR USE IN
EXPLOSIVE ATMOSPHERES (IECEx SYSTEM)**

TITLE: IECEx Assessment Report for the acceptance of Karandikar Laboratories Pvt Ltd, as an Accepted IECEx Test Laboratory, ExTL, within the IECEx System, Equipment Scheme 02.

Circulated to: Ex Management Committee, ExMC

INTRODUCTION

This document contains the IECEx Assessment Report for the acceptance of Karandikar Laboratories Pvt Ltd, as an Accepted IECEx Test Laboratory, ExTL, within the IECEx System, Equipment Scheme 02.

Please consider this assessment report and return the completed voting form, separate Word document, to the IECEx Secretary by-

4th May 2015

Your speedy response to the voting process will be very much appreciated.

Chris Agius

IECEx Secretary

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**IEC System for certification to standards relating to equipment for use in
Explosive Atmospheres (IECEx System)**

IECEx Assessment Report Form

IECEx Assessment Report Form for use by IECEx Assessment Teams to report
Assessments conducted according to the IECEx Assessment Procedures of

- a) Operational Document IECEx OD 003-2 for the Certified Equipment Scheme
- b) Operational Document IECEx OD 016 for the Certified Service Facility Scheme
- c) Operational Document IECEx OD 022 for the IECEx Conformity Mark Licensing System

IECEx ExCB/ExTL assessment report for Karandikar Laboratories

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1 Assessment information

1.1 Type of Body covered by this assessment: <retain appropriate marks>

ExCB for IECEx Certified Equipment Scheme	
ExTL for IECEx Certified Equipment Scheme	✓
ExCB for IECEx Certified Service Facilities Scheme	
ExCB for IECEx Conformity Mark Licensing System	

NOTE 1 ExCB - IECEx Certification Body

NOTE 2 ExTL - IECEx Testing Laboratory

1.2 Type of assessment: <retain appropriate marks>

Pre-assessment for candidate body	
Initial assessment for candidate body	✓
Surveillance	
Re-assessment	
Scope extension	

1.3 Details of body

1.3.1 Country

India

1.3.2 Name of body

Karandikar Laboratories Pvt Ltd

1.3.3 Name and title of nominated principal contact

Name	Title	E-mail address
Ravi Paranjpe	Director Operations	ravi@karandikarlab.com

1.4 Assessment information

1.4.1 Members of the assessment team

Name	Role (modify as necessary)
Jim Munro	Lead Assessor
Vijay Varma	Expert Assessor

1.4.2 Place(s) of assessment

Gat No 142, Betegaon, Boisar Chilhar Road, Opp Union Park, Boisar (E), Dist Palghar, PIN 401501	
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1.4.3 Assessment date(s)

1 and 2 December 2014.

1.5 Application information

Date of application: 21 August 2014 with revision to scope requested sent by email on 1 December 2014.

1.6 Scopes

1.6.1 ExTL scope for equipment certification scheme

Number	Title
IEC 60079-0 Edition 6	Explosive atmospheres - Part 0: Equipment - General requirements
IEC 60079-1 Edition 7	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"

Number	Title
IEC 60079-2 Edition 6	Explosive atmospheres - Part 2: Equipment protection by pressurized enclosure «p»
IEC 60079-5 Edition 3	Explosive atmospheres - Part 5: Equipment protection by powder filling «q»
IEC 60079-6 Edition 3	Explosive atmospheres - Part 6: Equipment protection by oil immersion «o»
IEC 60079-7 Edition 4	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
IEC 60079-11 Edition 6	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-15 Edition 4	Explosive atmospheres – Part 15: Equipment protection by type of protection "n"
IEC 60079-18 Edition 3	Explosive atmospheres – Part 18: Equipment protection by encapsulation "m"
IEC 60079-25 Edition 2	Explosive atmospheres – Part 25: Intrinsically safe electrical systems
IEC 60079-26 Edition 3	Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga
IEC 60079-30-1 Edition 1	Explosive atmospheres – Part 30-1: Electrical resistance trace heating – General and testing requirements
IEC 60079-31 Edition 2	Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t"

NOTE 1 Standards shown with an asterisk (*) are superseded standards

NOTE 2 Unless otherwise indicated, earlier editions of standards (even if with a different number) are considered to be covered in the above scope for the purposes of the assessment.

