

Technical Engineering Laboratory

TEL

COMPANY PROFILE 2020



Commercial Registration No: 67453
ISO/IEC 17025:2005 Accredited, Cert #TL 453

31, Hiteen Street, Muntazah Tel/Fax: 4450 7437, Mob: 3003 5807
P.O.Box: 47428, E-mail: tel.qatar@gmail.com, Web: www.telqatar.com

TEL

Revision no.22, Date: 04/01/2020

٣١ شارع حطين المنزه، هاتف / فاكس: ٤٤٥٠ ٧٤٣٧، جوال: ٣٠٠٣ ٥٨٠٧
ص.ب: ٤٧٤٢٨

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COMPANY DETAILS

- ◆ **INTRODUCTION**
- ◆ **CONTACT DETAILS & LOCATION**
- ◆ **ORGANIZATION CHART**

INTRODUCTION

Our Laboratory, Technical Engineering Laboratory (TEL) was established in Doha, Qatar in 2007, we are proud to introduce our very ambitious enterprise to your good selves; it was the fruit of long study and assessment of the nowadays-growing needs of the large-scale development of Qatar.

With the ever-growing horizons of this country, the need of quality products become essential requirement.

Founded by two senior engineers with experience of over 30 years in different aspects of civil engineering in addition to vast knowledge in materials and laboratory works, and now after more than one decade we proved to be one of the leading companies in this industry.

All the supplied equipment bought brand new, made by top of the best manufactures in accordance with the international standards. The staff are supplied with instructions and procedures, and are having continuous training program to keep them always aware of the new systems in addition to improve their capabilities and professional skills. QCS, ASTM, AASHTO and BS Standards (all relevant articles) have been put under the disposal of all the technical employees in hard and soft copies. Incentive system being one tool to encourage them to achieve or come closest to total perfection.

The Laboratory has achieved the ISO 17025 accreditation in a record time and in the first trial due to the commitment of the staff for excellence.

We have taken the safety and the general environment preservation as a priority, providing healthy atmosphere will ensure better control and allow precise final production.

Finally, we are looking forward to have the closest relation with the Ministry of Environment/'Laboratories, and Standardization Affairs', and ASHGHAL 'Quality, Safety and Environment Department' seeking their advice and following their instruction to keep up with the general developments in every aspect.

Dr. Mustafa Al Hawli

General Manager



CONTACT DETAILS & LOCATION

Technical Engineering Laboratory

Telephone: +974 - 44507437

Mobile: +974 - 30035807

Fax: +974 - 44507437

P.O. Box: 47428 Doha-Qatar

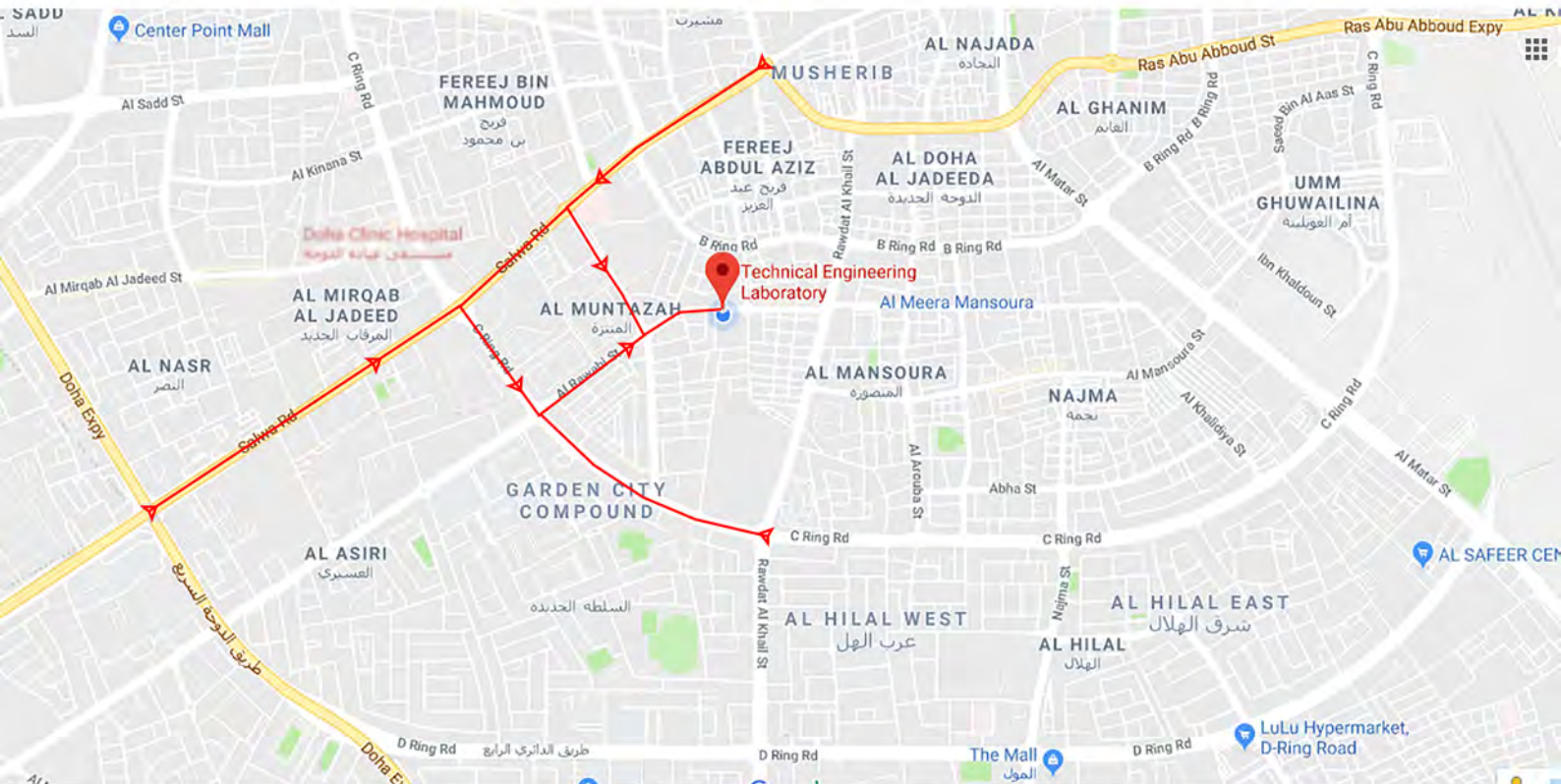
Email: tel.qatar@gmail.com

Website: www.telqatar.com

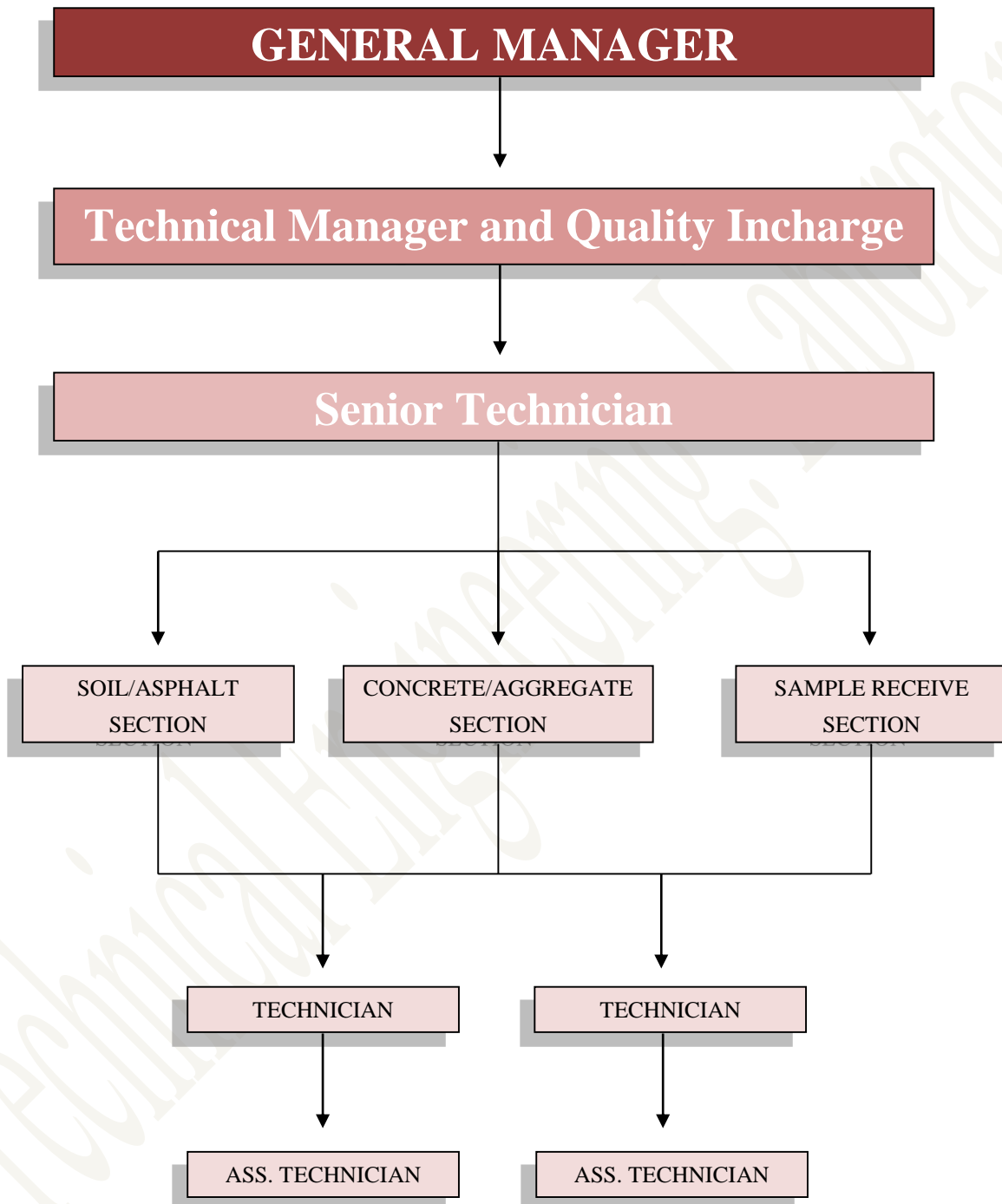
**Address: Building No. 31, Hiteen Street,
Al Muntazah**

Location Map

25°16'19.8"N 51°31'21.3"E



(ORGANIZATION CHART)



2

LICENSE & CERTIFICATION

Lab Registration Certificate

الهيئة العامة القطرية للمواصفات والتقييس
Qatar General Organization for Standardization



REGISTRATION CERTIFICATE

شهادة تسجيل مختبر خاص



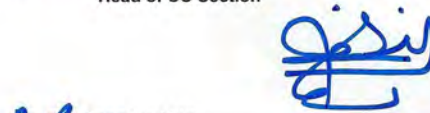
وفقاً للائحة الصادرة بقرار وزير البلدية والبيئة رقم (356) لسنة 2017م
According to the Ministerial Decree No. (356)/2017

No: **RL004 -19**

Date of Issue: 21/08/2019 تاريخ اصدار الشهادة:
Date of Expiry : 21/08/2020 الصلاحية حتى:
Lab Name: Technical Engineering Laboratory اسم المختبر:
Address: Muntazah, Hitteen Street, Villa No. 31 العنوان:
CR No: 67453 رقم السجل التجاري :
Scope of Registration: Attached مرفق مجال التسجيل:

Notes:

1. QS has no any responsibility for poor performance by this lab during the validity period.
2. This certificate will remain valid for the period specified, subject to compliance with the Technical Regulations.
3. This certificate is invalid without the attached scope of accreditation
3. It is important to apply two months before expiry date of validity for renewal of this conformity certificate.
4. The required fee for this certificate has been stated according to the decision No. (112)/2019

Recommended by: 
Head of CC Section
Authorized by: 
Director of Quality & Conformity Dept
Approved by: 
PRESEDENT, QGOS



REGISTRATION CERTIFICATE

Commercial Registration (English)



Registration and Commercial
Licenses Department

وزارة الاقتصاد والتجارة
Ministry of Economy and Commerce

إدارة التسجيل
والتراخيص التجارية

Commercial Registration Data



Issue Date: 29/06/2019

Commercial Reg. No.:	67453	Tax Reg. No.:	67453
Trade Name:	AlMukhtabar AlFani AlHandasee	Trade Type:	
Creation Date:	13/07/2014	Expiry Date:	11/07/2020
Legal Form:	W.L.L	Capital:	200000
Commercial Reg. Status:	Active	Firm Nationality:	QATAR
No. of Branches:	0		

Contact Information

Mail Box:	47428	Contacts Numbers:	+97455854514
Email:			

Partners

Name	Document No	CR No	Nationality	Percentage	Status
A.AZIZ IBRAHIM G RADWANI	25463400109		QATAR	51%	Active
MUSTAFA MOHAMAD HANI ALHAWLI	25142200058		LEBANON	49%	Active

Managers (Authorized Signatories)

Name	Document No	CR No	Nationality	Designation (Authority)
MUSTAFA MOHAMAD HANI ALHAWLI	25142200058		LEBANON	Manager -
A.AZIZ IBRAHIM G RADWANI	25463400109		QATAR	Manager - Full and Absolute Authority



Page 1 of 2
CR No : 67453



تشهد غرفة تجارة وصناعة قطر بأن المنشأة المذكورة اعلاه سجلت لدينا

Qatar Chamber certifies that the above mentioned establishment has been registered

Commercial Registration (English)



Registration and Commercial
Licenses Department

وزارة الاقتصاد والتجارة
Ministry of Economy and Commerce

إدارة التسجيل
والتراخيص التجارية

Commercial Registration Data

Business Activities

Activity Name	Activity Code
works of examine and experiment of building materials	7120005

Activity Name	Activity Code
Laboratory for testing soil and concrete and asphalt material	7120018



Page 2 of 2
CR No : 67453



تشهد غرفة تجارة وصناعة قطر بأن المنشأة المذكورة اعلاه سجلت لدينا
Qatar Chamber certifies that the above mentioned establishment has been registered

Commercial Registration (Arabic)



وزارة الاقتصاد والتجارة
Ministry of Economy and Commerce

Registration and Commercial
Licenses Department

إدارة التسجيل
والتراخيص التجارية

مستخرج بعض بيانات السجل التجاري

تاريخ الطباعة: 2019/06/29



رقم التسجيل الضريبي:	67453	رقم السجل التجاري:	67453
السمة التجارية:		المختبر الفني الهندسي:	
تاريخ انتهاء السجل:	11/07/2020	تاريخ انشاء السجل:	13/07/2014
راس المال:	200000	الشكل القانوني:	شركة ذات مسؤولية محدودة
جنسية المنشأة:	قطر	حالة السجل:	نشط
		عدد الفروع:	0
		صندوق البريد:	47428
أرقام الاتصال:	+97455854514	معلومات الاتصال:	

الشركاء

الحالة	النسبة	الجنسية	رقم السجل	رقم الإثبات	الأسم
نشط	51	قطر		25463400109	عبد العزيز ابراهيم غلوم رضا رضوانى
نشط	49	لبنان		25142200058	مصطفى محمد هاني الحولى

المدراء (المخولون بالتوقيع)

الصفة (الملاحية)	الجنسية	رقم السجل	رقم الإثبات	الأسم
- مدير	لبنان		25142200058	مصطفى محمد هاني الحولى

Page 1 of 2

رقم السجل : 67453



تشهد غرفة تجارة و صناعة قطر بان المنشأة المذكورة اعلاه سجلت لديها

Qatar Chamber certifies that the above mentioned establishment has been registered

Commercial Registration (Arabic)



وزارة الاقتصاد والتجارة
Ministry of Economy and Commerce

Registration and Commercial
Licenses Department

إدارة التسجيل
والتراخيص التجارية

مستخرج بعض بيانات السجل التجاري

صلاحيات كاملة ومطلقة - مدير	قطر	25463400109	عبد العزيز ابراهيم غلوم رضا رضوانى
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الأنشطة التجارية

إسم النشاط	الرقم
اعمال فحص واختيار مواد البناء	7120005

إسم النشاط	الرقم
معمل فحوصات التربة والمواد الخرسانية والاسفلتيه	7120018



Page 2 of 2
رقم السجل : 67453



تشهد غرفة تجارة و صناعة قطر بان المنشأة المذكورة اعلاه سجلت لدينا
Qatar Chamber certifies that the above mentioned establishment has been registered

Municipality Approval

2019/08/17
No 1 of 1

تاريخ الطباعة:
صفحة رقم:



Registration and Commercial
Licenses Department

وزارة الاقتصاد والتجارة
Ministry of Economy and Commerce

إدارة التسجيل
والتراخيص التجارية

رخصة تجارية



رقم الرخصة: 60069
المختبر الفني الهندسي
شركة
نوع المنشأة التجارية:
السمة التجارية:
تاريخ اصدار الرخصة: 2014/10/26
تاريخ انتهاء الرخصة: 2020/08/19
رقم السجل التجاري: 67453

بيانات المدير المسؤول :

اسم المدير المسؤول: مصطفى محمد هاني الحولي
رقم الإثبات: 25142200058

جنسية المدير المسؤول: ليدان

نموذج ختم المنشأة التجارية :

عقار رقم: 31
رقم الدور/ الوحدة:
اسم مالك العقار: أحمد علي أكبر
نوع الرخصة:
وصف العنوان: بلدية الدوحة / روضة الخيل

تصنيف الموقع: تجاري
نوع الموقع: مكتب تجاري
المنطقة: 24 روضة الخيل
الشارع: حطين
رقم الشارع: 830

الأنشطة التجارية :

رقم النشاط	إسم النشاط	رقم النشاط	إسم النشاط
7120005	إعمال فحص واختبار مواد البناء	7120018	معمل فحوصات التربة والمواد الخرسانية والاسفلتية



مدير إدارة التسجيل والتراخيص التجارية

ISO 17025 Certificate



INTERNATIONAL
ACCREDITATION
SERVICE®

CERTIFICATE OF ACCREDITATION

This is to attest that

TECHNICAL ENGINEERING LABORATORY

31, HITTEEN STREET, MUNTAZAH
TECHNICAL ENGINEERING LABORATORY
P.O. BOX 47428
DOHA
QATAR

Testing Laboratory TL-453

has met the requirements of the IAS Accreditation Criteria for Testing Laboratories (AC89), has demonstrated compliance with ISO/IEC Standard 17025:2005, *General requirements for the competence of testing and calibration laboratories*, and has been accredited for the test methods listed in the approved scope of accreditation. The scope can be found on the IAS website (www.iasonline.org).

This certificate is valid up to June 1, 2020.



This accreditation certificate supersedes any IAS accreditation bearing an earlier effective date. The certificate becomes invalid upon suspension, cancellation or revocation of accreditation. See <http://iasonline.org> for current accreditation information, or contact IAS at 502-304-8201.



Raj Nathan
President

الأمانة العامة



1-6976-2007
9-8-2007
م.أ.ب 0017

المخترم

السيد / المدير العام

المختبر الفني الهندسي

فاكس : ٤٣٦٥١٢٨

الدوحة ،

السلام عليكم ورحمة الله وبركاته . أما بعد ،

الموضوع : طلب تصريح بيئي

تهدي إدارة الشؤون الفنية أطيب تحياتها لسيادتكم ، و بالإشارة لكتابكم المؤرخ في ٢٠٠٧/٨/١م بخصوص المختبر الكائن في موقع تجاري على طريق سلوى ، نود احاطتكم علماً بأنه لا مانع لدينا بيئياً من الموقع ، على أن يتم الالتزام بالشروط البيئية الواردة بالتصريح البيئي رقم (٢٠٠٧/٥٦٠) وعدم استخدام أي مواد كيميائية أو مواد ضارة بالبيئة والإنسان .