NOTE 3 The above list highlights any extension of scope in the list above for new standards or later editions of standards already in scope.

At the assessment visit it was agreed that IEC TR60079-16 would be dropped from the application and that IEC 60079-30-1 would be added. This was subsequently confirmed by email to the IECEx Secretariat on 1 December 2014.

2 Common information

2.1 Legal entity of body

Karandikar Laboratories Pvt Ltd is an independent legal entity and is incorporated with Registrar of Companies, Government of Maharashtra having number U 33125 MH 2004 PTC 145610. The Certificate of Incorporation showing the above incorporation dated 12 April 2004 was viewed. The company is not part of a larger organization.

2.2 Financial support

The operation is fully supported by income from its activities such as calibration, testing and training.

2.3 History

The company was initially incorporated as a proprietary concern "Karandikar & Associates" in the year 1991 with the sole object of providing Test and Calibration services in the field of Electro-technical components and equipment. Services were limited to weatherproof tests as per IS 2147 and NEMA 4. In response to increased demand, the facilities were expanded to cover climatic tests such as Dry heat, Damp heat, Humidity, Dry Cold, Dust, Salt Mist and Rain Simulation.

In 1995, Calibration services were added with assistance from M/S UK CALIBRATION AND TESTING CONSULTANTS LTD (UKCTC). One of the directors of UKCTC with experience in electrical measurements and in the auditing of NAMAS (UK) accredited laboratories came to India to impart training to Karandikar & Associates staff for periods of four weeks in Feb 95 and Feb 97 respectively.

The constitution of the company was amended in 2004, and it is now a Private Ltd. Company known as “**Karandikar Laboratories Pvt. Ltd.**” providing test and calibration services to industry. M/s Karandikar Laboratories Pvt. Ltd. has taken over the laboratory operations of M/s Karandikar & Associates with effect from May 2004.

The company entered into a co-operation agreement in October 2008 with a test and certification body **Baseefa Ltd, UK. Baseefa** which has a high reputation for testing and certification in the field of equipment for use in hazardous areas.

In 2009 test facilities were commissioned in Boisar to cover testing of Enclosures of Electrical Equipment in line with IS/IEC 60079 series of standards, and safety testing in line with IEC 61010 and 61950.

In 2010, the calibration facilities were shifted from Dahanu to Boisar with the view of providing better co-ordination of activities thereby improving services to customer and adequate utilization of resources.

In 2012, activities of inspection and training were introduced and were identified as a separate division of Karandikar Laboratories. For this a separate quality manual is issued and accreditation for these activities will be sought under NABCB - a division of Quality Council of India (QCI).

Karandikar Laboratories Pvt Ltd have three divisions namely Calibration Laboratory, Testing Laboratory, and Inspection and Training.

2.4 Documentation

2.4.1 Quality manual

The Quality Manual is a tier one top level document, which contains Quality Policy incorporating the , objectives and commitments of the management and staff of the laboratory. It includes brief guidelines and the overall operating system, and is prepared in such a manner that all requirements of IS / ISO / IEC 17025:2005 are addressed. Reference to procedures is made at the end of the document. The manual has been prepared by the Quality Manager and is approved and issued by the Chief Executive Officer. Annexes to the Quality Manual contain a copy of layout, a copy of list of formats, and a copy of list of procedures. The Quality Manual viewed during the assessment was at Issue 8, Revision 00 and found to cover IECEx requirements.

2.4.2 Procedures

Laboratory Procedures are the tier two documents containing calibration and test procedures. These are divided into four sections.

Section A contains System procedures, common procedures and specific calibration procedures for calibration of instruments in laboratory.

Section B contains calibration procedures for calibration of instruments at customers' sites.

Section C contains general purpose procedures related to testing and specific testing procedures.

Section D contains test procedures for product testing to IEC Ex latest standards. They were reviewed and found to meet IECEx requirements.

2.4.3 Work instructions

Test and calibration procedures above contain sufficient details and so separate work instructions are not prepared.

2.4.4 Records (including test records where relevant)

Control of records is addressed in Chapter 14 of the Quality Manual. Form F#44 addresses retention time for records. Critical documents, such as reports for Ex testing are not destroyed. They are retained in hard form in locked storage.

NOTE 1 Example records should be sought of oldest records both in electronic and hard copy to test the retrieval and existence of records, including archival records.

NOTE 2 Information should be sought on whether there is a method of secure disposal of hard copy records once they have been placed on an electronic system.

2.4.5 Document change control

Document change control is as per Chapter 4 of the quality manual and procedure Doc 14. Staff only have access to a pdf version on the internet. These are there for reference and staff are advised not to print copies. Procedures that are needed for testing are kept at the testing locations in hard copy and are controlled.

Publications are purchased in print form or electronic form. Those procured in hard copy format are stamped as "CONTROL DOCUMENT" or "REFERENCE COPY" as the case may be. Electronically acquired control documents are stored on the server for reference.

2.5 Confidentiality

Policy for freedom from undue pressures, proprietary rights and confidential information, impartiality and operational integrity is covered in Quality Manual sections # 2.4, # 2.5, # 2.6. A written signed undertaking and agreement to observe impartiality, confidentiality and integrity is obtained by staff at the time of joining the organization. The format is given in GP # 003. The signed agreements are kept in each person's file which also documents educational qualifications and training. Examples of signed agreements were viewed and found to meet the requirements for IECEx

2.6 Publications (Hard cover and Electronic)

Karandikar Laboratories do not issue any publications. They do have a website that includes news updates relevant to the operation.

2.7 Recognition and agreements

The laboratory has attained the following accreditations and recognitions:

- 1) National Accreditation Board for Testing and Calibration Laboratories NABL – Testing
- 2) National Accreditation Board for Testing and Calibration Laboratories NABL – Calibration
- 3) Petroleum Explosives Safety Organization : PESO (CCoE)
- 4) Bureau of Indian Standards : BIS
- 5) Quality Council of India : for training division QCI
- 6) SGS BASEEFA as an associate testing laboratory for its IECEx ExTL
- 7) Director General of Mine Safety (DGMS)

2.8 Internal audit and periodic management review

Internal auditing requirements are addressed in the Quality Manual Section 15. Audit observations are recorded on Audit observation form F#02A and NCs are reported in Non-Conformance Audit Report Form (Format # F02 Doc.AX –A2) by the auditor. An audit summary (F 03) is also prepared. There are five internal audits carried out in the course of a year addressing different areas of the operation. There is an audit schedule included in the manual. The audits are done as both horizontal and vertical audits.

An audit carried out on 13 September 2014 was reviewed. It raised 5 non-compliances. All were subsequently resolved.

Management review requirements are addressed in Quality Manual Section 16. This states that the CEO will conduct a review once a year. But it was advised that in practice they are presently taking place more often. The manual lists the topics that will be addressed in the review. The last review took place on 30 October 2014. The minutes of the meeting were reviewed. There were some very good recommendations flowing from the meeting and evidence of implementation of these was already in evidence at the time of the assessment visit. The requirements for management review were found to meet the requirements of IECEx.

2.9 Contracting, subcontracting, use of other labs and use of other locations

Quality Manual Section 6 : Testing and calibration work which will be subcontracted to an another laboratory in the event that the Karandikar Laboratories' own facilities are temporarily non functional or where Karandikar Laboratories does not have the capability. The manual states that subcontracting will be done only after the consent of the customer either written or through email. The work will only be sub contracted to a competent sub-contractor only after verification of his scope, competence, capability, and after confirmation of his accreditation.

When either complete or part of testing is performed at a customer's site, the IEC procedure # OD024 will be followed.

Subcontracting or witness testing will only be undertaken by agreement with the ExCB, SGS Baseefa, and subject to their controls. This is addressed in the procedures covering the working relationship between SGA Baseefa and Karandikar Laboratories.