وتفضلوا تقبل فائق الاحترام والتقدير ،،

يوسف إبراهيم الحمير

مدير إدارة الشؤون الفنية

تسعة
• قسم تقييم الأثر البيئي
• الملف العام
أ.ع (٢٠٠٧/٥٦٠)



General Secretariat



Fax

To:	M/s. Larsen & Toubro Ltd.	From:	A/Head of Electricity Projects
Attention:	Mr. G. Sridhar Cluster Head – Cable Projects	Date:	13 AUG 2018
Fax No.:	+974 -- 4455 1286	Our Ref.:	TA/TEP/FX/18/ 0300
Contract No.:	GTC/736A/2015	Pages:	1

Qatar Power Transmission System Expansion – Phase 13 – EHV & HV Cables
Packages C5, C6, C11, C12, C13, C14 & C15

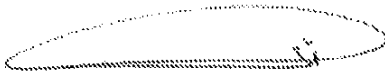
PQ Subcontractor Proposal for Material Testing Services / Site Sampling / NDT Works
M/s Technical Engineering Laboratory

With reference to your No. PH13-L&T-6A-CON-18-0057 dated 27th May 2018, regarding the above subject, please be informed that M/s Technical Engineering Laboratory is hereby approved to carry out material testing / Site Sampling / NDT under the above Contract.

Detailed material submittals shall be proposed for Kahramaa review and approval during engineering stage of the Project.

Please also note that it will be the sole responsibility of the Main Contractor to ensure that the proposed subcontractor has the required resources and capability to meet the project requirements and schedule.

Regards,


ENG. AHMAD ALI AL KUWARI


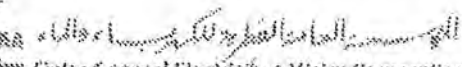
CC: EPE (Fax: 4447 8572)

Ref. : TA/DO/TE/FX/16/0070

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Tel: (+974) 4484 5111 / 4484 5110 Fax: (+974) 4484 5191
 P.O. Box 41, Doha, Qatar



KAHRAA  
 Qatar General Electricity & Water Corporation
 Technical Affairs - Electricity Projects Department



Fax

To:	M/s. LS Cable & System	From:	A/ Head of Electricity Projects
Attention:	Mr. Jin Goo Kim Project Manager	Date:	24 MAY 2018
Fax No.:	+974 - 4487 7058	Our Ref.:	TA/TEP/FX/18/0585
Contract No.:	GTC/736C/2015	Pages:	1

Qatar Power Transmission System Expansion – Phase 13 – EHV Power Cables
 Packages C7 & C9

Approval of M/s Technical Engineering Laboratory for Material Testing

With reference to your letter No. PH13 LSC-6C-CON-18-0007 dated 20th February 2018, TA/1282/2017 dated 12.10.2017, please be informed that your proposal to use M/S Technical Engineering Laboratories for material testing is acceptable.

This approval is given pursuant to the General Conditions of Contract (GCC), Article 16, and it does not relieve you, as a Main Contractor, of any contractual obligations and responsibilities. It is deemed that you have ensured that the proposed Subcontractor has sufficient qualified manpower and equipment to execute the works in line with Project Schedule and Kahramaa specifications.

In addition to the above, please note that capabilities and performance of M/s Technical Engineering Laboratory shall be monitored closely during Project execution and if the performance of the proposed Supplier is not satisfactory, Kahramaa reserves the right to amend this approval.

Regards,

ENG. AHMAD ALI AL KUWARI

CC: EPE (Fax: 4447-8572)

CC: LI (Fax: 4486 6089)

Ref.: TA/DO/TE/FX/16/0070

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Tel: (+974) 4484 5111 / 4484 5110 Fax: (+974) 4484 5191
 P.O. Box 41, Doha, Qatar





Fax

To:	M/s. LS Cable & System	From:	A/Head of Electricity Project
Attention:	Mr Jin Goo Kim Project Director	Date:	03 MAY 2018
Fax No.:	+974 - 4487 7058	Our Ref.:	TA/TEP/FX/18/0535
Contract No.:	GTC/736E/2015	Pages:	1

Qatar Power Transmission System Expansion – Phase 13 – EHV & HV Cables
Packages C1 (Feeder 2), C2, C3 & C4


Approval for M/s Technical Engineering Laboratory for Material Testing

With reference to your letter No. PH13-LSC-6E-CON-18-0015 dated 20th February 2018 and PH13-LSC-6E-CON-18-0030 dated 20th March 2018, please be informed that M/s Technical Engineering Laboratory is hereby approved to carry out material testing under the above Contract based on priority-1.

This approval is given pursuant to the General Conditions of Contract (GCC), Article 16, and it does not relieve you, as a Main Contractor, of any contractual obligations and responsibilities. It is deemed that you have ensured that the proposed Subcontractor has sufficient qualified manpower and equipment to execute the works in line with Project Schedule and Kahramaa specifications.

In addition to the above, please note that capabilities and performance of M/s Technical Engineering Laboratory shall be monitored closely during Project execution and if the performance of the proposed Supplier is not satisfactory, Kahramaa reserves the right to amend this approval.

Regards,


ENG. AHMAD ALI ALKUWARI

cc: EPE (Fax: 44-47 8572)

cc: EDF (Fax: 4006 6579)

Ref: TA/1286/2017

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Tel. (+974) 4484 5111 / 4484 5110 Fax: (+974) 4484 5191
 P.O. Box 41, Doha, Qatar



Fax

To:	M/s. Furukawa Electric Co. Ltd.	From:	A/ Head of Electricity Projects
Attention:	Mr. Hironori Sugano Project Director	Date:	29 NOV 2017
Fax No.:	+974 - 44 51 3708	Our Ref.:	TA/TEP/FX/17/14/8
Contract No.:	GTC/736D/2015	Pages:	1

Qatar Power Transmission System Expansion - Phase 13 - EHV Power Cables
Package C-1 (Feeder 1)

Pre-qualification Documents for M/s Technical Engineering Laboratory (TEL)

With reference to your letter no. PH13-FEC-6D-CON-17-0012 dated 23rd July 2017; please be informed that M/s Technical Engineering Laboratory is hereby approved to carry out soil investigation and civil material tests under the above mentioned contract.

This approval is given pursuant to the General Conditions of Contract (GCC), Article 16, and it does not relieve you, as a Main Contractor, of any contractual obligations and responsibilities. It is deemed that you have ensured that proposed laboratory has sufficient qualified manpower and equipment to execute the soil investigation and civil material tests in line with Project Schedule and Kahramaa specifications.

In addition to the above, please note that capabilities and performance of M/s Technical Engineering Laboratory shall be monitored closely during Project execution and if the performance of the proposed laboratory is not satisfactory, Kahramaa reserves the right to amend this approval.

Regards,



ENG. AHMED ALI AL KUWARI

CC: EPE (Fax: 4447 8572)


Ref.:TA/DO/TE/FX/15/

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Tel: (+974) 4484 5111 / 4484 5110 Fax: (+974) 4484 5191
 P.O. Box 41, Doha, Qatar



X NO: 5

KAHRA MAA  **شركة الكهرباء والماء العامة قطر**
 Qatar General Electricity & Water Corporation
 Technical Affairs - Electricity Projects Department

Fax

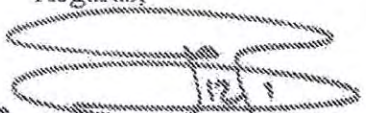
To:	M/s. Elsewedy Cables Qatar W.L.L.	From:	Director - Technical Affairs
Attention:	Mr. Mohamed Thamin Senior Project Manager	Date:	13 JAN 2016
Fax No.:	+974 - 4465 38 92	Our Ref.:	TA/DO/TE/FX/16/00070
Contract No.:	GTC/642D/2014	Pages:	1

**Qatar Power Transmission System Expansion - Phase 12 - EHV Power Cables
 Package C6, C7 & C8**

**Submission of Pre-Qualification Document of Third Party Testing Laboratory
 (M/s. Technical Engineering Laboratory)**

With reference to your letter ref. No. PH12-ESC-2D-CON-15-0008 dated 30th December 2015, regarding the above mentioned subject, please be informed that M/s. Technical Engineering Laboratory is approved to carry out soil investigation and material testing under the above mentioned contract.

Regards,


Ahmed Naser Al-Nasr

CC: EPE (by fax: 444 7 8572)

TE / TEP / TEB / PM

PH12-EPE-2D-CON-16-0001

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Electricity Projects; Tel: (+974) 4484 5333 Fax: (+974) 4484 5391 P.O. Box 41, Doha, Qatar



Fax

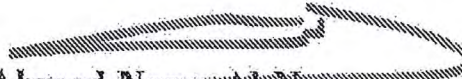
To:	M/s Viscas & J-Power Consortium	From:	Director - Technical Affairs
Attention:	Mr. Katsumi Ishii Project Director	Date:	15 NOV 2015
Fax No.:	+974 - 44988206	Our Ref.:	TA/DO/TE/FX/15/ 1932
Contract No.:	GTC/642A/2014	Pages:	1

QATAR POWER TRANSMISSION SYSTEM EXPANSION PHASE XII (EHV POWER CABLES PACKAGES C1 & C2)

Subject: Pre-Qualification Documents for M/s Technical Engineering Laboratory

With reference to your Ltr. Ref. No. PH12-VJC-2A-CON-15-0035 dated 1st November 2015, regarding the above subject; please be informed that M/s Technical Engineering Laboratory is approved to carry out Soil Investigation and Backfilling Material Testing under the above mentioned contract.


Regards,


~~Ahmed Naser Al-Nasr~~

CC:
TE
TEP
PM

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Electricity Projects; Tel: (+974) 4484 5333 Fax: (+974) 4484 5391 P.O. Box 41, Doha, Qatar


 KAHRAA MAA *شركة الكهرباء والماء العامة*
 Qatar General Electricity & Water Corporation
 Technical Affairs - Electricity Projects Department

Fax

To:	M/s. El Sewedy Cables	From:	Director - Technical Affairs
Attention:	Mr. Mohamed Thamim Senior Project Manager	Date:	04 OCT 2015
Fax No.:	+974 - 44653892	Our Ref.:	TA/DO/TE/FX/15/ 1336
Contract No.:	GTC/642C/2014	Pages:	1

Qatar Power Transmission System Expansion - Phase 12 EHV Power Cables - Packages C-4

Submission of Pre-Qualification Document of Third Party testing Laboratory (M/s Technical Engineering Laboratory)

With reference to your Ltr. Ref. No. PH12-ESC-2C-CON-15-0016 dated 17th September 2015, regarding the above subject; please be informed that M/s Technical Engineering Laboratory is approved to carry out soil investigation and material testing under the above mentioned contract.

Regards,


Ahmed Naser Al-Nasr

CC:

TE
TEP
PM


RECEIVED
04 OCT 2015

BY:

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 مؤسسة العامة للكهرباء والمياه
 Qatar General Electricity & Water Corporation
 Technical Affairs - Electricity Projects Department

RECEIVED
 11 NOV 2014
NCC, QATAR

2018
 11/11
 KMM/14/58
 AA/14/58

Fax

To:	National Contracting Co. Ltd	From:	Director, Technical Affairs.
Attention:	Mr M Chandrasekar Country Manager	Date:	10 NOV 2014
Fax No.:	40 01 64 79	Our Ref.:	TA/DO/TE/FX/14/ 1853
Contract No.:	GTC/4501/2011 Package C15, C16 & C18	Pages:	1 + 1

Subject: Submission of PQ Document for Technical Engineering Laboratory (TEL)
Ref no: PH11-NCC-01-CON-14-0035 dated 28.10.2014

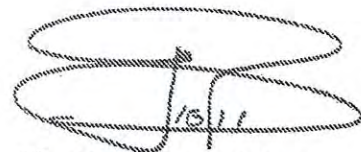
With reference to above submission, the proposed Sub-Contractor 'M/s Technical Engineering Laboratory (TEL)' is acceptable to carry out the Soil Investigation and Material Testing for Package - C16 as per the following:

1. Field Testing - In - Situ Density Test by Nuclear Density Gauge.
2. Soil - Sub Grade / Sub base - Moisture content, Sieve Analysis, Sedimentation Analysis, Dry Density and Moisture Content Relationship.
3. Concrete Protection Tiles - Impact Resistance Test of Cable Tiles.
4. Concrete - Compressive strength of moulded cubes including weight, size and density.

Please note that calibration / service certificates of testing machines / equipment shall be submitted along with particular Test Reports of Materials, Work etc. Test Reports shall be submitted for KM / Consultant's review.

Satisfactory performance of the Sub-Contractor is solely a responsibility of the Main Contractor. In the event of unsatisfactory performance, KM reserves the right to withhold the acceptance and request suitable replacement without any impact to the delivery of the part of the Work / delivery of the Project in general.

Regards,



Ahmed Naser Al-Nasr

CC: MML (Fax: 44425758)


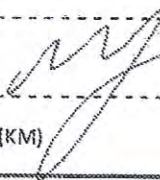
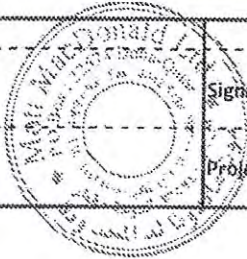
TE
 TEP
 PM
 MML

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Contract No. GTC/4501/2011 - Qatar Power Transmission System Expansion PHASE 11 - ADDENDUM (Cables) Package - C15, C16 & C18		
1	Proposed Equipment / Item of Work.	Complete Soil Investigation Works and Material Testing - Package - C16. 1. Field Testing - In - situ Density Test by Nuclear Density Gauge . 2. Soil - Sub Grade / Sub base - Moisture content, sieve analysis, Sedimentation analysis, Dry density and moisture content relationship. 3. Concrete protection tiles - Impact resistance test of cable tiles . 4. Concrete - Compressive strength of moulded cubes including weight, size and density.
2	Name of the Vendor/Subcontractor & Country of Origin.	M/s. Technical Engineering Laboratory (TEL).
3	Name of the Sponsor/Agents in Qatar.	Mr. Abdul Aziz Ibrahim Galoom Raza. TEL, P.O. Box 19613, Doha, Qatar.
4	Commercial Registration No. & Validity. (Copy attached)	Reg. No.: 67453, valid until 13/07/2015.
5	Whether the Equipment is in the KM Vendor List or Not.	YES.
6	Previous Experience in KM System/Projects.	List of KAHRAMAA PROJECTS Attached.
7	Any Other Remark.	
8	Recommendation of Consultants.	'RE COMMENDED'

Signature:		Signature:	
Project Manager (Consultant)		Project Manager (KM)	

Fax

To:	M/s. Prysmian Powerlink	From:	Manager – Electricity Projects
Attention:	Mr. Alessandro Pistonesi Project Manager	Date:	27 OCT 2014
Fax No.:	+ 974 - 44980101	Our Ref.:	TA/TE/FX/14/ 1572
Contract No.:	GTC/450J/2011	Pages:	1

**Qatar Power Transmission System Expansion - Phase 11 Addendum
Power Cables - Package C-13 and C17**

Proposal for Vendor Approval - M/s Technical Engineering Laboratory(TEL)

With reference to your letter Ref. No. PH11-PRY-0J-CON-14-0023 dated 02nd October, 2014, regarding the above subject, please be informed that M/s Technical Engineering Laboratory (TEL) is approved to carryout soil and concrete testing works under Phase 11 Addendum Power Cables Project - Package C-13 and C17.

Regards,


Mohammed M. Al-Dosari

CC: EPE (by fax: 44478572)

TE

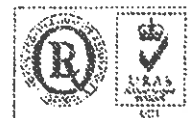
TEP


PM

PH11 EPE 0J-CON-14-0027

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Electricity Projects: Tel: (+974) 4484 5333 Fax: (+974) 4484 5391 P.O. Box 41, Doha, Qatar




 مؤسسة العامة للكهرباء والمياه
 Qatar General Electricity & Water Corporation
 Technical Affairs - Electricity Projects Department

Fax

To:	M/s. ETA Star International LLC	From:	Director - Technical Affairs
Attention:	Mr. P. Nadana Sabapathy Project Manager	Date:	4/21/2014
Fax No.:	+974 - 44669497	Our Ref.:	TA/DO/TE/FX/14/ 775
Contract No.:	GTC/450D/2011	Pages:	1

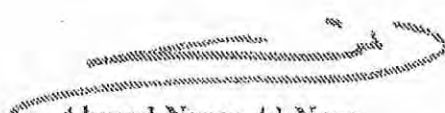
Qatar Power Transmission System Expansion - Phase 11
Stage 1 - EHV Power Cables - Packages C-4, C-8 & C-10

Pre-Qualification document of Soil Investigation – Technical Engineering Company (TEL)

With reference to your letter ref. No.: PH11-ETA-0D-CON-14-0042 dated 3rd April 2014, please be informed that M/s Technical Engineering Company (TEL) are approved to carryout soil investigation and material testing under the subject Contract.

Please note that Kahramaa reserve the right to amend the approval in case of non satisfactory performance and deficient quality of works.

Regards,


 Ahmed Naser Al-Nasr

CC: EPE (by fax: 44478572)

TE
 TEP
 PM
 PMS


PH11-EPE-0D-CON-14-0042



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Electricity Projects, Tel: (+974) 4484 5353 Fax: (+974) 4484 5391 P.O. Box 41, Doha, Qatar




 كاتر العام للكهرباء والماء
 Qatar General Electricity & Water Corporation
 Technical Affairs - Electricity Projects Department

Fax

To:	M/s Elsewedy Cables	From:	Director, Technical Affairs.
Attention:	Mr E Mohamed Thamim Senior Project Manager	Date:	13 APR 2014
Fax No.:	44 65 38 92	Our Ref.:	TA/DO/TE/FX/14/ 724
Contract No.:	GTC/450C/2011 Package C3 & C5	Pages:	1+1

Subject : Pre-Qualification Documents of Third party Testing Laboratory
(M/s Technical Engineering Laboratory)
Ref : PH11-ESC-0C-CON-14-0030 dated 24-03-2014

With reference to the above submission, please note that M/S Technical Engineering laboratory is approved to carry out soil investigation and material testing for the mentioned contract.

Regards,

~~Handwritten signature~~
Ahmed Naser Al-Nasr

CC : MML (Fax: 44425758)

TE
 TEP
 PM
 BS
 MML

RECEIVED
13 APR 2014

BY:.....

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Electricity Projects; Tel: (+974) 4484 5111 / 4484 5110 Fax: (+974) 4484 5191 P.O. Box 41, Doha, Qatar



Fax

To:	ELSEWEDY CABLES	From:	Manager Electricity Projects
Attention:	Mr. Mohamed Thamim Project Manager	Date:	11 MAR 2013
Fax No.:	44 65 38 92	Our Ref.:	TA/TE/FX/13/243
Contract No.:	GTC/372E/2010 Qatar Power Transmission System Expansion – Phase 10 Package C-5	Pages:	2 (including this cover)

**Approval of Material Testing Laboratory
 (M/s. Technical Engineering Laboratory, Doha Qatar)**

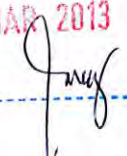
We refer to your letter PH10-ESC-2E-LTR-13-0104 dated 14/02/2013.

Please be informed that M/s Technical Engineering Laboratories is approved to carryout soil investigation works and material testing for the above contract package.

Please note that Elsewedy Cables shall be responsible to monitor the capabilities and performance of M/s Technical Engineering laboratory. If the performance is not satisfactory or quality of work is deficient, KM reserves the right to amend this approval.

~~Monaimed M. Al-Dosari~~

CC: LI (44 86 60 89)

RECEIVED
 11 MAR 2013
 BY: 

TEP
 PM
 LI

Tele: (974) 4484 5136 - Fax: (974) 44845191 P O BOX 41, DOHA - QATAR.