Sub-contractor details are recorded in the vendors register maintained for this purpose (in form# F14). This includes details of accreditation. The records for subcontractors were reviewed. Subcontractors are either Indian laboratories with NABL accreditation for the tests or the SGS Baseefa ExTL.

Tests that have been identified as needing subcontracting include:

- Radio frequency measurement (IEC 60079-0)

- Vibration test (IEC 60079-7)

- Shock test (IEC 60079-7)

- Resistance to chemical agents for Group I electrical equipment (IEC 60079-0)

More details are included the site assessment report.

2.10 Training and competence

Quality Manual Sec # 18 : It is ensured that the personnel employed have adequate qualification and experience as per defined competency criteria. Any new employee is screened and then inducted if found suitable. The employee undergoes a thorough orientation program and starts working under guidance of suitable senior staff depending on the type of work assigned. A training program is prepared depending on qualification, experience and perceived potential.

There are two competency matrices, one addresses competency by test and the other (F # 34) addresses competence by IEC standard and associated test procedures. Some updating for the matrices was required during the assessment visit. This was completed and found to meet the requirements of IECEx.

2.11 Complaints and appeals (including appeals to IECEx)

Quality Manual Sec. 9 lays down the procedure. Complaints are registered in a complaint register (Format # F13 Doc.AX –A2) and an acknowledgement is sent to the complainant. Technical Manager, Quality Manager and Senior Laboratory Engineer discuss the complaint

and plan a suitable line of action considering the specific points. The complaints register was reviewed .

The procedures relevant to the relationship between Karandikar Laboratories and SGS Baseefa were revised to make it clear that any appeal relevant to IECEx certification should be dealt with through SGS Baseefa.

2.12 Special facts to be noted

2.12.1 Supporting documentation

Copies of additional supporting information for this assessment have been provided to the applicant and the IECEx Secretariat. These are included in a site assessment report and include:

- Details of issues raised and how these have been resolved
- Checklist for ISO/IEC 17025
- Completed Technical Capability Document (TCD) for the standards in the scope
- Photos of the facilities/tests witnessed (included in the above)

2.13 Recommendations

Based on the assessment performed on Karandikar Laboratories Pvt Ltd, it is recommended for acceptance into the IECEx scheme as:

- An ExTL in the IECEx Certified Equipment Scheme

This is according to the scope of the standards listed in this document.

Jim Munro	Vijay Varma
Lead Assessor	Expert Assessor

Date: 2 March 2015

3 ExTL for IECEx Certified Equipment Scheme

3.1 Assessment references

- a) IECEx02 IECEx Certified Equipment Scheme covering equipment for use in explosive atmospheres – Rules of Procedure
- b) IECEx OD003-2 Assessment, surveillance assessment and re-assessment of ExCBs and ExTLs operating in the IECEx 02, IECEx Certified Equipment Scheme
- c) IECEx OD009 Issuing of CoCs, ExTRs and QARs
- d) ISO/IEC 17025:2005 Edition 2, General requirements for the competence of testing and calibration laboratories
- e) IECEx Document OD17 Drawing and documentation guidance
- f) IECEx Technical Capability Documents (TCDs)
- g) ExTAG Decision Sheets (DSs)

NOTE The latest editions of the above documents were applied.

3.2 Candidate ExTL persons interviewed

Name	Position
Ravi Paranjpe	Director -Operations
Atul Marathe	Technical Manager with additional responsibility of Quality Manager
Nilesh Mahadik	Sr. Laboratory Engineer
Mayur Patel	Laboratory Engineer (Testing)
Vijendra Bari	Laboratory Engineer (Testing)
Javed Shaikh	Laboratory Engineer (Testing)
Rupesh Mukane	Jr. Laboratory Engineer (Testing)
Deepak Reienzo	Jr. Laboratory Engineer (Testing)
Sanjay Dubla	Jr. Laboratory Engineer (Testing)
Sunil Bheskar	Jr. Laboratory Engineer (Testing)

3.3 Associated ExCB(s)

The associated ExCB is SGS Baseefa Ltd located in the UK. There is a signed agreement between the two parties and procedures that address how their relationship will work as ExCB-ExTL. This involves a change from the current relationship where Karandikar Laboratories operates as an IECEx associate laboratory of the SGS Baseefa ExTL.