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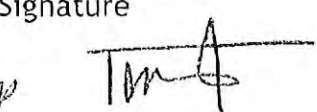
TE-P6/F3	Issue: 0	15-04-2012
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Page 1 of 2

PH10-LI-2E-LTR-13-0002_TEL_03.03.2013

**CONTRACT NO : GTC/372E/2010
QATAR POWER TRANSMISSION SYSTEM EXPANSION
PHASE 10 - PACKAGE C-5**

Proposed Item of Work	Material Testing Laboratory.
Name of the Vendor / Sub-Contractor & Country of Origin	M/s. Technical Engineering Laboratory, Doha, Qatar.
Name of Sponsor	Mr. Fahed Ahmed Hussain Ahmed El Khalf
Commercial Registration No. & Validity	18311 & 01/06/2013
Whether the Equipment is in the KM Vendor List or not	Yes
Previous Experience in KM System / Projects	1) GTC/142C/2006 - Bani Hajir/ Al Wajbah. 2) GTC/142E/2006 - Abu Nakhta. 3) GTC/142B/2006 - Qatar Power Transmission System Phase-VIII. 4) GTC/287/2009 - 400kV Cables. 5) GTC/318A/2009 - 132kV Cable Route, Doha North Super S/S to Al Kharitiyat South S/S. 6) GTC/318A/2009 - 132kV Cable Route, New Hitmi S/S to Rayyan Village. 7) GTC/372A/2010 - QATAR POWER TRANSMISSION PHASE 10 (PACKAGE C1)
Any Other Remarks	
Recommendations of Consultants	Recommended for Approval

Signature 	Signature 
Project Manager (KAHRAMAA)	Project Manager (KAHRAMAA)

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11 MAR 2013

BY:.....

Tele: (974) 4484 6136 - Fax: (974) 44846191 P O BOX 41, DOHA - QATAR

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TE-P6/F3 Issue: 0 15-04-2012




Page 2 of 2

PH10-LI-2E-LTR-13-0002_TEL_19.02.2013



المؤسسة العامة القطرية للكهرباء والماء
Qatar General Electricity & Water Corporation

TECHNICAL AFFAIRS الشؤون الفنية

TELEFAX MESSAGE	DATE: 18 AUG 2011	TOTAL PAGES: 1
To : Elsewedy Cables.	Fax No. 44653892	
For the Attention of: Mr. E. Mohammed Thamim Project Manager	Our Ref.: TA/DO/TE/FX/11/ 1065	
Project : <u>GTC/372A/2010</u> <u>Qatar Power Transmission System Expansion - PHASE-10 (Package C-1)</u>		
<u>Approval for Material Testing laboratory (M/s. Technical Engineering Laboratory, Doha - Qatar)</u>		
<p>With reference to your letter ref no. PH10-ELS-2A-LTR-11-0024 dated 27.07.201, please be informed that M/s. Technical Engineering Laboratory Qatar are hereby approved to carry out soil investigation and material testing under GTC/372A/2010. Nevertheless, it remains M/s Elsewedy Cables responsibility to monitor performance of M/s. Technical Engineering Laboratory Qatar. In case a lack of performance is observed, KM reserves its right to call for a change of the subcontractor.</p>		
Regards,		
 Ahmed Naser Al-Nasr Ag. Director Technical Affairs		
CC: PD		
		
TE TEP PD PM 		

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Tel: (974) 4484 5333 - Fax: (974) 44845391
P O BOX 41, DOHA - QATAR.

تلفون: (974) 44845333 - فاكس: 44845391
ص ب 41 الدوحة - قطر




better living



المؤسسة العامة القطرية للكهرباء والماء
Qatar General Electricity & Water Corporation

TECHNICAL AFFAIRS

الشؤون الفنية

TELEFAX MESSAGE	DATE: 11 MAR 2010	TOTAL PAGES: 1
To: Pysmian Powerlink		Fax No. 4980202
For the Attention of: Mr. Shwan Gwinnett Project Manager		Our Ref.: TA/TE/FX/10/150
Subject : GTC/287/2009 - 400 kV cables Umm Al Amad Super- LDS2 Feeder 1		
<u>Proposed Laboratories for Soil Investigation</u>		
With reference to your letter No. GTC/287/2009/LTR/10/056 dated 25/02/10 on the above subject, our comments are as follows		
<ol style="list-style-type: none">1. Technical Engineering Laboratories is acceptable for soil investigation test as independent testing laboratory provided the detail of the testing equipment used for thermal resistivity test along with valid calibration certificate is attached.2. Doha Technical Laboratories has not provided any previous experience in thermal resistivity test or detail of the equipment used for such tests. Attached document is not sufficient to qualify for the approval to conduct these tests. Also a copy of the valid commercial registration shall be included.		
M/s. Pysmian shall clearly state the scope of work of each laboratory in their submittal.		
Regards		
 Ahmed Naser Al Nasr Manager - Electricity Projects		
cc: TEP		
TEP MAF MS/MTJ		

Tele: (974) 484 5111 - Fax: (974) 484 5191
P O BOX 41, DOHA - QATAR.

تيلفون : ٤٨٤٥١١١ (٩٧٤) - فاكس : ٤٨٤٥١٩١ (٩٧٤)
ص. ب. ٤١ الدوحة - قطر



GTC 142D/2006 - PRYSMIAN NEXANS CONSORTIUM
QATAR POWER TRANSMISSION SYSTEM EXPANSION PHASE VIII
CABLES - PACKAGE C-3-2

DOCUMENT TRANSMITTAL ADVICE				Ref.No.:	PH8-MML-2D-DTA-09-0615	
				Total Pages:	1 + 1	
Forwarded To:			Type of Status			
Ms Prysmian Nexans Consortium P.O. Box 13347, Doha, Qatar. Fax: 4980202			A - Approved (Issue as IFC*) B - Approved Except as Noted (Issue as IFC* with incorporated comments) C - Approved Except as Noted & Re-submit D - Not Approved E - As Built F - For Information G - Superseded H - See Remark I - Collect Stamped Document from EFC Office J - Rejected *IFC = Issued For Construction			
Att Mr. Darren Webster Project Manager						
cc Mr. Magdy A. El Sayad Project Manager KM EHA Focal Point - (to be announced)						
Sl. No.	Originator	DTS No. & Date	Document / Drawing No.	Rev	Subject	Status
1	PNC- GTC 142D/2006	PH8-PNC-2D-DTS-09-0615 dated 27.04.2009	PH8-2D-10-70-S838	0	Technical Engineering Laboratory (Nexans)	A
Remarks:						
Originator's Signature		Designation		Date		
		F. FOCARACCIO Project Manager		27-Jul-09		
Please acknowledge receipt by returning one signed copy of this sheet (or fax confirmation to be attached).						
Receiver's Signature		Designation		Date		

AM

Note: The above comments and/or approval are made after checking in accordance with the Contract and technical Specification. These do not relieve the Contractor from his obligation in the Contract to ensure conformance to the Specification. Any Specification deviations found subsequent to approval are to be corrected by the Contractor to the satisfaction of KAHRAMA/Engineer

CERTIFICATION

To Whom It May Concern:

This is to certify that **TECHNICAL ENGINEERING LABORATORY** with office address at Hitteen Street, Muntazah, P.O. Box 47428 is rendering laboratory testing works for Dorex Engineering in our various projects in Qatar. Further, we certify that in so far as their services are concerned, they are performing their services according to expectations.

This certification is issued to Technical Engineering Laboratory upon their request for whatever purpose it may serve.


Rabih S. Skaf
Managing Director







Ref: GEN/MCS/396/MH/05

Date: 15 November 2009

TO WHOM IT MAY CONCERN

We hereby certify that Technical Engineering Laboratory is one of the approved independent laboratories in our list, approved to run the following tests and studies:

- 1- Soil investigation and geotechnical studies
- 2- Physical and Chemical Soil and earth material tests
- 3- Sand, Fine and coarse aggregate tests
- 4- Thermal & Electrical conductivity of materials.
- 5- Water tests.
- 6- Concrete & Cement tests.
- 7- Structural tests.
- 8- Asphalt/Asphaltic Concrete tests.
- 9- Sound and Vibration properties tests.

Wassim Haroun
Area Manager

CONSER Consulting Engineers

P.O. Box : 22646
Phone : (+974) 436 7768
Fax : (+974) 436 7914
Email : qatar@conserconsulting.com
Doha - Qatar

كونسير للخدمات الهندسية الإستشارية

ص.ب : ٢٢٦٤٦
هاتف : ٤٣٦ ٧٧٦٨ (+٩٧٤)
فاكس : ٤٣٦ ٧٩١٤ (+٩٧٤)
الدوحة - قطر

Maunsell Consultancy Services Ltd
شركة مونسيل للخدمات الإستشارية المحدودة
PO Box 6650, Doha, Qatar
T +974 462 0785 F +974 462 0850 doha@maunsell.com

Ref: NA/MA/96006806.50/L 04491

Hamad Bin Khalid Contracting Co. (HBK)
P.O. Box 1362
Doha Qatar

For the attention of Mr. Sayeed Ahmed, The Project Manager

Fax No: +974-4131749

15 May 2008

Dear Sir

**Al-Sadd Development Office Tower
Approval of M/s Technical Engineering Laboratory**

With reference to the above mentioned project and further to your letter reference HBK/AST/242-08 dated 04/05/2008 concerning the Proposal for Alternative Independent Laboratory M/s Technical Engineering Laboratory Doha/Qatar, P.O. Box 47428.

Please be informed that we reviewed the submitted documents and we have no objection for your proposal.

The status of the proposal is **Approved**.

The above is for your information and necessary action, please.

Yours faithfully



Nadher Ahmed
Project Manager
nadher.ahmed@maunsell.com
Mobile: +974 6607044
Direct Dial: +974 4131754
Direct Fax: +974 4131753

cc. Client – For your kind information, please.
MCSL – Main Office
File

3

CALIBRATION CERTIFICATES

- ◆ **CALIBRATION STATUS**
- ◆ **CALIBRATION CERTIFICATES**
- ◆ **LABORATORY EQUIPMENT LIST**



Calibration Status of Equipment

F/CAL/01
Rev. No. 01
Date: 01-06-2016
Page 1 of 3

Frequency of calibration

One Year

Method of calibration

Outside agency

Sr. No.	Unique Id. No.	TEL Apparatus no.	Name Of Instruments	Range	Accuracy / Least Count	Acceptance Criteria	Location	Calibration			Status
								Date	Rep. No.	Due Date	
1.	NA	TEL APP NO.0270	Right Angle	30 cm	-	As per Certificate	Concrete	08-10-2019	551220083260995	08-10-2020	Accepted
2.	NA	TEL APP NO.0269	Measuring Tape	0-10 m	1 mm	As per Certificate	Master	09-10-2018	551220081610752	09-10-2020	Accepted
3.	NA	TEL APP NO.0271	Steel Ruler	0-100 cm	1 mm	As per Certificate	All	08-10-2019	5512200832661007	08-10-2020	Accepted
4.	NA	TEL APP NO.0268	Straight Edge	300 mm	-	As per Certificate	Concrete	08-10-2019	551220083260998	08-10-2020	Accepted
5.	NA	TEL APP NO.0267	Feeler Gauge	0.03-0.50 mm	0.03 mm	As per Certificate	Concrete	09-10-2019	551220083261012	09-10-2020	Accepted
6.	BRD1782	TEL APP NO.0094	Digital Calliper	0-155 mm	0.01 mm	As per Certificate	Master	09-10-2018	551220081610713	09-10-2020	Accepted
7.	112603151 2	TEL APP NO.0081	Electronic Balance	0-22000g	0.1g	As per Certificate	All	09-10-2019	551220083261021	09-10-2020	Accepted
8.	0060319- 6KG	TEL APP NO.0080	Electronic Balance	0-60 kg	0.01kg	As per Certificate	All	09-10-2019	551220083261027	09-10-2020	Accepted
9.	112603270 5	TEL APP NO.0083	Electronic Balance	0-6100g	0.1g	As per Certificate	Master	10-10-2018	551220081613379	10-10-2020	Accepted

Prepared By →

Pradip

Reviewed And Approved By →

Technical Manager



Calibration Status of Equipment

F/CAL/01
Rev. No. 01
Date: 01-06-2016
Page 2 of 3

Frequency of calibration

One Year

Method of calibration

Outside agency

Sr. No.	Unique Id. No.	TEL Apparatus no.	Name Of Instruments	Range	Accuracy / Least Count	Acceptance Criteria	Location	Calibration			Status
								Date	Rep. No.	Due Date	
10.	33731764/701	TEL APP NO.0218	Digital Thermometer	-50 to 1000°C	0.1°C	As per Certificate	All	09-10-2018	551220081610725	09-10-2019	Accepted
11.	33731763/701	TEL APP NO.0219	Digital Thermometer	-50 to 1000°C	0.1°C	As per Certificate	Master	09-10-2018	551220081610737	09-10-2019	Accepted
12.	Y7D170	TEL APP NO.0074	Drying Oven	250°C	5°C	As per Certificate	All	18-10-2018	51220081626987	18-10-2019	Accepted
13.	Y7D169	TEL APP NO.0076	Drying Oven	250°C	5°C	As per Certificate	All	18-10-2018	51220081626989	18-10-2019	Accepted
14.	06107365	TEL APP NO.0084	Compressive Machine	2000 KN	0.1 KN	As per Certificate	Concrete	18-10-2018	51220081631465	18-10-2019	Accepted
15.	C1006081159	TEL APP NO.0275	Digital Caliper	0-300 mm	0.01 mm	As per Certificate	All	16-01-2020	551220083429087	16-01-2021	Accepted
16.	2819046011	TEL APP NO.0320	Electronic Balance	0-12 Kg	0.1 g	As per Certificate	Asphalt Lab	19-01-2020	551220083429088	19-01-2021	Accepted
17.	D10480434	TEL APP NO.0274	Date Logger	-40 to +125°C	0.1°C	As per Certificate	Curing Room	20-01-2020	551220083429086	20-01-2021	Accepted

Prepared By →	Pradip	Reviewed And Approved By →	Technical Manager
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Calibration Status of Equipment

F/CAL/01
Rev. No. 01
Date: 01-06-2016
Page 3 of 3

Frequency of calibration

One Year

Method of calibration

Outside agency

Sr. No.	Unique Id. No.	TEL Apparatus no.	Name Of Instruments	Range	Accuracy / Least Count	Acceptance Criteria	Location	Calibration			Status
								Date	Rep. No.	Due Date	
18.	NA	TEL APP NO.0272	Decimal Stop Watch	9:59:59.99 sec	0.01 sec	As per Certificate	All	07-08-2019	51220083151010	07-08-2020	Accepted
19.	NA	TEL APP NO.0282	Decimal Stop Watch	9:59:59.99 sec	0.01 sec	As per Certificate	Master	07-08-2019	51220083151011	07-08-2020	Accepted
20	NA	TEL APP NO.0366	Schmidt Hammer	10-100 N/mm ²	0.1 N/mm ²	As per Certificate	Concrete	12-05-2019	551220083009405	12-05-2020	Accepted

Prepared By →

Pradip

Reviewed And Approved By →

Technical Manager



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Industrial Area, Doha State of Qatar
Tel: (974) 44585400 Fax: (974) 44607637

Certificate of Calibration

Print Date: 10-Oct-2019

Cert No. 551220083260995

Customer:

TECHNICAL ENGINEERING LABORATORY
DOHA - QATAR

Work Order No. : QA-10039449
Cal ID No. : TEL APP.NO.0270
Equipment ID : TEL APP.NO.0270
Equipment Type: RIGHT ANGLE
Manufacturer : STANLEY
Model No. : 46-536
Range / Size : 30 CM / 90 °
Temp/RH : 20.2°C / 50 %

Purchase Order No. : CAS
Serial No. : N/A
Department : N/A
Performed By : RIYA CHATTERJEE
Received Condition : IN TOLERANCE
Returned Condition : IN TOLERANCE
Calibration Date : 08-Oct-2019
Calibration Interval : 12 MONTHS
Calibration Due Date : 08-Oct-2020

Calibration Notes:

Site Location : MPC Lab.
Attached 1 page calibration data.

Reference Instruments Used in Calibration

I.D.	Description.	Model No.	Serial No.	Manufacturer	Cal. Due Date	Traceability No.
AJ2003	7 PCS GAGE BLOCK SET	SS8MA1X	6779.4	STARRETT	Jun 17, 2022	551220083070924
AX0074	112 PCS LG METRIC GAGE BLOCK SET	RS112MA1	120908.3	STARRETT	Dec 8, 2019	1000133997
QA-VMM-01	VIDEO MEASURING MACHINE	MV-2515	VFC00142	LEADER PRECISION	Jun 11, 2020	551220083101142

Procedures Used in Calibration

Procedure Name	Description
MANUFACTURER	MANUAL REV CONTROL

Calibration Performed By:

Riya Chatterjee
RIYA CHATTERJEE
Calibration Technician



Faizal Fajardeen
FAIZAL FAJARDEEN
QA/QC Inspector

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with EA's Publication and NIST Technical Note 1297, 1994 Edition. Services rendered comply with ISO 17025:2005, ANSI/NCSL Z540-1, ANSI/NCSL Z540.3, MPC Quality Manual, MPC CSD and with customer purchase order instructions.

Calibration cycles and resulting due dates were submitted/approved by the customer. Any number of factors may cause an instrument to drift out of tolerance before the next scheduled calibration. Recalibration cycles should be based on frequency of use, environmental conditions and customer's established systematic accuracy. The information on this report, pertains only to the instrument identified.

All standards are traceable to SI through the National Institute of Standards and Technology (NIST) and/or recognized national or international standards laboratories. Services rendered include proper manufacturer's service instruction and are warranted for no less than thirty (30) days. This report may not be reproduced in part or in a whole without the prior written approval of the issuing MPC lab.

Right Angle

Procedure Reference: MANUFACTURER
 Calibration ID Number: TEL APP.NO.0270
 Asset Number: TEL APP.NO.0270
 Manufacturer: STANLEY

Order Number: QA-10039449
 Serial Number: NONE
 Model Number: 46-536
 Calibration Date: October 8, 2019

All calculations and data transfers have been reviewed for accuracy and completeness

Inside Measurement Accuracy

Function Tested	Nominal	As Found	As Left	Deviation	Tolerance	Result	Uncertainty
Linearity	1.0 cm	1.0 cm	1.0 cm	0.0 cm	±1.0 cm	PASS	±0.58 cm
Linearity	5.0 cm	5.0 cm	5.0 cm	0.0 cm	±1.0 cm	PASS	±0.58 cm
Linearity	10.0 cm	10.0 cm	10.0 cm	0.0 cm	±1.0 cm	PASS	±0.58 cm
Linearity	15.0 cm	15.0 cm	15.0 cm	0.0 cm	±1.0 cm	PASS	±0.58 cm
Linearity	20.0 cm	20.0 cm	20.0 cm	0.0 cm	±1.0 cm	PASS	±0.58 cm
Linearity	25.0 cm	25.0 cm	25.0 cm	0.0 cm	±1.0 cm	PASS	±0.58 cm
Linearity	30.0 cm	30.0 cm	30.0 cm	0.0 cm	±1.0 cm	PASS	±0.58 cm

Outside Measurement Accuracy

Function Tested	Nominal	As Found	As Left	Deviation	Tolerance	Result	Uncertainty
Linearity	1.0 cm	1.0 cm	1.0 cm	0.0 cm	±1.0 cm	PASS	±0.58 cm
Linearity	5.0 cm	5.0 cm	5.0 cm	0.0 cm	±1.0 cm	PASS	±0.58 cm
Linearity	10.0 cm	10.0 cm	10.0 cm	0.0 cm	±1.0 cm	PASS	±0.58 cm
Linearity	15.0 cm	15.0 cm	15.0 cm	0.0 cm	±1.0 cm	PASS	±0.58 cm
Linearity	20.0 cm	20.0 cm	20.0 cm	0.0 cm	±1.0 cm	PASS	±0.58 cm
Linearity	25.0 cm	25.0 cm	25.0 cm	0.0 cm	±1.0 cm	PASS	±0.58 cm
Linearity	30.0 cm	30.0 cm	30.0 cm	0.0 cm	±1.0 cm	PASS	±0.58 cm

* Measurement Accuracy (angle°)

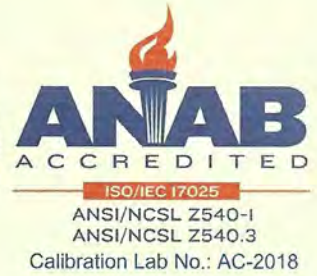
Function Tested	Nominal	As Found	As Left	Deviation	Tolerance	Result	Uncertainty
Inside Angle	90.0°	89.9997°	89.9997°	0.0003°	±0.2°	PASS	±0.061°
Outside Angle	90.0°	89.9998°	89.9998°	0.0002°	±0.2°	PASS	±0.061°
Inside Angle	45.0°	45.0006°	45.0006°	-0.0006°	±0.2°	PASS	±0.061°
Outside Angle	45.0°	45.0008°	45.0008°	-0.0008°	±0.2°	PASS	±0.061°

Note:

The readings are the results at the time of calibration only and they do not carry any implication regarding long term stability of the instrument being tested.

*The remark (*) is Z540 Calibration Only.*





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Certificate of Calibration

Print Date: 10-Oct-2018

Cert No. 551220081610752

Customer:

TECHNICAL ENGINEERING LABORATORY
 DOHA - QATAR

Work Order No. : QA-10036077
 Cal ID No. : TEL APP.NO.0269
 Equipment ID : TEL APP.NO.0269
 Equipment Type: MEASURING TAPE
 Manufacturer : STANLEY
 Model No. : 33-896
 Range / Size : 10m / 33' / 1000cm
 Temp/RH : 20.3°C / 56 %

Purchase Order No. : CAS
 Serial No. : N/A
 Department : N/A
 Performed By : JOE MANNIX RETUERNE
 Received Condition : IN TOLERANCE
 Returned Condition : IN TOLERANCE
 Calibration Date : 09-Oct-2018
 Calibration Interval : 24 MONTHS
 Calibration Due Date : 09-Oct-2020

Calibration Notes:

Site Location: MPC Lab
 See attached 1 page calibration data

Reference Instruments Used in Calibration

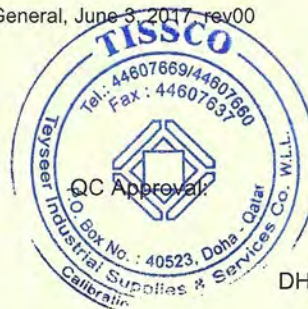
I.D.	Description.	Model No.	Serial No.	Manufacturer	Cal. Due Date	Traceability No.
782533443	LASER DISTANCE METER	HD50	782533443	SPECTRA	Jan 23, 2019	512200813239721
AJ2003	7 PCS GAGE BLOCK SET	SS8MA1X	6779.4	STARRETT	Dec 1, 2018	222200812369392
AX0074	112 PCS LG METRIC GAGE BLOCK SET	RS112MA1	120908.3	STARRETT	Sep 8, 2019	1000133997

Procedures Used in Calibration

Procedure Name	Description
MPC-RTM-001	Rulers and Tape Measures, General, June 3, 2017, rev00

Calibration Performed By:

JOE MANNIX RETUERNE
 Calibration Technician



DHANA KADIRMANICKAM
 QA/QC Inspector

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with EA's Publication and NIST Technical Note 1297, 1994 Edition. Services rendered comply with ISO 17025:2005, ANSI/NCSL Z540-1, ANSI/NCSL Z540.3, MPC Quality Manual, MPC CSD and with customer purchase order instructions.

Calibration cycles and resulting due dates were submitted/approved by the customer. Any number of factors may cause an instrument to drift out of tolerance before the next scheduled calibration. Recalibration cycles should be based on frequency of use, environmental conditions and customer's established systematic accuracy. The information on this report, pertains only to the instrument identified.

All standards are traceable to SI through the National Institute of Standards and Technology (NIST) and/or recognized national or international standards laboratories. Services rendered include proper manufacturer's service instruction and are warranted for no less than thirty (30) days. This report may not be reproduced in part or in a whole without the prior written approval of the issuing MPC lab.

MEASURING TAPE

Procedure Reference: MPC-RTM-001
Calibration ID: TEL APP.NO.0269
Asset Number: TEL APP.NO.0269
Manufacturer: STANLEY

Work Order Number: QA-10036077
Serial Number: NONE
Model Number: 33-896
Calibration Date: October 9, 2018

All calculations and data transfers have been reviewed for accuracy and completeness...

Measurement

Function	Nominal UUT	As Found	As Left	Deviation	Tolerance	Result	Uncertainty
@ 0 Origin	50 cm	50.0 cm	50.0 cm	0.0 cm	± 0.2 cm	PASS	± 0.058 cm
@ 0 Origin	100 cm	100.0 cm	100.0 cm	0.0 cm	± 0.2 cm	PASS	± 0.058 cm
@ 100 Origin	150 cm	150.0 cm	150.0 cm	0.0 cm	± 0.2 cm	PASS	± 0.058 cm
@ 150 Origin	200 cm	200.0 cm	200.0 cm	0.0 cm	± 0.2 cm	PASS	± 0.058 cm
@ 200 Origin	250 cm	250.0 cm	250.0 cm	0.0 cm	± 0.2 cm	PASS	± 0.058 cm
@ 250 Origin	300 cm	300.0 cm	300.0 cm	0.0 cm	± 0.2 cm	PASS	± 0.058 cm
@ 300 Origin	350 cm	350.0 cm	350.0 cm	0.0 cm	± 0.2 cm	PASS	± 0.058 cm
@ 350 Origin	400 cm	400.0 cm	400.0 cm	0.0 cm	± 0.2 cm	PASS	± 0.058 cm
@ 400 Origin	450 cm	450.0 cm	450.0 cm	0.0 cm	± 0.2 cm	PASS	± 0.058 cm
@ 450 Origin	500 cm	500.0 cm	500.0 cm	0.0 cm	± 0.2 cm	PASS	± 0.058 cm
@ 500 Origin	550 cm	550.0 cm	550.0 cm	0.0 cm	± 0.2 cm	PASS	± 0.058 cm
@ 550 Origin	600 cm	600.0 cm	600.0 cm	0.0 cm	± 0.2 cm	PASS	± 0.058 cm
@ 600 Origin	650 cm	650.0 cm	650.0 cm	0.0 cm	± 0.2 cm	PASS	± 0.058 cm
@ 650 Origin	700 cm	700.0 cm	700.0 cm	0.0 cm	± 0.2 cm	PASS	± 0.058 cm
@ 700 Origin	750 cm	750.0 cm	750.0 cm	0.0 cm	± 0.2 cm	PASS	± 0.058 cm
@ 750 Origin	800 cm	800.0 cm	800.0 cm	0.0 cm	± 0.2 cm	PASS	± 0.058 cm
@ 800 Origin	850 cm	850.0 cm	850.0 cm	0.0 cm	± 0.2 cm	PASS	± 0.058 cm
@ 850 Origin	900 cm	900.0 cm	900.0 cm	0.0 cm	± 0.2 cm	PASS	± 0.058 cm
@ 900 Origin	950 cm	950.0 cm	950.0 cm	0.0 cm	± 0.2 cm	PASS	± 0.058 cm

Note:

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Certificate of Calibration

Print Date: 10-Oct-2019

Cert No. 551220083261007

Customer:

TECHNICAL ENGINEERING LABORATORY
DOHA - QATAR

Work Order No. : QA-10039449
Cal ID No. : TEL APP.NO.0271
Equipment ID : TEL APP.NO.0271
Equipment Type: STEEL RULER
Manufacturer : EGA MASTER
Model No. : 65838-05.09
Range / Size : 0 to 100 CM
Temp/RH : 20.1°C / 50 %

Purchase Order No. : CAS
Serial No. : N/A
Department : N/A
Performed By : RIYA CHATTERJEE
Received Condition : IN TOLERANCE
Returned Condition : IN TOLERANCE
Calibration Date : 08-Oct-2019
Calibration Interval : 12 MONTHS
Calibration Due Date : 08-Oct-2020

Calibration Notes:

Site Location : MPC Lab.
Attached 1 page calibration data.

Reference Instruments Used in Calibration

I.D.	Description.	Model No.	Serial No.	Manufacturer	Cal. Due Date	Traceability No.
AJ2003	7 PCS GAGE BLOCK SET	SS8MA1X	6779.4	STARRETT	Jun 17, 2022	551220083070924
AX0074	112 PCS LG METRIC GAGE BLOCK SET	RS112MA1	120908.3	STARRETT	Dec 8, 2019	1000133997
QA-LDM-01	LASER DISTANCE METER	LASER MESSFIX50	1273440774	NEDO	Dec 1, 2019	551220081702371

Procedures Used in Calibration

Procedure Name	Description
MPC-RTM-001	Rulers and Tape Measures, General, June 3, 2017, rev00

Calibration Performed By:

Riya Chatterjee
RIYA CHATTERJEE
Calibration Technician

QC Approval: *Faizal Fajardeen*
FAIZAL FAJARDEEN
QA/QC Inspector



The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with EA's Publication and NIST Technical Note 1297, 1994 Edition. Services rendered comply with ISO 17025:2005, ANSI/NC SL Z540-1, ANSI/NC SL Z540.3, MPC Quality Manual, MPC CSD and with customer purchase order instructions.

Calibration cycles and resulting due dates were submitted/approved by the customer. Any number of factors may cause an instrument to drift out of tolerance before the next scheduled calibration. Recalibration cycles should be based on frequency of use, environmental conditions and customer's established systematic accuracy. The information on this report, pertains only to the instrument identified.

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STEEL RULER

Procedure Reference: MPC-RTM-001
 Calibration ID Number: TEL APP.NO.0271
 Asset Number: TEL APP.NO.0271
 Manufacturer: EGA MASTER

Order Number: QA-10039449
 Serial Number: NONE
 Model Number: 65838-05.09
 Calibration Date: October 8, 2019

All calculations and data transfers have been reviewed for accuracy and completeness

Measurement Accuracy

Function Tested	UUT Set Value	As Found	As Left	Deviation	Tolerance	Result	Uncertainty
Length	1.0 cm	1.0 cm	1.0 cm	0.0 cm	± 1.0 cm	PASS	±0.58 cm
Length	5.0 cm	5.0 cm	5.0 cm	0.0 cm	± 1.0 cm	PASS	±0.58 cm
Length	10.0 cm	10.0 cm	10.0 cm	0.0 cm	± 1.0 cm	PASS	±0.58 cm
Length	15.0 cm	15.0 cm	15.0 cm	0.0 cm	± 1.0 cm	PASS	±0.58 cm
Length	20.0 cm	20.0 cm	20.0 cm	0.0 cm	± 1.0 cm	PASS	±0.58 cm
Length	50.0 cm	50.0 cm	50.0 cm	0.0 cm	± 1.0 cm	PASS	±0.58 cm
Length	60.0 cm	60.0 cm	60.0 cm	0.0 cm	± 1.0 cm	PASS	±0.58 cm
Length	70.0 cm	70.0 cm	70.0 cm	0.0 cm	± 1.0 cm	PASS	±0.58 cm
Length	80.0 cm	80.0 cm	80.0 cm	0.0 cm	± 1.0 cm	PASS	±0.58 cm
Length	90.0 cm	90.0 cm	90.0 cm	0.0 cm	± 1.0 cm	PASS	±0.58 cm
Length	100.0 cm	100.0 cm	100.0 cm	0.0 cm	± 1.0 cm	PASS	±0.58 cm

Note:

The readings are the results at the time of calibration only and they do not carry any implication regarding long term stability of the instrument being tested.





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Certificate of Calibration

Print Date: 10-Oct-2019

Cert No. 551220083260998

Customer:

TECHNICAL ENGINEERING LABORATORY
 DOHA - QATAR

Work Order No. : QA-10039449
 Cal ID No. : TEL APP.NO.0268
 Equipment ID : TEL APP.NO.0268
 Equipment Type: STRAIGHT EDGE
 Manufacturer : CONTROLS
 Model No. : 34-T0099
 Range / Size : 0-300 mm
 Temp/RH : 20.1°C / 49 %

Purchase Order No. : CAS
 Serial No. : N/A
 Department : N/A
 Performed By : RIYA CHATTERJEE
 Received Condition : IN TOLERANCE
 Returned Condition : IN TOLERANCE
 Calibration Date : 08-Oct-2019
 Calibration Interval : 12 MONTHS
 Calibration Due Date : 08-Oct-2020

Calibration Notes:

Site Location : MPC Lab.
 Attached 1 page calibration data.

Reference Instruments Used in Calibration

I.D.	Description.	Model No.	Serial No.	Manufacturer	Cal. Due Date	Traceability No.
02240178	FEELER GAUGE	0.02-1.00	02240178	MC	Jan 21, 2020	551220082770916
AX0174	GRANITE SURFACE PLATE	18X24X3	2008101611	XINXING MEASURING TOOLS FACTORY	Jun 15, 2020	512200813025338

Procedures Used in Calibration

Procedure Name	Description
33K6-4-538-1	Planekator Diabase Straight Edge, Rahn, Technical Manual, Jan-30-2019

Calibration Performed By:

Riya Chatterjee
 RIYA CHATTERJEE
 Calibration Technician



Faizal Fajardeen
 FAIZAL FAJARDEEN
 QA/QC Inspector

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STRAIGHT EDGE

Procedure Reference: 33K6-4-538-1
 Calibration ID: TEL APP.NO.0268
 Asset Number: TEL APP.NO.0268
 Manufacturer: CONTROLS

Work Order Number: QA-10039449
 Serial Number: NONE
 Model Number: 34-T0099
 Calibration Date: 08-Oct-2019

All calculations and data transfers have been reviewed for accuracy and completeness...

Flatness Accuracy

Function	Nominal	As Found	As Left	Deviation	Tolerance	Result	Uncertainty
Flatness @ Zero	0 mm	0.00 mm	0.00 mm	0.00 mm	± 0.03 mm	PASS	± 0.0058 mm
Flatness @ 30 mm	0 mm	0.01 mm	0.01 mm	0.01 mm	± 0.03 mm	PASS	± 0.0075 mm
Flatness @ 60 mm	0 mm	0.01 mm	0.01 mm	0.01 mm	± 0.03 mm	PASS	± 0.0075 mm
Flatness @ 90 mm	0 mm	0.01 mm	0.01 mm	0.01 mm	± 0.03 mm	PASS	± 0.0075 mm
Flatness @ 120 mm	0 mm	0.01 mm	0.01 mm	0.01 mm	± 0.03 mm	PASS	± 0.0075 mm
Flatness @ 150 mm	0 mm	0.01 mm	0.01 mm	0.01 mm	± 0.03 mm	PASS	± 0.0075 mm
Flatness @ 180 mm	0 mm	0.02 mm	0.02 mm	0.02 mm	± 0.03 mm	PASS	± 0.0116 mm
Flatness @ 210 mm	0 mm	0.02 mm	0.02 mm	0.02 mm	± 0.03 mm	PASS	± 0.0116 mm
Flatness @ 240 mm	0 mm	0.02 mm	0.02 mm	0.02 mm	± 0.03 mm	PASS	± 0.0116 mm
Flatness @ 270 mm	0 mm	0.01 mm	0.01 mm	0.01 mm	± 0.03 mm	PASS	± 0.0075 mm
Flatness @ 300 mm	0 mm	0.01 mm	0.01 mm	0.01 mm	± 0.03 mm	PASS	± 0.0075 mm

Note:

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ISO/IEC 17025
 ANSI/NCSL Z540-1
 ANSI/NCSL Z540.3
 Calibration Lab No.: AC-2018

Certificate of Calibration

Print Date: 10-Oct-2018

Cert No. 551220081610713

Customer:

TECHNICAL ENGINEERING LABORATORY
 DOHA - QATAR

Work Order No. : QA-10036077
 Cal ID No. : TEL APP.NO.0094
 Equipment ID : TEL APP.NO.0094
 Equipment Type: DIGITAL CALIPER
 Manufacturer : BAKER GAUGE
 Model No. : N/A
 Range / Size : 0-150 mm
 Temp/RH : 20.2°C / 53 %

Purchase Order No. : CAS
 Serial No. : BRD1782
 Department : N/A
 Performed By : JOE MANNIX RETUERNE
 Received Condition : IN TOLERANCE
 Returned Condition : IN TOLERANCE
 Calibration Date : 09-Oct-2018
 Calibration Interval : 24 MONTHS
 Calibration Due Date : 09-Oct-2020

Calibration Notes:

Site Location: MPC Lab
 See attached 1 page calibration data

Reference Instruments Used in Calibration

I.D.	Description.	Model No.	Serial No.	Manufacturer	Cal. Due Date	Traceability No.
AX0074	112 PCS LG METRIC GAGE BLOCK SET	RS112MA1	120908.3	STARRETT	Sep 8, 2019	1000133997

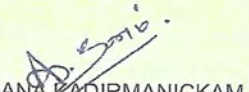
Procedures Used in Calibration

Procedure Name	Description
MPC-CAL-001	Calipers, General

Calibration Performed By:


JOE MANNIX RETUERNE
 Calibration Technician




DHANA KADIRMANICKAM
 QA/QC Inspector

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with EA's Publication and NIST Technical Note 1297, 1994 Edition. Services rendered comply with ISO 17025:2005, ANSI/NCSL Z540-1, ANSI/NCSL Z540.3, MPC Quality Manual, MPC CSD and with customer purchase order instructions.

Calibration cycles and resulting due dates were submitted/approved by the customer. Any number of factors may cause an instrument to drift out of tolerance before the next scheduled calibration. Recalibration cycles should be based on frequency of use, environmental conditions and customer's established systematic accuracy. The information on this report, pertains only to the instrument identified.

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DIGITAL CALIPER

Procedure Reference: MPC-CAL-001
 Calibration ID Number: TEL APP.NO.0094
 Asset Number: TEL APP.NO.0094
 Manufacturer: BAKER GAUGE

Order Number: QA-10036077
 Serial Number: BRD1782
 Model Number: NONE
 Calibration Date: October 9, 2018

All calculations and data transfers have been reviewed for accuracy and completeness

Length Accuracy

Function Tested	Nominal Value	As Found	As Left	Deviation	Tolerance	Result	Uncertainty
TI Zero	0.00 mm	0.00 mm	0.00 mm	0.00 mm	± 0.02 mm	PASS	± 0.0058 mm
OD Scale Indication	10.00 mm	10.00 mm	10.00 mm	0.00 mm	± 0.02 mm	PASS	± 0.0058 mm
OD Scale Indication	25.00 mm	25.00 mm	25.00 mm	0.00 mm	± 0.02 mm	PASS	± 0.0058 mm
OD Scale Indication	50.00 mm	50.00 mm	50.00 mm	0.00 mm	± 0.02 mm	PASS	± 0.0058 mm
OD Scale Indication	75.00 mm	75.00 mm	75.00 mm	0.00 mm	± 0.02 mm	PASS	± 0.0058 mm
OD Scale Indication	100.00 mm	100.00 mm	100.00 mm	0.00 mm	± 0.03 mm	PASS	± 0.0058 mm
OD Scale Indication	125.00 mm	125.00 mm	125.00 mm	0.00 mm	± 0.03 mm	PASS	± 0.0058 mm
OD Scale Indication	150.00 mm	150.00 mm	150.00 mm	0.00 mm	± 0.04 mm	PASS	± 0.0058 mm
ID Scale Indication	150.00 mm	150.00 mm	150.00 mm	0.00 mm	± 0.03 mm	PASS	± 0.0058 mm
Depth Indication	50.00 mm	50.00 mm	50.00 mm	0.00 mm	± 0.02 mm	PASS	± 0.0058 mm

Note:

The readings are the results at the time of calibration only and they do not carry any implication regarding long term stability of the instrument being tested.