3.4 Organisation

3.4.1 Names, titles and experience of the senior executives

Name	Title	Experience
Ajit Karandikar	CEO	40 Years
Ravi Paranjpe	Director-Operations	30 Years

3.4.2 Name, title and experience of the quality management representative

Name	Title	Experience
Ajit Karandikar	CEO	40 Years
Atul Marathe	Technical Manager	28 Years
Javed Shaikh	Assistant Manager QA	8 years

3.4.3 Other employees in ExTL activity

Name	Title/responsibility	Experience in Ex
Nilesh Mahadik	Sr. Laboratory Engineer	3 Years
Mayur Patel	Laboratory Engineer (Testing)	2 ½ Years
Vijendra Bari	Laboratory Engineer (Testing)	3 Years
Javed Shaikh	Laboratory Engineer (Testing)	2 Years
Rupesh Mukane	Jr. Laboratory Engineer (Testing)	2 ½ Years (IP and ENV)
Deepak Reienzo	Jr. Laboratory Engineer (Testing)	5 Years
Sanjay Dubla	Jr. Laboratory Engineer (Testing)	1 ½ Years
Sunil Bheskar	Jr. Laboratory Engineer (Testing)	4 Years

3.5 Organizational Structure

As attached in Annex A

3.6 Resources

The laboratory is well resourced with appropriate test conditions, a good range of test equipment, comprehensive list of test procedures and competent staff.

3.7 Test reports issued

The following is the number of test reports that were issued during past four years for the purpose of Indian certification. A few of the jobs also involved providing test data for the purpose of SGS Baseefa issuing an ExTR.

Standard numbers	Type of protection or other identifying information	Number of issued reports (for last 4 years)				Total
		2011	2012	2013	2014	
IS/IEC 60079-1	Flameproof enclosure Ex d	31	41	44	39	155
IS/IEC 60079-2	Pressurised enclosure Ex p	4	1	2	5	12
IS/IEC 60079-7	Increased Safety Ex e	4	6	6	9	25
IS/IEC 60079-11	Intrinsic Safety Ex i	27	27	14	16	84
IS/IEC 60079-15	Non Sparking Ex n	28	4	39	38	109
IS/IEC 60079-18	Encapsulation Ex m	0	1	1	2	4
IS/IEC 60079-25	Intrinsically Safe systems	0	2	3	0	5
IS/IEC 60079-31	Ex t	0	0	0	5	5
IS/IEC 60079-30-1	Electrical resistance trace heating	0	0	0	0	0

NOTE Above include reports to IEC 60079-0

3.8 National accreditation

Karandikar Laboratories holds accreditation from the National Accreditation Board for Testing and Calibration Laboratories (NABL) to ISO/IEC 17025 for:

- Testing - certificate T-1641 valid from 07/01/2014 until 06/01/2016; and
- Calibration - certificates C-0149, -0150 and -0151 valid from 19/10/2014 until 18/10/2016

The scope for testing covers all standards requested as an ExTL with the exception of IEC 60079-30-1. It was advised the reason for this was that the standard had not been adopted in India at the time of the last NABL assessment. It is being scheduled for inclusion in the next assessment which is expected to take place in 2015.

3.9 Calibration

The instruments used for calibration have traceability to National / International Standards. This is achieved via calibration of instruments at accredited laboratories. Most calibration is done by its own NABL accredited calibration laboratory. Where their laboratory does not have the capability the calibration is done by other NABL accredited laboratories. The Ex d pressure transducers and charge amplifiers are calibrated by Kistler.

All equipment is located in an equipment register which includes details of calibration date and due dates. All equipment viewed during the assessment was found to be in calibration.