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Certificate of Calibration

Print Date: 10-Oct-2019

Cert No. 551220083261021

Customer:

TECHNICAL ENGINEERING LABORATORY
 DOHA - QATAR

Work Order No. : QA-10039449
 Cal ID No. : TEL APP.NO.0081
 Equipment ID : TEL APP.NO.0081
 Equipment Type: ELECTRONIC BALANCE
 Manufacturer : OHAUS CORP
 Model No. : EP22001
 Range / Size : 22000 g
 Temp/RH : 20.1°C / 50 %

Purchase Order No. : CAS
 Serial No. : 1126031512
 Department : N/A
 Performed By : RIYA CHATTERJEE
 Received Condition : IN TOLERANCE
 Returned Condition : IN TOLERANCE
 Calibration Date : 09-Oct-2019
 Calibration Interval : 12 MONTHS
 Calibration Due Date : 09-Oct-2020

Calibration Notes:

Site Location : MPC Lab.
 Attached 1 page calibration data.

Reference Instruments Used in Calibration

I.D.	Description.	Model No.	Serial No.	Manufacturer	Cal. Due Date	Traceability No.
QA-TW-02	WEIGHT SET	12775	N/A	RICE LAKE WEIGHING SYSTEMS	Dec 2, 2019	551220081722223
QA-TW-03	ASTM WEIGHT SET CLASS 1	12485	3IV4	RICE LAKE WEIGHING SYSTEMS	Jan 31, 2020	551220082805890

Procedures Used in Calibration

Procedure Name	Description
MPC-WEI-001	Weighing Instruments, General, rev03, Nov-23-2017

Calibration Performed By:

Riya Chatterjee
 RIYA CHATTERJEE
 Calibration Technician



Faizal Fajardeen
 FAIZAL FAJARDEEN
 QA/QC Inspector

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with EA's Publication and NIST Technical Note 1297, 1994 Edition. Services rendered comply with ISO 17025:2005, ANSI/NC SL Z540-1, ANSI/NC SL Z540.3, MPC Quality Manual, MPC CSD and with customer purchase order instructions.

Calibration cycles and resulting due dates were submitted/approved by the customer. Any number of factors may cause an instrument to drift out of tolerance before the next scheduled calibration. Recalibration cycles should be based on frequency of use, environmental conditions and customer's established systematic accuracy. The information on this report, pertains only to the instrument identified.

All standards are traceable to SI through the National Institute of Standards and Technology (NIST) and/or recognized national or international standards laboratories. Services rendered include proper manufacturer's service instruction and are warranted for no less than thirty (30) days. This report may not be reproduced in part or in a whole without the prior written approval of the issuing MPC lab.

Electronic Balance

Procedure Reference: MPC-WEI-001
 Calibration ID: TEL APP.NO.0081
 Asset Number: TEL APP.NO.0081
 Manufacturer: OHAUS CORPORATION INC

Work Order Number: QA-10039449
 Serial Number: 1126031512
 Model Number: EP22001
 Calibration Date: 09-Oct-2019

All calculations and data transfers have been reviewed for accuracy and completeness...

Repeatability Test

Range: 22 kg

Resolution: 0.1 g

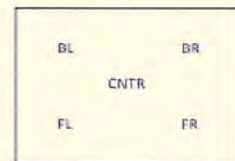
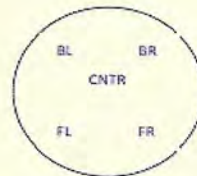
Function	Reading	Uncertainty
Repeatability	9999.9 g	± 0.058 g
Repeatability	9999.9 g	
Repeatability	9999.9 g	
Repeatability	9999.9 g	
Repeatability	9999.9 g	
Repeatability	9999.9 g	
Repeatability	9999.9 g	
Repeatability	9999.9 g	
Repeatability	9999.9 g	
Repeatability	9999.9 g	
Standard Deviation	0.00 g	
* Tolerance	± 0.2 g	
Result	PASS	

Eccentricity Test (Corner Loading)

Range: 22 kg

Resolution: 0.1 g

Quadrant	Nominal	Reading
CNTR	10000 g	9999.9 g
BL	10000 g	9999.9 g
BR	10000 g	9999.8 g
FL	10000 g	9999.9 g
FR	10000 g	9999.8 g
* Tolerance		± 0.4 g
Uncertainty		± 0.096 g
Result		PASS



Linearity Test

Range: 22 kg

Resolution: 0.1 g

Function	Nominal	As Found	As Left	Deviation	Tolerance	Result	Uncertainty
Zero Load	0 g	0.0 g	0.0 g	0.0 g	± 0.4 g	PASS	± 0.058 g
Linearity	1000 g	1000.0 g	1000.0 g	0.0 g	± 0.4 g	PASS	± 0.075 g
Linearity	3000 g	3000.0 g	3000.0 g	0.0 g	± 0.4 g	PASS	± 0.075 g
Linearity	5000 g	4999.9 g	4999.9 g	-0.1 g	± 0.4 g	PASS	± 0.075 g
Linearity	10000 g	9999.9 g	9999.9 g	-0.1 g	± 0.4 g	PASS	± 0.075 g
Linearity	15000 g	14999.8 g	14999.8 g	-0.2 g	± 0.4 g	PASS	± 0.075 g
Linearity	20000 g	19999.8 g	19999.8 g	-0.2 g	± 0.4 g	PASS	± 0.082 g
Linearity	22000 g	21999.7 g	21999.7 g	-0.3 g	± 0.4 g	PASS	± 0.082 g

Note:

* Tolerance according to MPC-WEI-001

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ISO/IEC 17025
 ANSI/NCSL Z540-1
 ANSI/NCSL Z540.3
 AC-1969.28

Certificate of Calibration

Print Date: 10-Oct-2019

Cert No. 551220083261027

Customer:

TECHNICAL ENGINEERING LABORATORY
 DOHA - QATAR

Work Order No. : QA-10039449
 Cal ID No. : TEL APP.NO.0080
 Equipment ID : TEL APP.NO.0080
 Equipment Type: ELECTRONIC BALANCE
 Manufacturer : OHAUS CORP
 Model No. : N/A
 Range / Size : 60 kg
 Temp/RH : 20.2°C / 49 %

Purchase Order No. : CAS
 Serial No. : 0060319-6KG
 Department : N/A
 Performed By : RIYA CHATTERJEE
 Received Condition : IN TOLERANCE
 Returned Condition : IN TOLERANCE
 Calibration Date : 09-Oct-2019
 Calibration Interval : 12 MONTHS
 Calibration Due Date : 09-Oct-2020

Calibration Notes:

Site Location : MPC Lab.
 Attached 1 page calibration data.

Reference Instruments Used in Calibration

I.D.	Description.	Model No.	Serial No.	Manufacturer	Cal. Due Date	Traceability No.
QA-TW-02	WEIGHT SET	12775	N/A	RICE LAKE WEIGHING SYSTEMS	Dec 2, 2019	551220081722223
QA-TW-03	ASTM WEIGHT SET CLASS 1	12485	3IV4	RICE LAKE WEIGHING SYSTEMS	Jan 31, 2020	551220082805890

Procedures Used in Calibration

Procedure Name	Description
MPC-WEI-001	Weighing Instruments, General, rev03, Nov-23-2017

Calibration Performed By:

Riya Chatterjee
 RIYA CHATTERJEE
 Calibration Technician



Faizal Fajardeen
 FAIZAL FAJARDEEN
 QA/QC Inspector

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with EA's Publication and NIST Technical Note 1297, 1994 Edition. Services rendered comply with ISO 17025:2005, ANSI/NCSL Z540-1, ANSI/NCSL Z540.3, MPC Quality Manual, MPC CSD and with customer purchase order instructions.

Calibration cycles and resulting due dates were submitted/approved by the customer. Any number of factors may cause an instrument to drift out of tolerance before the next scheduled calibration. Recalibration cycles should be based on frequency of use, environmental conditions and customer's established systematic accuracy. The information on this report, pertains only to the instrument identified.

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Electronic Balance

Procedure Reference: MPC-WEI-001
 Calibration ID: TEL APP.NO.0080
 Asset Number: TEL APP.NO.0080
 Manufacturer: OHAUS CORPORATION INC

Work Order Number: QA-10039449
 Serial Number: 0060319-6KG
 Model Number: N/A
 Calibration Date: 09-Oct-2019

All calculations and data transfers have been reviewed for accuracy and completeness...

Repeatability Test

Range: 60 kg

Resolution: 0.01 kg

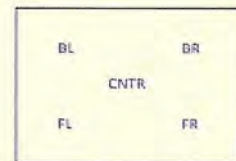
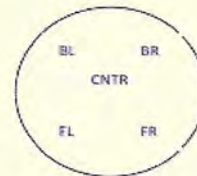
Function	Reading	Uncertainty
Repeatability	24.99 kg	± 0.0058 kg
Repeatability	24.99 kg	
Repeatability	24.99 kg	
Repeatability	24.99 kg	
Repeatability	24.99 kg	
Repeatability	24.99 kg	
Repeatability	24.99 kg	
Repeatability	24.99 kg	
Repeatability	24.99 kg	
Repeatability	24.99 kg	
Standard Deviation	0.00 kg	
* Tolerance	± 0.02 kg	
Result	PASS	

Eccentricity Test (Corner Loading)

Range: 60 kg

Resolution: 0.01 kg

Quadrant	Nominal	Reading
CNTR	25.00 kg	24.99 kg
BL	25.00 kg	24.98 kg
BR	25.00 kg	24.98 kg
FL	25.00 kg	24.99 kg
FR	25.00 kg	24.99 kg
* Tolerance		± 0.04 kg
Uncertainty		± 0.0087 kg
Result		PASS



Linearity Test

Range: 60 kg

Resolution: 0.01 kg

Function	Nominal	As Found	As Left	Deviation	Tolerance	Result	Uncertainty
Zero Load	0 kg	0.00 kg	0.00 kg	0.00 kg	± 0.04 kg	PASS	± 0.0058 kg
Linearity	5 kg	5.00 kg	5.00 kg	0.00 kg	± 0.04 kg	PASS	± 0.0075 kg
Linearity	10 kg	9.99 kg	9.99 kg	-0.01 kg	± 0.04 kg	PASS	± 0.0087 kg
Linearity	20 kg	19.99 kg	19.99 kg	-0.01 kg	± 0.04 kg	PASS	± 0.0087 kg
Linearity	30 kg	29.99 kg	29.99 kg	-0.01 kg	± 0.04 kg	PASS	± 0.0087 kg
Linearity	40 kg	40.00 kg	40.00 kg	0.00 kg	± 0.04 kg	PASS	± 0.0075 kg
Linearity	50 kg	50.00 kg	50.00 kg	0.00 kg	± 0.04 kg	PASS	± 0.0075 kg
Linearity	60 kg	60.01 kg	60.01 kg	0.01 kg	± 0.04 kg	PASS	± 0.0094 kg

Note:

* Tolerance according to MPC-WEI-001

The readings are the results at the time of calibration only and they do not carry any implication regarding long term stability of the instrument being tested.





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Certificate of Calibration

Print Date: 11-Oct-2018

Cert No. 551220081613379

Customer:

TECHNICAL ENGINEERING LABORATORY
 DOHA - QATAR

Work Order No. : QA-10036077
 Cal ID No. : TEL APP.NO.0083
 Equipment ID : TEL APP.NO.0083
 Equipment Type: ELECTRONIC BALANCE
 Manufacturer : OHAUS CORPORATION INC USA
 Model No. : EP6101
 Range / Size : 6100 g
 Temp/RH : 20.9°C / 50 %

Purchase Order No. : CAS
 Serial No. : 1126032705
 Department : N/A
 Performed By : CHRISTIAN BUCAYON
 Received Condition : IN TOLERANCE
 Returned Condition : IN TOLERANCE
 Calibration Date : 10-Oct-2018
 Calibration Interval : 24 MONTHS
 Calibration Due Date : 10-Oct-2020

Calibration Notes:

Lab. Calibration.
 The results of calibration are given on the attached calibration data.

Reference Instruments Used in Calibration

I.D.	Description.	Model No.	Serial No.	Manufacturer	Cal. Due Date	Traceability No.
QA-TW-03	ASTM WEIGHT SET CLASS 1	12485	3IV4	RICE LAKE WEIGHING SYSTEMS	Feb 1, 2019	512200813354046

Procedures Used in Calibration

Procedure Name	Description
MPC-WEI-001	Weighing Instruments, General, 23-Nov-2017 rev03

Calibration Performed By:

CHRISTIAN BUCAYON
 Calibration Technician



DHANA RADIRMANICKAM
 QA/QC Inspector

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with EA's Publication and NIST Technical Note 1297, 1994 Edition. Services rendered comply with ISO 17025:2005, ANSI/NCSL Z540-1, ANSI/NCSL Z540.3, MPC Quality Manual, MPC CSD and with customer purchase order instructions.

Calibration cycles and resulting due dates were submitted/approved by the customer. Any number of factors may cause an instrument to drift out of tolerance before the next scheduled calibration. Recalibration cycles should be based on frequency of use, environmental conditions and customer's established systematic accuracy. The information on this report, pertains only to the instrument identified.

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Electronic Balance

Procedure Reference: MPC-WEI-001
 Calibration ID: TEL APP.NO.0083
 Asset Number: TEL APP.NO.0083
 Manufacturer: OHAUS CORPORATION

Work Order Number: QA-10036077
 Serial Number: 1126032705
 Model Number: EP6101
 Calibration Date: 10-Oct-2018

All calculations and data transfers have been reviewed for accuracy and completeness...

Repeatability Test

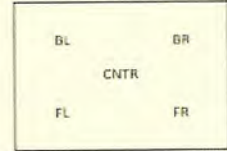
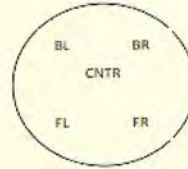
Range: 6100 g Resolution: 0.1 g

Function	Reading	Uncertainty
Repeatability	3000.0 g	± 0.0580 g
Repeatability	3000.0 g	
Repeatability	3000.0 g	
Repeatability	3000.0 g	
Repeatability	3000.0 g	
Repeatability	3000.0 g	
Repeatability	3000.0 g	
Repeatability	3000.0 g	
Repeatability	3000.0 g	
Repeatability	3000.0 g	
Standard Deviation	0 g	
* Tolerance	± 0.2 g	
Result	PASS	

Eccentricity Test (Corner Loading)

Range: 6100 g Resolution: 0.1 g

Quadrant	Nominal	Reading
CNTR	3000 g	3000.0 g
BL	3000 g	3000.0 g
BR	3000 g	3000.0 g
FL	3000 g	3000.0 g
FR	3000 g	3000.0 g
* Tolerance		± 0 g
Uncertainty		± 0.058 g
Result		PASS



Linearity Test

Range: 6100 g Resolution: 0.1 g

Function	Nominal	As Found	As Left	Deviation	Tolerance	Result	Uncertainty
Zero Load	0 g	0.0 g	0.0 g	0.0 g	± 0.4 g	PASS	± 0.058 g
Linearity	500 g	500.0 g	500.0 g	0.0 g	± 0.4 g	PASS	± 0.087 g
Linearity	1000 g	1000.0 g	1000.0 g	0.0 g	± 0.4 g	PASS	± 0.087 g
Linearity	2000 g	2000.0 g	2000.0 g	0.0 g	± 0.4 g	PASS	± 0.087 g
Linearity	3000 g	3000.0 g	3000.0 g	0.0 g	± 0.4 g	PASS	± 0.087 g
Linearity	4000 g	4000.1 g	4000.1 g	0.1 g	± 0.4 g	PASS	± 0.087 g
Linearity	5000 g	5000.1 g	5000.1 g	0.1 g	± 0.4 g	PASS	± 0.087 g
Linearity	6000 g	6000.2 g	6000.2 g	0.2 g	± 0.4 g	PASS	± 0.087 g
Linearity	6100 g	6100.3 g	6100.3 g	0.3 g	± 0.4 g	PASS	± 0.087 g

Note:

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Certificate of Calibration

Print Date: 10-Oct-2019

Cert No. 551220083261010

Customer:

TECHNICAL ENGINEERING LABORATORY
DOHA - QATAR

Work Order No. : QA-10039449
Cal ID No. : TEL APP.NO.0218
Equipment ID : TEL APP.NO.0218
Equipment Type: DIGITAL THERMOMETER
Manufacturer : TESTO AG GERMANY
Model No. : 925
Range / Size : -50 TO 1000°C
Temp/RH : 19.9°C / 50 %

Purchase Order No. : CAS
Serial No. : 33731764/701
Department : N/A
Performed By : RIYA CHATTERJEE
Received Condition : IN TOLERANCE
Returned Condition : IN TOLERANCE
Calibration Date : 08-Oct-2019
Calibration Interval : 12 MONTHS
Calibration Due Date : 08-Oct-2020

Calibration Notes:

Site Location : MPC Lab.
Attached 1 page calibration data.

Reference Instruments Used in Calibration

I.D.	Description.	Model No.	Serial No.	Manufacturer	Cal. Due Date	Traceability No.
20962	DRY BLOCK CALIBRATOR WITH RTD	DBC-150-TC	20962	DRUCK INC	May 19, 2020	551220083106433
QA-RTD-01	PT100 RTD PROBE	PT100X1	12204	TEMPSENS	Nov 14, 2019	512200812981482
3150900	ADVANCE MODULAR CALIBRATOR	DPI620	3150900	DRUCK INC	Dec 17, 2019	551220082742299
QA-MPC-01	MULTI-PRODUCT CALIBRATOR	5502A	3635801	FLUKE	Sep 25, 2021	551220083239688

Procedures Used in Calibration

Procedure Name	Description
MPC-TEM-001	Temperature Sensors and Indicators, General

Calibration Performed By:

Riya Chatterjee
RIYA CHATTERJEE
Calibration Technician



Faizal Fajardeen
FAIZAL FAJARDEEN
QA/QC Inspector

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with EA's Publication and NIST Technical Note 1297, 1994 Edition. Services rendered comply with ISO 17025:2005, ANSI/NC SL Z540-1, ANSI/NC SL Z540.3, MPC Quality Manual, MPC CSD and with customer purchase order instructions.

Calibration cycles and resulting due dates were submitted/approved by the customer. Any number of factors may cause an instrument to drift out of tolerance before the next scheduled calibration. Recalibration cycles should be based on frequency of use, environmental conditions and customer's established systematic accuracy. The information on this report, pertains only to the instrument identified.

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Digital Thermometer

Procedure Reference: MPC-TEM-01
 Calibration ID Number: TEL APP.NO.0218
 Asset Number: TEL APP.NO.0218
 Manufacturer: TESTO

Order Number: QA-10039449
 Serial Number: 33731764/701
 Model Number: 925
 Calibration Date: October 8, 2019

All calculations and data transfers have been reviewed for accuracy and completeness

Temperature Accuracy

* System calibration (Meter + Sensor)

Function Tested	Standard Reading	As Found	As Left	Deviation	Tolerance	Result	Uncertainty
Temperature @ 10 °C	-9.87°C	-9.9 °C	-9.9 °C	-0.03 °C	± 2.50 °C	PASS	± 0.069 °C
Temperature @ 0 °C	0.05°C	0.0°C	0.0 °C	-0.05 °C	± 2.50 °C	PASS	± 0.070 °C
Temperature @ 25 °C	25.06°C	25.1°C	25.1 °C	0.04 °C	± 2.50 °C	PASS	± 0.067 °C
Temperature @ 50 °C	50.14°C	50.1°C	50.1 °C	-0.04 °C	± 2.50 °C	PASS	± 0.067 °C
Temperature @ 100 °C	99.87°C	99.8°C	99.8 °C	-0.07 °C	± 2.50 °C	PASS	± 0.069 °C
Temperature @ 150 °C	150.03°C	149.9 °C	149.9 °C	-0.13 °C	± 2.50 °C	PASS	± 0.074 °C
Temperature @ 200 °C	200.28°C	200.2 °C	200.2 °C	-0.08 °C	± 2.50 °C	PASS	± 0.069 °C

Temperature Accuracy

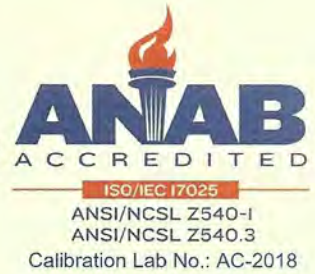
* TC Type K Simulator Input

Function Tested	Input Value	As Found	As Left	Deviation	Tolerance	Result	Uncertainty
Temperature	-40.0°C	-39.7°C	-39.7 °C	0.3 °C	± 0.62 °C	PASS	± 0.108 °C
Temperature	0.0°C	0.3°C	0.3 °C	0.3 °C	± 0.50 °C	PASS	± 0.108 °C
Temperature	25.0°C	24.8°C	24.8 °C	-0.2 °C	± 0.58 °C	PASS	± 0.084 °C
Temperature	50.0°C	50.1°C	50.1 °C	0.1 °C	± 0.65 °C	PASS	± 0.065 °C
Temperature	100.0°C	100.2°C	100.2°C	0.2 °C	± 0.80 °C	PASS	± 0.084 °C
Temperature	200.0°C	200°C	200°C	0.0 °C	± 1.10 °C	PASS	± 0.61 °C
Temperature	300.0°C	300°C	300°C	0.0 °C	± 1.40 °C	PASS	± 0.70 °C
Temperature	600.0°C	600°C	600°C	0.0 °C	± 2.30 °C	PASS	± 0.61 °C
Temperature	900.0°C	900°C	900°C	0.0 °C	± 3.20 °C	PASS	± 0.61 °C

Note:

The readings are the results at the time of calibration only and they do not carry any implication regarding long term stability of the instrument being tested.





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Certificate of Calibration

Print Date: 10-Oct-2018

Cert No. 551220081610737

Customer:

TECHNICAL ENGINEERING LABORATORY
DOHA - QATAR

Work Order No. : QA-10036077
Cal ID No. : TEL APP.NO.0219
Equipment ID : TEL APP.NO.0219
Equipment Type: DIGITAL THERMOMETER
Manufacturer : TESTO AG GERMANY
Model No. : 925
Range / Size : -50 TO 1000°C
Temp/RH : 20.4°C / 55 %

Purchase Order No. : CAS
Serial No. : 33731763/701
Department : N/A
Performed By : JOE MANNIX RETUERNE
Received Condition : IN TOLERANCE
Returned Condition : IN TOLERANCE
Calibration Date : 09-Oct-2018
Calibration Interval : 24 MONTHS
Calibration Due Date : 09-Oct-2020

Calibration Notes:

Site Location: MPC Lab
See attached 1 page calibration data

Note: Probe identified as TEL APP.NO.0219-P

Reference Instruments Used in Calibration

I.D.	Description.	Model No.	Serial No.	Manufacturer	Cal. Due Date	Traceability No.
20962	DRY BLOCK CALIBRATOR WITH RTD	DBC-150-TC	20962	DRUCK INC	May 19, 2019	551220081406034
MY44000146	6 1/2 DIGIT MULTIMETER	34401A	MY44000146	AGILENT	Sep 13, 2019	551220081575612
PH1257	BLACKBODY CALIBRATOR	BB-4A	12050272	OMEGA	May 5, 2019	551220081474505
QA-RTD-01	PT100 RTD PROBE	PT100X1	12204	TEMPSENS	Aug 14, 2019	512200812981482
3150900	ADVANCE MODULAR CALIBRATOR	DPI620	3150900	DRUCK INC	Dec 26, 2018	512200813271831

Procedures Used in Calibration

Procedure Name Description

Calibration Performed By:

JOE MANNIX RETUERNE
Calibration Technician



DHANA KADIRMANICKAM
QA/QC Inspector

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with EA's Publication and NIST Technical Note 1297, 1994 Edition. Services rendered comply with ISO 17025:2005, ANSI/NC SL Z540-1, ANSI/NC SL Z540.3, MPC Quality Manual, MPC CSD and with customer purchase order instructions.

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Digital Thermometer

Procedure Reference: <u>TESTO THERMOMETER</u>	Order Number: <u>QA-10036077</u>
Calibration ID Number: <u>TEL APP.NO.0219</u>	Serial Number: <u>33731763/701</u>
Asset Number: <u>TEL APP.NO.0219</u>	Model Number: <u>925</u>
Manufacturer: <u>TESTO</u>	Calibration Date: <u>October 9, 2018</u>

All calculations and data transfers have been reviewed for accuracy and completeness

Temperature Accuracy

** System calibration (Meter + Sensor)*

Function Tested	Standard Reading	As Found	As Left	Deviation	Tolerance	Result	Uncertainty
Temperature @ 10 °C	-9.91°C	-10.1 °C	-10.1 °C	-0.19 °C	± 2.50 °C	PASS	± 0.092 °C
Temperature @ 0 °C	0.07°C	-0.1°C	-0.1 °C	-0.17 °C	± 2.50 °C	PASS	± 0.086 °C
Temperature @ 25 °C	25.07°C	24.9°C	24.9 °C	-0.17 °C	± 2.50 °C	PASS	± 0.084 °C
Temperature @ 50 °C	50.11°C	49.8°C	49.8 °C	-0.31 °C	± 2.50 °C	PASS	± 0.109 °C
Temperature @ 100 °C	100.29°C	99.9°C	99.9 °C	-0.39 °C	± 2.50 °C	PASS	± 0.123 °C
Temperature @ 150 °C	150.34°C	150.1 °C	150.1 °C	-0.24 °C	± 2.50 °C	PASS	± 0.091 °C
Temperature @ 200 °C	200.29°C	199.9 °C	199.9 °C	-0.39 °C	± 2.50 °C	PASS	± 0.120 °C

Temperature Accuracy

** TC Type K Simulator Input*

Function Tested	Input Value	As Found	As Left	Deviation	Tolerance	Result	Uncertainty
Temperature	-40.0°C	-39.8°C	-39.8 °C	0.2 °C	± 0.62 °C	PASS	± 0.084 °C
Temperature	0.0°C	0.1°C	0.1 °C	0.1 °C	± 0.50 °C	PASS	± 0.065 °C
Temperature	25.0°C	25.1°C	25.1 °C	0.1 °C	± 0.58 °C	PASS	± 0.065 °C
Temperature	50.0°C	50.2°C	50.2 °C	0.2 °C	± 0.65 °C	PASS	± 0.084 °C
Temperature	100.0°C	100.2°C	100.2 °C	0.2 °C	± 0.80 °C	PASS	± 0.084 °C
Temperature	200.0°C	200°C	200 °C	0.0 °C	± 1.10 °C	PASS	± 0.61 °C
Temperature	300.0°C	300°C	300 °C	0.0 °C	± 1.40 °C	PASS	± 0.70 °C
Temperature	600.0°C	600°C	600 °C	0.0 °C	± 2.30 °C	PASS	± 0.61 °C
Temperature	900.0°C	900°C	900 °C	0.0 °C	± 3.20 °C	PASS	± 0.61 °C

Note:

The readings are the results at the time of calibration only and they do not carry any implication regarding long term stability of the instrument being tested.





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P.O. Box: 40523 St. No. 11 Gate No. 74 Bldg. No. 163
Industrial Area, Doha State of Qatar
Tel: (974) 44585400 Fax: (974) 44607637

Certificate of Calibration

Print Date: 12-Oct-2019

Cert No. 551220083265410

Customer:

TECHNICAL ENGINEERING LABORATORY
DOHA - QATAR

Work Order No. : QA-10039487
Cal ID No. : TEL APP. NO. 0074
Equipment ID : TEL APP. NO. 0074
Equipment Type: DRYING OVEN
Manufacturer : GENLAB
Model No. : SD0/225/DT
Range / Size : 250°C MAX
Temp/RH : 21.3°C / 51 %

Purchase Order No. : CAS
Serial No. : Y7D170
Department : N/A
Performed By : CHRISTIAN BUCAYON
Received Condition : IN TOLERANCE
Returned Condition : IN TOLERANCE
Calibration Date : 09-Oct-2019
Calibration Interval : 12 MONTHS
Calibration Due Date : 09-Oct-2020

Calibration Notes:

Onsite calibration.
The results of calibration are given on the attached calibration data.

Reference Instruments Used in Calibration

I.D.	Description.	Model No.	Serial No.	Manufacturer	Cal. Due Date	Traceability No.
AZ9263	DATA AQUISITION W/ 20CH MULTIPLEXER MODULE	34970A W/ 34901A	US37018585	AGILENT	Jun 5, 2020	551220083062651
3150900	ADVANCE MODULAR CALIBRATOR	DP1620	3150900	DRUCK INC	Dec 17, 2019	551220082742299

Procedures Used in Calibration

Procedure Name	Description
MPC-00074	Temperature Devices, Sept-27-2016 rev02

Calibration Performed By:

CHRISTIAN BUCAYON
Calibration Technician



FAIZAL FAJARDEEN
QA/QC Inspector

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor $k=2$, which for normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with EA's Uncertainty and NIST Technical Note 1297, 1994 Edition. Services rendered comply with ISO 17025:2005, ANSI/NCSL Z540-1, ANSI/NCSL Z540.3, MPC Quality Manual, MPC CSO and with customer purchase order instructions.

Calibration cycles and resulting due dates were submitted/approved by the customer. Any number of factors may cause an instrument to drift out of tolerance before the next scheduled calibration. Recalibration cycles should be based on frequency of use, environmental conditions and customer's established systematic accuracy. The information on this report, pertains only to the instrument identified.

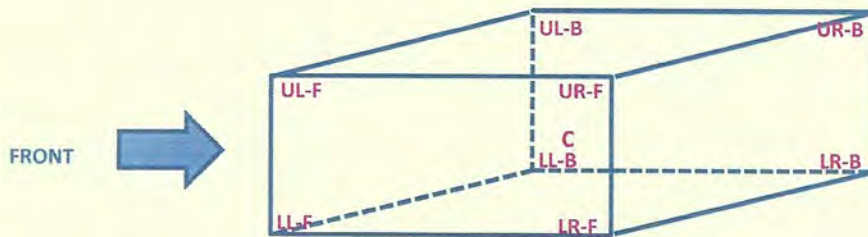
All standards are traceable to SI through the National Institute of Standards and Technology (NIST) and/or recognized national or international standards laboratories. Services rendered include proper manufacturer's service instruction and are warranted for no less than thirty (30) days. This report may not be reproduced in part or in a whole without the prior written approval of the issuing MPC lab.

Drying Oven

Procedure Reference: MPC-00074
 Calibration ID: TEL APP. NO. 0074
 Asset Number: TEL APP. NO. 0074
 Manufacturer: GEN LAB

Work Order Number: QA-10039487
 Serial Number: Y7D170
 Model Number: SD0/225/DT
 Calibration Date: 09-Oct-2019

All calculations and data transfers have been reviewed for accuracy and completeness...



Chamber Temperature Profile Check

*As found/As Left data read-out from Master STD

Thermocouple Position	UUT Set-Point	As Found	As Left	Deviation	Tolerance	Result	Uncertainty
Upper Right - Front	100°C	100.92°C	100.92°C	0.92°C	± 5.00°C	PASS	± 0.81°C
Upper Left - Front	100°C	100.86°C	100.86°C	0.86°C	± 5.00°C	PASS	± 0.81°C
Lower Right - Front	100°C	100.77°C	100.77°C	0.77°C	± 5.00°C	PASS	± 0.81°C
Lower Left - Front	100°C	101.06°C	101.06°C	1.06°C	± 5.00°C	PASS	± 0.81°C
Lower Right - Back	100°C	101.18°C	101.18°C	1.18°C	± 5.00°C	PASS	± 0.81°C
Lower Left - Back	100°C	101.02°C	101.02°C	1.02°C	± 5.00°C	PASS	± 0.81°C
Upper Left - Back	100°C	100.94°C	100.94°C	0.94°C	± 5.00°C	PASS	± 0.81°C
Upper Right - Back	100°C	100.89°C	100.89°C	0.89°C	± 5.00°C	PASS	± 0.81°C
Center	100°C	100.98°C	100.98°C	0.98°C	± 5.00°C	PASS	± 0.81°C

Temperature Measurement

*As found/As Left data read-out from Master STD

Function	UUT Set-Point	As Found	As Left	Deviation	Tolerance	Result	Uncertainty
Linearity Test	75°C	75.68°C	75.68°C	0.68°C	5.00°C	PASS	± 0.81°C
Linearity Test	100°C	100.93°C	100.93°C	0.93°C	5.00°C	PASS	± 0.81°C
Linearity Test	105°C	105.99°C	105.99°C	0.99°C	5.00°C	PASS	± 0.81°C
Linearity Test	110°C	111.09°C	111.09°C	1.09°C	5.00°C	PASS	± 0.81°C
Linearity Test	125°C	126.23°C	126.23°C	1.23°C	5.00°C	PASS	± 0.81°C
Linearity Test	150°C	151.46°C	151.46°C	1.46°C	5.00°C	PASS	± 0.81°C
Linearity Test	175°C	176.57°C	176.57°C	1.57°C	5.00°C	PASS	± 0.81°C
Linearity Test	190°C	191.85°C	191.85°C	1.85°C	5.00°C	PASS	± 0.81°C

Note:

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 Industrial Area, Doha State of Qatar
 Tel: (974) 44585400 Fax: (974) 44607637

Certificate of Calibration

Print Date: 18-Oct-2018

Cert No. 551220081626989

Customer:

TECHNICAL ENGINEERING LABORATORY
 DOHA - QATAR

Work Order No. : QA-10036194

Cal ID No. : TEL APP. NO. 0076

Equipment ID : TEL APP. NO. 0076

Equipment Type: DRYING OVEN

Manufacturer : GENLAB

Model No. : SD0/225/DT

Range / Size : 250°C MAX

Temp/RH : 28.8°C / 41 %

Purchase Order No. : CAS

Serial No. : Y7D169

Department : N/A

Performed By : ANUSHKA PERERA

Received Condition : IN TOLERANCE

Returned Condition : IN TOLERANCE

Calibration Date : 18-Oct-2018

Calibration Interval : 24 MONTHS

Calibration Due Date : 18-Oct-2020

Calibration Notes:

Onsite calibration.
 The results of calibration are given on the attached calibration data.

Reference Instruments Used in Calibration

I.D.	Description.	Model No.	Serial No.	Manufacturer	Cal. Due Date	Traceability No.
AZ9263	DATA AQUISION W/ 20CH MULTIPLEXER MODULE	34970A W/ 34901A	US37018585	AGILENT	Jun 5, 2019	551220081447096
3150900	ADVANCE MODULAR CALIBRATOR	DPI620	3150900	DRUCK INC	Dec 26, 2018	512200813271831

Procedures Used in Calibration

Procedure Name	Description
33K5-4-571-1	Ovens

Calibration Performed By:

ANUSHKA PERERA
 Calibration Technician

QC Approval:

DHANA KADIRMANICKAM
 QA/QC Inspector

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with EA's Publication and NIST Technical Note 1297, 1994 Edition. Services rendered comply with ISO 17025:2005, ANSI/NCSL Z540-1, ANSI/NCSL Z540.3, MP&Q Quality Manual, MPC CSD and with customer purchase order instructions.

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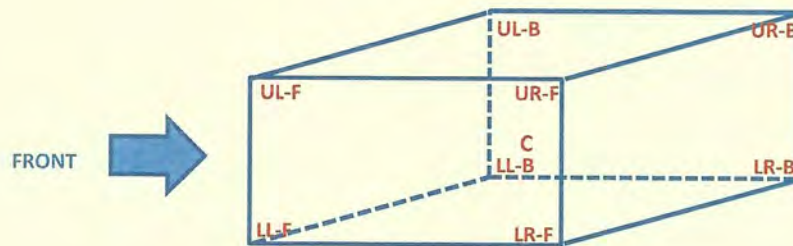
DRYING OVEN

1 year specifications

Procedure Reference: 33K5-4-571-1
 CAL ID : TEL APP. NO. 0076
 Asset ID: TEL APP. NO. 0076
 Manufacturer : GENLAB LIMITED

Order Number: QA-10036194
 Serial Number: Y7D169
 Model : SD0/225/DT
 Calibration Date: Oct 18, 2018

All calculations and data transfers have been reviewed for accuracy and completeness



Chamber Temperature Profile Check

*As found/As Left data read-out from Master STD

Thermocouple Position	UUT Set Point	As Found	As Left	Deviation	Tolerance	Result	Uncertainty
Upper Right - Front	100.0°C	100.56°C	100.56 °C	0.56 °C	± 5 °C	PASS	± 0.94 °C
Upper Left - Front	100.0°C	100.72°C	100.72 °C	0.72 °C	± 5 °C	PASS	± 0.98 °C
Lower Right - Front	100.0°C	100.86°C	100.86 °C	0.86 °C	± 5 °C	PASS	± 0.99 °C
Lower Left - Front	100.0°C	100.45°C	100.45 °C	0.45 °C	± 5 °C	PASS	± 0.99 °C
Lower Right - Back	100.0°C	100.71°C	100.71 °C	0.71 °C	± 5 °C	PASS	± 0.98 °C
Lower Left - Back	100.0°C	100.84°C	100.84 °C	0.84 °C	± 5 °C	PASS	± 0.99 °C
Upper Left - Back	100.0°C	100.75°C	100.75 °C	0.75 °C	± 5 °C	PASS	± 0.98 °C
Upper Right - Back	100.0°C	100.72°C	100.72 °C	0.72 °C	± 5 °C	PASS	± 0.97 °C
Center	100.0°C	100.58°C	100.58 °C	0.58 °C	± 5 °C	PASS	± 0.98 °C

Set Point Accuracy

*As found/As Left data read-out from Master STD

Function Tested	UUT Set Point	As Found	As Left	Deviation	Tolerance	Result	Uncertainty
Temperature Accuracy	75.0°C	74.81°C	74.81 °C	-0.19 °C	± 5 °C	PASS	± 0.58 °C
Temperature Accuracy	100.0°C	100.62°C	100.62 °C	0.62 °C	± 5 °C	PASS	± 0.57 °C
Temperature Accuracy	105.0°C	105.86°C	105.86 °C	0.86 °C	± 5 °C	PASS	± 0.57 °C
Temperature Accuracy	110.0°C	110.94°C	110.94 °C	0.94 °C	± 5 °C	PASS	± 0.58 °C
Temperature Accuracy	125.0°C	125.18°C	125.18 °C	0.18 °C	± 5 °C	PASS	± 0.56 °C
Temperature Accuracy	150.0°C	151.33°C	151.33 °C	1.33 °C	± 5 °C	PASS	± 0.57 °C
Temperature Accuracy	175.0°C	175.67°C	175.67 °C	0.67 °C	± 5 °C	PASS	± 0.55 °C
Temperature Accuracy	190.0°C	190.98°C	190.98 °C	0.98 °C	± 5 °C	PASS	± 0.58 °C

Note:

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Certificate of Calibration

Print Date: 12-Oct-2019

Cert No. 551220083265411

Customer:

TECHNICAL ENGINEERING LABORATORY
DOHA - QATAR

Work Order No. : QA-10039487
Cal ID No. : TEL APP.NO. 0084
Equipment ID : TEL APP.NO. 0084
Equipment Type: COMPRESSION MACHINE
Manufacturer : CONTROLS
Model No. : C46G2
Range / Size : 2000 kN
Temp/RH : 23.4°C / 51 %

Purchase Order No. : CAS
Serial No. : 06107365
Department : N/A
Performed By : CHRISTIAN BUCAYON
Received Condition : IN TOLERANCE
Returned Condition : IN TOLERANCE
Calibration Date : 09-Oct-2019
Calibration Interval : 12 MONTHS
Calibration Due Date : 09-Oct-2020

Calibration Notes:

Onsite calibration.
The results of calibration are given on the attached calibration data.