4 Comments (including issues found during assessment)

4.1 Witnessed tests

The following tests were witnessed during the assessment visit:

- Flameproof pressure determination (with Hydrogen) to IEC 60079-1

- Flameproof pressure test to IEC 60079-1

- Temperature rise on a luminaire

- Use of the spark test apparatus on an active power supply to IEC 60079-11

- Electrolyte leakage test for cells and batteries, short circuit test of battery to IEC 60079-11

- 4 kPa Pressure test followed by IP6X test to IEC 60079-31

- Resistance to impact test for Group I to IEC 60079-0

- Surface resistance test of parts of enclosures of non-metallic materials to IEC 60079-0

All were performed competently to the satisfaction of the assessment team, although there were some problems with the electrolyte leakage test that needed to be resolved before the test was deemed acceptable.

4.2 Issues

There were a few issues raised during the assessment. In addition to those documented earlier in this report, these included clarification in the procedures regarding which body will prepare the test plan, the provision of evidence regarding test apparatus for testing to IEC 60079-30-1 and the need for additional competences for assessment to IEC 60079-11.

All were subsequently resolved to the satisfaction of the assessment team.

5 Annexes

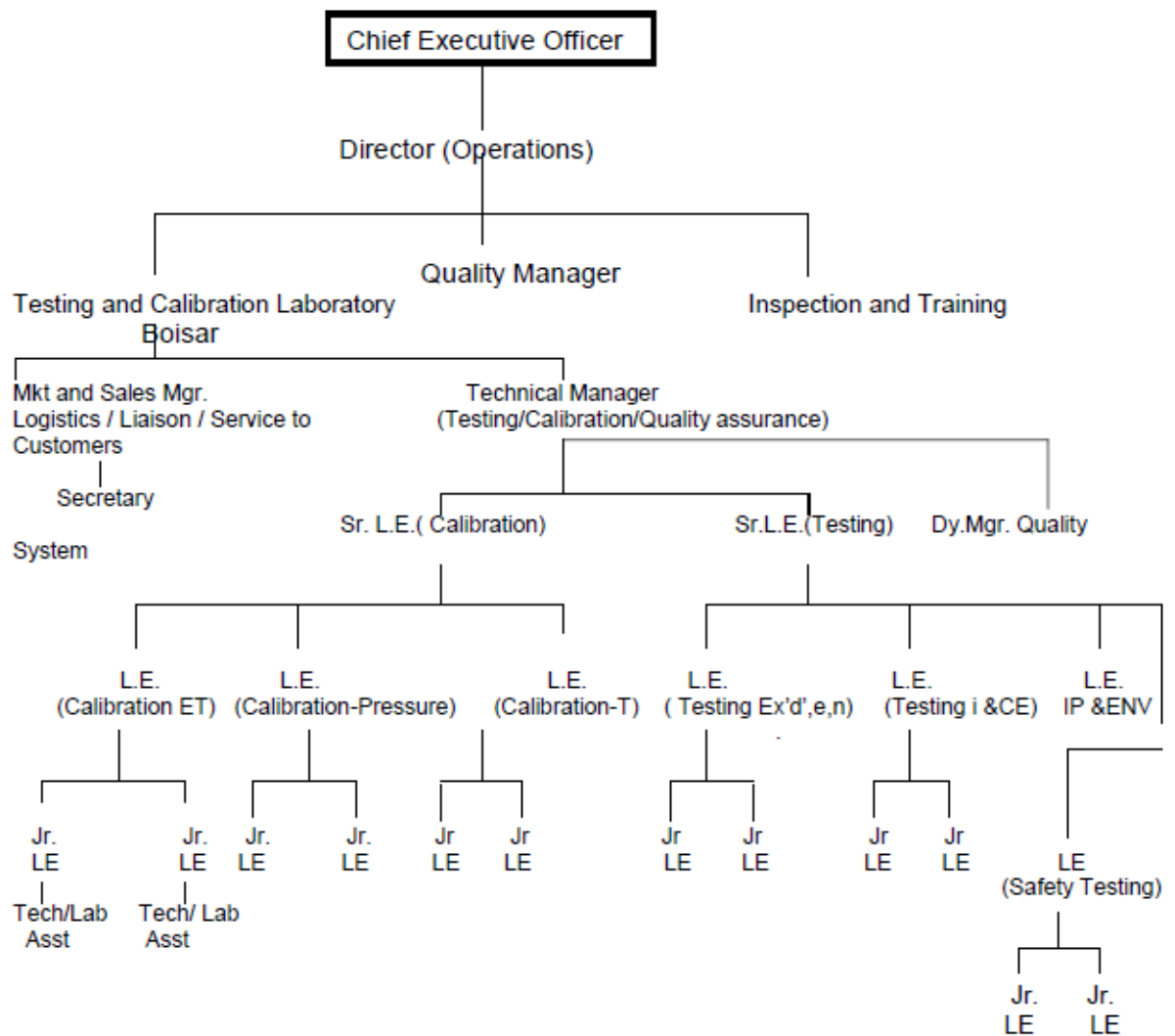
See Contents. (add, modify or delete annexes as necessary). Please note the following instructions for the IEC template:

NOTE When creating a new annex **DO NOT** type the word Annex, just create a new empty page and then apply the styles ANNEX_title to the first (empty) line. The word "Annex" followed by the letter "A" or "B", etc will automatically appear.

Annex A Organisation Chart

A.1 Organisation Structure :

The chart shown below explains the structure:



LE: Laboratory Engineer; Sr. LE: Senior Laboratory Engineer; Jr. LE: Junior Laboratory Engineer

Annex B
Accreditation Certificate for Testing to ISO/IEC 17025



NABL

**National Accreditation Board for
Testing and Calibration Laboratories**
Department of Science & Technology, India

CERTIFICATE OF ACCREDITATION

KARANDIKAR LABORATORIES PVT. LTD.

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2005

"General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at

Gat No. 142, Boisar Chilhar Road, Opp. Union Park, At Betegaon, Boisar (E), Taluka Palghar, Maharashtra

in the discipline of
ELECTRICAL TESTING

(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Certificate Number T-1641

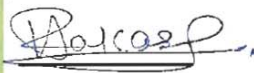
Issue Date 07/01/2014



Valid Until 06/01/2016

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the additional requirements of NABL.

Signed for and on behalf of NABL



R. Prakash
Convenor



Anil Relia
Director



Dr. T. Ramasami
Chairman

Annex C
Accreditation Certificates for Calibration to ISO/IEC 17025


NABL
**National Accreditation Board for
Testing and Calibration Laboratories**
Department of Science & Technology, India

CERTIFICATE OF ACCREDITATION

KARANDIKAR LABORATORIES PRIVATE LIMITED
has been assessed and accredited in accordance with the standard
ISO/IEC 17025:2005
"General Requirements for the Competence of Testing & Calibration Laboratories"
for its facilities at
Gat No. 142, Boisar Chilhar Road, Opp. Union Park, At Betegaon, Taluka Palghar, Maharashtra
in the discipline of
ELECTRO-TECHNICAL CALIBRATION

(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Certificate Number C-0149		
Issue Date 19/10/2014		Valid Until 18/10/2016

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the additional requirements of NABL.

Signed for and on behalf of NABL


Avijit Das
Program Manager


Anil Relia
Director


Prof. K. VijayRaghavan
Chairman



NABL

National Accreditation Board for Testing and Calibration Laboratories

Department of Science & Technology, India

CERTIFICATE OF ACCREDITATION

KARANDIKAR LABORATORIES PRIVATE LIMITED

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2005

"General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at

Gat No. 142, Boisar Chilhar Road, Opp. Union Park, At Betegaon, Taluka Palghar, Maharashtra

in the discipline of

MECHANICAL CALIBRATION

(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Certificate Number C-0151

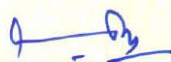
Issue Date 19/10/2014



Valid Until 18/10/2016

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the additional requirements of NABL.

Signed for and on behalf of NABL



Avijit Das
Program Manager



Anil Relia
Director



Prof. K. VijayRaghavan
Chairman