Reference Instruments Used in Calibration

I.D.	Description.	Model No.	Serial No.	Manufacturer	Cal. Due Date	Traceability No.
QA-LC-01	DYNAMOMETER	CLFLEX	330862	AEP TRANSDUCERS	Dec 25, 2019	212315F

Procedures Used in Calibration

Procedure Name	Description
MPC-CMC-001	Compression Machines, General, rev00, 23-Nov-2017

Calibration Performed By:

CHRISTIAN BUCAYON
Calibration Technician



FAIZAL FAJARDEEN
QA/QC Inspector

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COMPRESSION TESTING MACHINE - Force Calibration

Customer TECHNICAL ENGINEERING LABORATORY DOHA STATE OF QATAR
--

Machine	
Type:	COMPRESSION MACHINE
CAL ID :	TEL APP.NO. 0084
Asset ID:	TEL APP.NO. 0084
Frame Serial Number :	06107365
Manufacturer:	CONTROLS
Maximum Load:	2000 kN

Indicator	
Type:	DIGITAL
Serial Number:	06107365
Manufacturer:	CONTROLS
Capacity:	2000 kN
Lower Limit:	20 kN

Sensor	
Type:	DYNAMOMETER
Serial Number:	330862
Certificate:	331599T
Manufacturer:	AEP TRANSDUCERS

Calibration Technician: BUCAYON CHRISTIAN

Calibration Date : Oct 09, 2019



COMPRESSION TESTING MACHINE - Force calibration

Load measured by	Ranges	Resolution	Lower limit	Serial Number
Manometer indicator	0	0	0	0
Digital display	0+2000 kN	0.1	20 kN	06107365
Others	0	0	0	0
Verified with	Ranges	Certificate no.	Validity	Serial Number
Force transducer	0+3000kN	331599T	25-Dec-2019	330862
Digital electronic tester	260000 div.	331599T	25-Dec-2019	330862
Manometers				
Proving rings				
Conform to :				
LQ.P3 rev. 2 (ref. EN 12390 - 4 2000)				
CALIBRATION RESULTS				
FORCE SCALE TOLERANCES				
	Accuracy	Repeat. Err.	Zero error	Resolution
Class	%	%	% F.S.	%
1	± 1	1	± 0.2	0.5
2	± 2	2	± 0.4	1
CALIBRATION RESULTS				
Range	From 200 kN		to 1800 kN	
	0.13	0.03	0.09	0.05
Class	1			
Range	From		to	
Class				



COMPRESSION TESTING MACHINE - Force Calibration

Load measured by	Ranges	Resolution	Lower limit	Serial Number		
Manometer indicator						
Digital display	0+2000 kN	0.1 kN	20 kN	06107365		
Others						
Verified with	Ranges	Certificate no.	Validity	Serial Number		
Force transducer	0+3000kN	331599T	25-Dec-2019	330862		
Digital electronic tester	260000 div.	331599T	25-Dec-2019	330862		
Manometers						
Proving rings						
Conform to LQ.P3 rev. 2 (ref. EN 12390 - 4 2000)						
DATA RECORDING						
Load verified from	200 kN	to	1800 kN	Temperature	23.1°C	
Load	Output digital electronic tester (division)					
kN	Cycle 1	Cycle 2	Cycle 3			
0	000000	000000	000000			
200	011289	011290	011287			
400	022661	022658	022660			
600	034027	034029	034028			
800	045420	045419	045422			
1000	056783	056781	056783			
1200	068156	068159	068157			
1400	079554	079551	079555			
1600	090959	090957	090958			
1800	102385	102387	102384			
F_n	000001	000000	000000			Max
Zero	1	0	0			1

* = Peak holder



COMPRESSION TESTING MACHINE - Force calibration

Load measured by	Ranges	Resolution	Lower limit	Serial Number				
Manometer indicator	0	0	0	0				
Digital display	0+2000 kN	0.1 kN	20 kN	06107365				
Others	0	0	0	0				
Verified with	Ranges	Certificate no.	Validity	Serial Number				
Force transducer	0+3000kN	331599T	25-Dec-2019	330862				
Digital electronic tester	260000 div.	331599T	25-Dec-2019	330862				
Manometers								
Proving rings								
Conform to LQ.P3 rev. 2 (ref. EN 12390 - 4 2000)		Load verified from	200 kN	to	1800kN			
		Temperature			23.1			
DATA PROCESSING								
Calculation of measured forces $F_{ij} = C + D(U_j - U_0) + E(U_j - U_0)^2 + F(U_j - U_0)^3$	Accuracy $A_j = \frac{F_{ij} - M_j}{M_j} \cdot 100$	Repeatability $R_j = \frac{(F_{ij})_{\max} - (F_{ij})_{\min}}{M_j} \cdot 100$	Media $M_j = \frac{F_{1j} + F_{2j} + F_{3j}}{3}$					
Index of strain gauge equation								
C = 1.6266E+00	D = 1.7574E-02	E = 3.3720E-10	F = -2.0753E-15					
Load	Load measured kN			Media	Accuracy	Repeat. Err.	Resolution	Uncertainty
kN	Cycle 1	Cycle 2	Cycle 3	kN	%	%	%	± kN
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.460
200	200.063	200.080	200.028	200.057	-0.028	0.026	0.050	0.475
400	400.027	399.974	400.009	400.003	-0.001	0.013	0.025	0.515
600	599.936	599.971	599.954	599.954	0.008	0.006	0.017	0.576
800	800.352	800.335	800.388	800.358	-0.045	0.007	0.012	0.659
1000	1000.255	1000.220	1000.255	1000.244	-0.024	0.004	0.010	0.741
1200	1200.330	1200.383	1200.347	1200.353	-0.029	0.004	0.008	0.837
1400	1400.822	1400.769	1400.839	1400.810	-0.058	0.005	0.007	0.955
1600	1601.395	1601.360	1601.378	1601.378	-0.086	0.002	0.006	1.095
1800	1802.279	1802.314	1802.261	1802.285	-0.127	0.003	0.006	1.290
F_n	F₁	F₂	F₃	M	A	R		

* = Peak holder





TISCO



**MICRO
PRECISION**



ISO/IEC 17025

ANSI/NCSL Z540-1
ANSI/NCSL Z540.3
AC-1969.28

TEYSEER INDUSTRIAL SUPPLIES AND SERVICES CO. W.L.L.

P.O. Box: 40523 St. No. 11 Gate No. 74 Bldg. No. 163

Industrial Area, Doha State of Qatar

Tel: (974) 44585400 Fax: (974) 44607637

Certificate of Calibration

Print Date: 21-Jan-2020

Cert No. 551220083429087

Customer:

TECHNICAL ENGINEERING LABORATORY

DOHA - QATAR

Work Order No. : QA-10040316
Cal ID No. : TEL APP.NO.0275
Equipment ID : TEL APP.NO.0275
Equipment Type: DIGITAL CALIPER
Manufacturer : BAKER
Model No. : SDN30
Range / Size : 300 MM
Temp/RH : 20.2°C / 50 %

Purchase Order No. : CAS
Serial No. : C1006081159
Department : N/A
Performed By : RIYA CHATTERJEE
Received Condition : IN TOLERANCE
Returned Condition : IN TOLERANCE
Calibration Date : 16-Jan-2020
Calibration Interval : 12 MONTHS
Calibration Due Date : 16-Jan-2021

Calibration Notes:

Site Location : MPC Lab.
Attached 1 page calibration data.

Reference Instruments Used in Calibration

I.D.	Description.	Model No.	Serial No.	Manufacturer	Cal. Due Date	Traceability No.
AJ2003	7 PCS GAGE BLOCK SET	SS8MA1X	6779.4	STARRETT	Jun 17, 2022	551220083070924
070524	METRIC GAGE BLOCK SET	GRADE 0	070524	FOWLER PRECISION	Oct 4, 2021	1000446680

Procedures Used in Calibration

Procedure Name	Description
MPC-CAL-001	Calipers, General, rev03, Nov-19-2019

Calibration Performed By:

Riya Chatterjee
RIYA CHATTERJEE
Calibration Technician



Joe Mannix Retuerne
JOE MANNIX RETUERNE
QA/QC Inspector

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with EA's Publication and NIST Technical Note 1297, 1994 Edition. Services rendered comply with ISO 17025:2005, ANSI/NCSL Z540-1, ANSI/NCSL Z540.3, MPC Quality Manual, MPC CSD and with customer purchase order instructions.

Calibration cycles and resulting due dates were submitted/approved by the customer. Any number of factors may cause an instrument to drift out of tolerance before the next scheduled calibration. Recalibration cycles should be based on frequency of use, environmental conditions and customer's established systematic accuracy. The information on this report, pertains only to the instrument identified.

All standards are traceable to SI through the National Institute of Standards and Technology (NIST) and/or recognized national or international standards laboratories. Services rendered include proper manufacturer's service instruction and are warranted for no less than thirty (30) days. This report may not be reproduced in part or in a whole without the prior written approval of the issuing MPC lab.

Calibration Report of DIGITAL CALIPER

Procedure Ref:	MPC-CAL-001	Work Order No.:	QA-10040316
Calibration ID:	TEL APP.NO.0275	Serial Number:	C1006081159
Asset ID:	TEL APP.NO.0275	Model Number:	SDN30
Manufacturer:	BAKER	Calibration Date:	January 16, 2020

MEASUREMENT ACCURACY

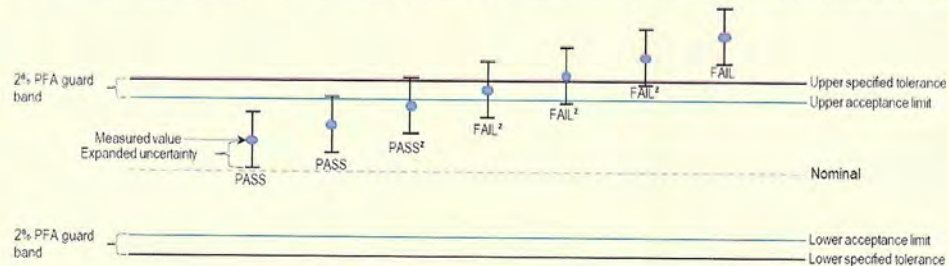
Function Tested	Nominal	Lower Limit	As Found	As Left	Upper Limit	Result	Uncertainty (±)
TI Zero	0.00 mm	-0.02 mm	0.00 mm	0.00 mm	0.02 mm	PASS	0.0057 mm
OD Scale Indication	25.00 mm	24.98 mm	25.00 mm	25.00 mm	25.02 mm	PASS	0.0057 mm
OD Scale Indication	50.00 mm	49.98 mm	50.00 mm	50.00 mm	50.02 mm	PASS	0.0057 mm
OD Scale Indication	100.00 mm	99.98 mm	100.00 mm	100.00 mm	100.02 mm	PASS	0.0057 mm
OD Scale Indication	150.00 mm	149.98 mm	150.00 mm	150.00 mm	150.02 mm	PASS	0.0058 mm
OD Scale Indication	200.00 mm	199.98 mm	200.00 mm	200.00 mm	200.02 mm	PASS	0.0058 mm
OD Scale Indication	300.00 mm	299.98 mm	300.00 mm	300.00 mm	300.02 mm	PASS	0.0059 mm
ID Scale Indication	150.00 mm	149.98 mm	150.00 mm	150.00 mm	150.02 mm	PASS	0.0058 mm
Depth Scale Indication	100.00 mm	99.98 mm	100.00 mm	100.00 mm	100.02 mm	PASS	0.0057 mm

Statements of Pass or Fail Conformance

The uncertainty of measurement has been taken into account when determining compliance with specification, as per ILAC-G8:03/2009. All measurements and test results guard banded to ensure the probability of false-accept does not exceed 2% in compliance with ANSI/NCSL Z540.3-2006.

The status of compliance with the acceptance criteria is reported as:

- PASS** - Compliant with specification
- FAIL** - Not compliant with specification.
- FAIL²** - The measured value is not within the acceptance limits. However, a portion of the expanded uncertainty of measurement at 95% is within the specified to
- PASS²** - The measured value is within acceptance limits. However, a portion of the expanded uncertainty of measurement at 95% exceeds the specified tolerance



Acceptance limits for ≤ 2 % probability of false accept (PFA) guard band

The expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%, unless otherwise stated.

This calibration report complies with ISO/IEC 17025:2017 and ANSI/NCSL Z540.3 Method 6-Guard Bands based on Test Uncertainty Ratio.

- End of Calibration Report -





TEYSEER INDUSTRIAL SUPPLIES AND SERVICES CO. W.L.L.
 P.O. Box: 40523 St. No. 11 Gate No. 74 Bldg. No. 163
 Industrial Area, Doha State of Qatar
 Tel: (974) 44585400 Fax: (974) 44607637

Certificate of Calibration

Print Date: 21-Jan-2020

Cert No. 551220083429088

Customer:

TECHNICAL ENGINEERING LABORATORY
 DOHA - QATAR

Work Order No. : QA-10040316
 Cal ID No. : TEL APP.NO.0320
 Equipment ID : TEL APP.NO.0320
 Equipment Type: ELECTRONIC BALANCE
 Manufacturer : CITIZEN SCALE
 Model No. : CTG-12H+
 Range / Size : 12 kg
 Temp/RH : 20.2°C / 50 %

Purchase Order No. : CAS
 Serial No. : 2819046011
 Department : N/A
 Performed By : RIYA CHATTERJEE
 Received Condition : IN TOLERANCE
 Returned Condition : IN TOLERANCE
 Calibration Date : 19-Jan-2020
 Calibration Interval : 12 MONTHS
 Calibration Due Date : 19-Jan-2021

Calibration Notes:

Site Location : MPC Lab.
 Attached 1 page calibration data.

Reference Instruments Used in Calibration

I.D.	Description.	Model No.	Serial No.	Manufacturer	Cal. Due Date	Traceability No.
QA-TW-01	1MG-10KG TEST WEIGHT SET	OIML E1 (1-SERIES) / ASTM C1 (3-SERIES)	PH2090	CHANGZHOU FUYUE WEIGHT CO	Apr 25, 2024	2857258

Procedures Used in Calibration

Procedure Name	Description
MPC-WEI-001	Weighing Instruments, General, rev03, Nov-23-2017

Calibration Performed By:

Riya Chatterjee
RIYA CHATTERJEE
 Calibration Technician



Joe Mannix Retuerne
JOE MANNIX-RETUERNE
 QA/QC Inspector

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with EA's Publication and NIST Technical Note 1297, 1994 Edition. Services rendered comply with ISO 17025:2005, ANSI/NCSL Z540-1, ANSI/NCSL Z540.3, MPC Quality Manual, MPC CSD and with customer purchase order instructions.

Calibration cycles and resulting due dates were submitted/approved by the customer. Any number of factors may cause an instrument to drift out of tolerance before the next scheduled calibration. Recalibration cycles should be based on frequency of use, environmental conditions and customer's established systematic accuracy. The information on this report, pertains only to the instrument identified.

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Electronic Balance

Procedure Reference: MPC-WEI-001
 Calibration ID: TEL APP.NO.0320
 Asset Number: TEL APP.NO.0320
 Manufacturer: CITIZEN SCALE INC

Work Order Number: QA-10040316
 Serial Number: 2819046011
 Model Number: CTG-12H+
 Calibration Date: 19-Jan-2020

All calculations and data transfers have been reviewed for accuracy and completeness...

Repeatability Test

Range: 12 kg

Resolution: 0.1 g

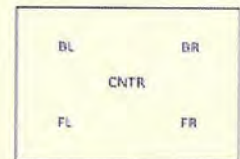
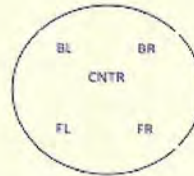
Function	Reading	Uncertainty
Repeatability	5000.0 g	± 0.087 g
Repeatability	5000.0 g	
Repeatability	5000.0 g	
Repeatability	5000.0 g	
Repeatability	5000.0 g	
Repeatability	5000.0 g	
Repeatability	5000.0 g	
Repeatability	5000.0 g	
Repeatability	4999.9 g	
Repeatability	4999.9 g	
Standard Deviation	0.042 g	
* Tolerance	± 0.20 g	
Result	PASS	

Eccentricity Test (Corner Loading)

Range: 12 kg

Resolution: 0.1 g

Quadrant	Nominal	Reading
CNTR	5000.0 g	5000.0 g
BL	5000.0 g	4999.9 g
BR	5000.0 g	5000.0 g
FL	5000.0 g	5000.0 g
FR	5000.0 g	5000.0 g
* Tolerance		± 0.40 g
Uncertainty		± 0.075 g
Result		PASS



Linearity Test

Range: 12 kg

Resolution: 0.1 g

Function	Nominal	As Found	As Left	Deviation	Tolerance	Result	Uncertainty
Zero Load	0.0 g	0.0 g	0.0 g	0.0 g	± 0.4 g	PASS	± 0.058 g
Linearity	50.0 g	50.0 g	50.0 g	0.0 g	± 0.4 g	PASS	± 0.058 g
Linearity	100.0 g	100.0 g	100.0 g	0.0 g	± 0.4 g	PASS	± 0.058 g
Linearity	300.0 g	300.0 g	300.0 g	0.0 g	± 0.4 g	PASS	± 0.058 g
Linearity	500.0 g	500.0 g	500.0 g	0.0 g	± 0.4 g	PASS	± 0.058 g
Linearity	1000.0 g	1000.0 g	1000.0 g	0.0 g	± 0.4 g	PASS	± 0.058 g
Linearity	3000.0 g	3000.0 g	3000.0 g	0.0 g	± 0.4 g	PASS	± 0.058 g
Linearity	6000.0 g	5999.9 g	5999.9 g	-0.1 g	± 0.4 g	PASS	± 0.075 g
Linearity	9000.0 g	8999.9 g	8999.9 g	-0.1 g	± 0.4 g	PASS	± 0.075 g
Linearity	12000.0 g	11999.8 g	11999.8 g	-0.2 g	± 0.4 g	PASS	± 0.12 g

Note:

* Tolerance according to MPC-WEI-001

The readings are the results at the time of calibration only and they do not carry any implication regarding long term stability of the instrument being tested.





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 Industrial Area, Doha State of Qatar
 Tel: (974) 44585400 Fax: (974) 44607637

Certificate of Calibration

Print Date: 21-Jan-2020

Cert No. 551220083429086

Customer:

TECHNICAL ENGINEERING LABORATORY
 DOHA - QATAR

Work Order No. : QA-10040316
 Cal ID No. : TEL APP.NO.0274
 Equipment ID : TEL APP.NO.0274
 Equipment Type: DATA LOGGER
 Manufacturer : ELECTRONIC TEMPERATURE INSTRUMENTS LIM
 Model No. : TDC
 Range / Size : -40 °C TO 125 °C
 Temp/RH : 20.2°C / 49 %

Purchase Order No. : CAS
 Serial No. : D10480434
 Department : N/A
 Performed By : RIYA CHATTERJEE
 Received Condition : IN TOLERANCE
 Returned Condition : IN TOLERANCE
 Calibration Date : 20-Jan-2020
 Calibration Interval : 12 MONTHS
 Calibration Due Date : 20-Jan-2021

Calibration Notes:

Site Location : MPC Lab.
 Attached 1 page calibration data.

Reference Instruments Used in Calibration

I.D.	Description.	Model No.	Serial No.	Manufacturer	Cal. Due Date	Traceability No.
20962	DRY BLOCK CALIBRATOR WITH RTD	DBC-150-TC	20962	DRUCK INC	May 19, 2020	551220083106433
3150900	ADVANCE MODULAR CALIBRATOR	DPI620	3150900	DRUCK INC	Dec 17, 2020	551220083389646
QA-RTD-01	PT100 RTD PROBE	PT100X1	12204	TEMPSENS	Oct 8, 2021	551220083255599

Procedures Used in Calibration

Procedure Name	Description
MPC-TEM-001	Temperature Sensors and Indicators, General, rev02, May-24-2018

Calibration Performed By:

Riya Chatterjee
 RIYA CHATTERJEE
 Calibration Technician



Joe Mannix Retuerne
 JOE MANNIX RETUERNE
 QA/QC Inspector

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with EA's Publication and NIST Technical Note 1297, 1994 Edition. Services rendered comply with ISO 17025:2005, ANSI/NCSL Z540-1, ANSI/NCSL Z540.3, MPC Quality Manual, MPC CSD and with customer purchase order instructions.

Calibration cycles and resulting due dates were submitted/approved by the customer. Any number of factors may cause an instrument to drift out of tolerance before the next scheduled calibration. Recalibration cycles should be based on frequency of use, environmental conditions and customer's established systematic accuracy. The information on this report, pertains only to the instrument identified.

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Calibration Report of DATA LOGGER

Procedure Ref:	MPC-TEM-001	Work Order No.:	QA-10040316
Calibration ID:	TEL APP.NO.0274	Serial Number:	D10480434
Asset ID:	TEL APP.NO.0274	Model Number:	TDC
Manufacturer:	ELECTRONIC TEMPERATURE INSTRUMENTS LIMITED	Calibration Date:	January 20, 2020

MEASUREMENT ACCURACY

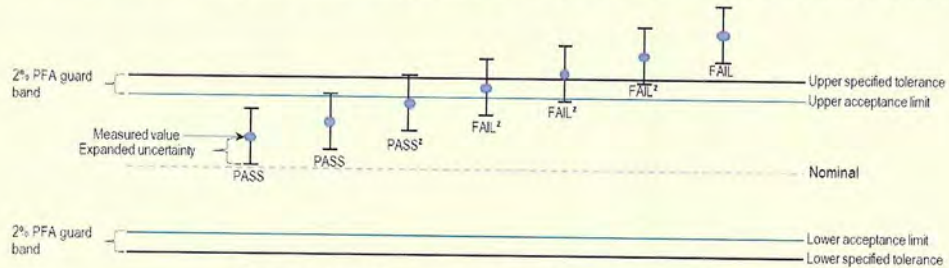
Temperature Tested	Nominal Standard Reading	Lower Limit	UUT As Found	UUT As Left	Upper Limit	Result	Uncertainty (±)
-10.00 °C	-9.91 °C	-10.41 °C	-9.8 °C	-9.8 °C	-9.41 °C	PASS	0.062 °C
0.00 °C	0.02 °C	-0.48 °C	0.1 °C	0.1 °C	0.52 °C	PASS	0.045 °C
25.00 °C	25.12 °C	24.62 °C	25.2 °C	25.2 °C	25.62 °C	PASS	0.045 °C
50.00 °C	50.19 °C	49.69 °C	50.3 °C	50.3 °C	50.69 °C	PASS	0.062 °C
100.00 °C	99.87 °C	99.37 °C	100.0 °C	100.0 °C	100.37 °C	PASS	0.073 °C
120.00 °C	119.66 °C	119.16 °C	119.8 °C	119.8 °C	120.16 °C	PASS	0.078 °C

Statements of Pass or Fail Conformance

The uncertainty of measurement has been taken into account when determining compliance with specification, as per ILAC-G8:03/2009. All measurements and test results guard banded to ensure the probability of false-accept does not exceed 2% in compliance with ANSI/NCSL Z540.3-2006.

The status of compliance with the acceptance criteria is reported as:

- PASS** - Compliant with specification
- FAIL** - Not compliant with specification.
- FAIL^z** - The measured value is not within the acceptance limits. However, a portion of the expanded uncertainty of measurement at 95% is within the specified to
- PASS^z** - The measured value is within acceptance limits. However, a portion of the expanded uncertainty of measurement at 95% exceeds the specified tolerance



Acceptance limits for ≤ 2% probability of false accept (PFA) guard band

The expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%, unless otherwise stated.

This calibration report complies with ISO/IEC 17025:2017 and ANSI/NCSL Z540.3 Method 6-Guard Bands based on Test Uncertainty Ratio.

- End of Calibration Report -





TISCO



**MICRO
PRECISION**



ISO/IEC 17025

ANSI/NCSL Z540-1
ANSI/NCSL Z540.3
AC-1969.28

TEYSEER INDUSTRIAL SUPPLIES AND SERVICES CO. W.L.L.

P.O. Box: 40523 St. No. 11 Gate No. 74 Bldg. No. 163

Industrial Area, Doha State of Qatar

Tel: (974) 44585400 Fax: (974) 44607637

Certificate of Calibration

Print Date: 07-Aug-2019

Cert No. 551220083151010

Customer:

TECHNICAL ENGINEERING LABORATORY

DOHA - QATAR

Work Order No. : QA-10038882

Cal ID No. : TEL APP.NO.0272

Equipment ID : TEL APP.NO.0272

Equipment Type: STOP WATCH

Manufacturer : EXTECH INSTRUMENTS

Model No. : 365515

Range / Size : 9:59:59.99 sec

Temp/RH : 20.3°C / 50 %

Purchase Order No. : CAS

Serial No. : N/A

Department : N/A

Performed By : RIYA CHATTERJEE

Received Condition : IN TOLERANCE

Returned Condition : IN TOLERANCE

Calibration Date : 07-Aug-2019

Calibration Interval : 12 MONTHS

Calibration Due Date : 07-Aug-2020

Calibration Notes:

SITE LOCATION MPC LAB.

SEE ATTACHED 1PAGE CALIBRATION DATA

Reference Instruments Used in Calibration

I.D.	Description.	Model No.	Serial No.	Manufacturer	Cal. Due Date	Traceability No.
AI6784	FUNCTION GENERATOR	33120A	US36038152	HEWLETT PACKARD	Feb 28, 2020	551220082847942
AX0028	UNIVERSAL COUNTER	53132A	MY40000188	AGILENT	Jun 8, 2021	551220083106387

Procedures Used in Calibration

Procedure Name	Description
MPC-TIM-001	Timer and/or Stopwatch Calibration, General, Jun-01-2018, rev00

Calibration Performed By:

Riya Chatterjee
RIYA CHATTERJEE
Calibration Technician



Faizal Fajardeen
FAIZAL FAJARDEEN
QA/QC Inspector

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with EA's Publication and NIST Technical Note 1297, 1994 Edition. Services rendered comply with ISO 17025:2005, ANSI/NCSL Z540-1, ANSI/NCSL Z540.3, MPC Quality Manual, MPC CSD and with customer purchase order instructions.

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Stop Watch

Procedure Reference: MPC-TIM-001
 Calibration ID Number: TEL APP.NO.0272
 Asset Number: TEL APP.NO.0272
 Manufacturer: EXTECH INSTRUMENTS

Order number: QA-10038882
 Serial Number: NONE
 Model Number: 365515
 Calibration Date: August 07, 2019

All calculations and data transfers have been reviewed for accuracy and completeness...

Time Accuracy

Function	UUT Reading	STD As Found	STD As Left	Deviation	Tolerance	Result	Uncertainty
Time Accuracy	6 sec	6.019 sec	6.019 sec	0.019 sec	± 0.20 sec	PASS	±0.0074 sec
Time Accuracy	60 sec	60.025 sec	60.025 sec	0.025 sec	± 0.20 sec	PASS	±0.0086 sec
Time Accuracy	600 sec	600.069 sec	600.069 sec	0.069 sec	± 0.20 sec	PASS	±0.0193 sec
Time Accuracy	1800 sec	1800.102 sec	1800.102 sec	0.102 sec	± 0.20 sec	PASS	±0.0280 sec
Time Accuracy	3600 sec	3600.117 sec	3600.117 sec	0.117 sec	± 0.20 sec	PASS	±0.0323 sec

The readings are the results at the time of calibration only and they do not carry any implication regarding long term stability of the instrument being tested.





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Certificate of Calibration

Print Date: 07-Aug-2019

Cert No. 551220083151011

Customer:

TECHNICAL ENGINEERING LABORATORY
DOHA - QATAR

Work Order No. : QA-10038882
Cal ID No. : TEL APP.NO.0282
Equipment ID : TEL APP.NO.0282
Equipment Type: STOP WATCH
Manufacturer : EXTECH INSTRUMENTS
Model No. : 365535
Range / Size : 9:59:59.99 sec
Temp/RH : 20.1°C / 50 %

Purchase Order No. : CAS
Serial No. : N/A
Department : N/A
Performed By : RIYA CHATTERJEE
Received Condition : IN TOLERANCE
Returned Condition : IN TOLERANCE
Calibration Date : 07-Aug-2019
Calibration Interval : 12 MONTHS
Calibration Due Date : 07-Aug-2020

Calibration Notes:

SITE LOCATION MPC LAB.
SEE ATTACHED 1PAGE CALIBRATION DATA

Reference Instruments Used in Calibration

I.D.	Description.	Model No.	Serial No.	Manufacturer	Cal. Due Date	Traceability No.
AI6784	FUNCTION GENERATOR	33120A	US36038152	HEWLETT PACKARD	Feb 28, 2020	551220082847942
AX0028	UNIVERSAL COUNTER	53132A	MY40000188	AGILENT	Jun 8, 2021	551220083106387

Procedures Used in Calibration

Procedure Name	Description
MPC-TIM-001	Timer and/or Stopwatch Calibration, General, Jun-01-2018, rev00

Calibration Performed By:

Riya Chatterjee
RIYA CHATTERJEE
Calibration Technician



QC Approval:

Faizal Fajardeen
FAIZAL FAJARDEEN
QA/QC Inspector

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with EA's Publication and NIST Technical Note 1297, 1994 Edition. Services rendered comply with ISO 17025:2005, ANSI/NCSL Z540-1, ANSI/NCSL Z540.3, MPC Quality Manual, MPC CSD and with customer purchase order instructions.

Calibration cycles and resulting due dates were submitted/approved by the customer. Any number of factors may cause an instrument to drift out of tolerance before the next scheduled calibration. Recalibration cycles should be based on frequency of use, environmental conditions and customer's established systematic accuracy. The information on this report, pertains only to the instrument identified.

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Stop Watch

Procedure Reference: MPC-TIM-001
 Calibration ID Number: TEL APP.NO.0282
 Asset Number: TEL APP.NO.0282
 Manufacturer: EXTECH INSTRUMENTS

Order number: QA-10038882
 Serial Number: NONE
 Model Number: 365535
 Calibration Date: August 07, 2019

All calculations and data transfers have been reviewed for accuracy and completeness...

Time Accuracy

Function	UUT Reading	STD As Found	STD As Left	Deviation	Tolerance	Result	Uncertainty
Time Accuracy	6 sec	6.031 sec	6.031 sec	0.031 sec	± 0.20 sec	PASS	±0.0098 sec
Time Accuracy	60 sec	60.029 sec	60.029 sec	0.029 sec	± 0.20 sec	PASS	±0.0094 sec
Time Accuracy	600 sec	600.076 sec	600.076 sec	0.076 sec	± 0.20 sec	PASS	±0.0213 sec
Time Accuracy	1800 sec	1800.113 sec	1800.113 sec	0.113 sec	± 0.20 sec	PASS	±0.0313 sec
Time Accuracy	3600 sec	3600.147 sec	3600.147 sec	0.147 sec	± 0.20 sec	PASS	±0.0403 sec

The readings are the results at the time of calibration only and they do not carry any implication regarding long term stability of the instrument being tested.





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 P.O. Box: 40523 St. No. 11 Gate No. 74 Bldg. No. 163
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 Tel: (974) 44585400 Fax: (974) 44607637

ANSI/NCSL Z540-1
 ANSI/NCSL Z540.3
 AC-1969.28

Certificate of Calibration

Print Date: 12-May-2019

Cert No. 551220083009405

Customer:

TECHNICAL ENGINEERING LABORATORY
 DOHA - QATAR

Work Order No. : QA-10038191
 Cal ID No. : TEL APP.NO.0366
 Equipment ID : TEL APP.NO.0366
 Equipment Type: SCHMIDT HAMMER
 Manufacturer : NA
 Model No. : N/A
 Range / Size : N/A
 Temp/RH : 20.5°C / 45 %

Purchase Order No. : CAS
 Serial No. : 3S0029
 Department : NA
 Performed By : JOE MANNIX RETUERNE
 Received Condition : IN TOLERANCE
 Returned Condition : IN TOLERANCE
 Calibration Date : 12-May-2019
 Calibration Interval : 12 MONTHS
 Calibration Due Date : 12-May-2020

Calibration Notes:

Site Location: MPC Lab
 See attached 1 page calibration data

Reference Instruments Used in Calibration

I.D.	Description.	Model No.	Serial No.	Manufacturer	Cal. Due Date	Traceability No.
QA-TA-01	TEST HAMMER CALIBRATION ANVIL	HM-76B	N/A	GILSON COMPANY, INC.	Aug 10, 2019	512200812479097

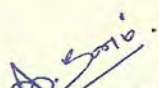
Procedures Used in Calibration

Procedure Name	Description
MPC-HAM-001	Concrete Hammer, General, 04-Dec-2017 rev00

Calibration Performed By:


JOE MANNIX RETUERNE
 Calibration Technician



QC Approval:

DHANA KADIRMANICKAM
 QA/QC Inspector

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with EA's Publication and NIST Technical Note 1297, 1994 Edition. Services rendered comply with ISO 17025:2005, ANSI/NCSL Z540-1, ANSI/NCSL Z540.3, MPC Quality Manual, MPC CSD and with customer purchase order instructions.

Calibration cycles and resulting due dates were submitted/approved by the customer. Any number of factors may cause an instrument to drift out of tolerance before the next scheduled calibration. Recalibration cycles should be based on frequency of use, environmental conditions and customer's established systematic accuracy. The information on this report, pertains only to the instrument identified.

All standards are traceable to SI through the National Institute of Standards and Technology (NIST) and/or recognized national or international standards laboratories. Services rendered include proper manufacturer's service instruction and are warranted for no less than thirty (30) days. This report may not be reproduced in part or in a whole without the prior written approval of the issuing MPC lab.

Concrete Test Hammer

Procedure Reference: MPC-HAM-001
 Calibration ID: TEL APP.NO.0366
 Asset Number: TEL APP.NO.0366
 Manufacturer: NONE

Work Order Number: QA-10038191
 Serial Number: 3S0029
 Model Number: NONE
 Calibration Date: 12-May-2019

All calculations and data transfers have been reviewed for accuracy and completeness...

Hardness Accuracy

Range	STD Nominal	As Found	As Left	Deviation	Tolerance	Result	Uncertainty
10 - 100 N/mm ²	80 N/mm ²	80 N/mm ²	80 N/mm ²	0 N/mm ²	± 2 N/mm ²	PASS	± 0.73 N/mm ²

Note:

The readings are the results at the time of calibration only and they do not carry any implication regarding long term stability of the instrument being tested.



TECHNICAL ENGINEERING LABORATORY APPARATUS LIST

S.N.	TEL Serial Number	Apparatus Name	Range/Capacity/Size	Make	Model No.	Location
1	TEL App. No. 0001	Working Sieve	50.0mm/300mm Dia	Glenammer Eng. LTD.	710355	Store
2	TEL App. No. 0002	Working Sieve	37.5mm/300mm Dia	Glenammer Eng. LTD.	709389	Store
3	TEL App. No. 0003	Working Sieve	25.0mm/300mm Dia	Glenammer Eng. LTD.	710354	Store
4	TEL App. No. 0004	Working Sieve	19.0mm/300mm Dia	Glenammer Eng. LTD.	709390	Store
5	TEL App. No. 0005	Working Sieve	12.5mm/300mm Dia	Glenammer Eng. LTD.	710356	Store
6	TEL App. No. 0006	Working Sieve	9.5mm/300mm Dia	Glenammer Eng. LTD.	709391	Store
7	TEL App. No. 0007	Working Sieve	4.75mm/300mm Dia	Glenammer Eng. LTD.	709399	Store
8	TEL App. No. 0008	Working Sieve	2.36mm/300mm Dia	Glenammer Eng. LTD.	709392	Store
9	TEL App. No. 0009	Working Sieve	2.00mm/300mm Dia	Glenammer Eng. LTD.	709395	Store
10	TEL App. No. 0010	Working Sieve	850 μ m/300mm Dia	Glenammer Eng. LTD.	709396	Store
11	TEL App. No. 0011	Working Sieve	600 μ m/300mm Dia	Glenammer Eng. LTD.	709397	Store
12	TEL App. No. 0012	Working Sieve	425 μ m/300mm Dia	Glenammer Eng. LTD.	709398	Store
13	TEL App. No. 0013	Working Sieve	250 μ m/300mm Dia	Glenammer Eng. LTD.	709399	Store
14	TEL App. No. 0014	Working Sieve	150 μ m/300mm Dia	Glenammer Eng. LTD.	709400	Store
15	TEL App. No. 0015	Working Sieve	100 μ m/300mm Dia	Glenammer Eng. LTD.	709402	Store
16	TEL App. No. 0016	Working Sieve	100 μ m/300mm Dia	Glenammer Eng. LTD.	709401	Store
17	TEL App. No. 0017	Working Sieve	75 μ m/300mm Dia	Glenammer Eng. LTD.	709404	Store
18	TEL App. No. 0018	Master Sieve	50.0mm/300mm Dia	Glenammer Eng. LTD.	709403	Store
19	TEL App. No. 0019	Master Sieve	37.5mm/300mm Dia	Glenammer Eng. LTD.	709405	Store
20	TEL App. No. 0020	Working Sieve	25.0mm/300mm Dia	Glenammer Eng. LTD.	709406	Store
21	TEL App. No. 0021	Master Sieve	19.0mm/300mm Dia	Glenammer Eng. LTD.	709409	Store
22	TEL App. No. 0022	Master Sieve	12.5mm/300mm Dia	Glenammer Eng. LTD.	709410	Store
23	TEL App. No. 0023	Master Sieve	9.5mm/300mm Dia	Glenammer Eng. LTD.	709386	Store
24	TEL App. No. 0024	Master Sieve	4.75mm/300mm Dia	Glenammer Eng. LTD.	709400	Store
25	TEL App. No. 0025	Master Sieve	2.36mm/300mm Dia	Glenammer Eng. LTD.	709414	Store
26	TEL App. No. 0026	Master Sieve	2.00mm/300mm Dia	Glenammer Eng. LTD.	709413	Manager Room
27	TEL App. No. 0027	Master Sieve	850 μ m/300mm Dia	Glenammer Eng. LTD.	705245	Manager Room

TECHNICAL ENGINEERING LABORATORY APPARATUS LIST

S.N.	TEL Serial Number	Apparatus Name	Range/Capacity/Size	Make	Model No.	Location
28	TEL App. No. 0028	Master Sieve	600µm/300mm Dia	Glenammer Eng. LTD.	705249	Manager Room
29	TEL App. No. 0029	Master Sieve	425µm/300mm Dia	Glenammer Eng. LTD.	709407	Manager Room
30	TEL App. No. 0030	Master Sieve	250µm/300mm Dia	Glenammer Eng. LTD.	709408	Store
31	TEL App. No. 0031	Master Sieve	150µm/300mm Dia	Glenammer Eng. LTD.	709417	Manager Room
32	TEL APP. No. 0032	Master Sieve	100µm/300mm Dia	Glenammer Eng. LTD.	709415	Manager Room
33	TEL APP. No. 0033	Master Sieve	75µm/300mm Dia	Glenammer Eng. LTD.	709416	Manager Room
34	TEL APP. No. 0034	Sieve Shaker	83Kg	Endecotts Limited	EFL/2-15573-06	Soil
35	TEL APP. No. 0035	CBR Machine	78Kg	Controls S.r.l	34-T0106/B	Soil
36	TEL APP. No. 0036	CBR MOULD	2305cm ³	Controls S.r.l	33-Too71	Soil
37	TEL APP. No. 0037	CBR MOULD	2305cm ³	Controls S.r.l	33-Too71	Soil
38	TEL APP. No. 0038	CBR MOULD	2305cm ³	Controls S.r.l	33-Too71	Soil
39	TEL APP. No. 0039	CBR Load Ring	50kN	Controls S.r.l	06053753	Soil
40	TEL APP. No. 0040	CBR Compaction Plug i		Controls S.r.l	34-T0091/B	Soil
41	TEL APP. No. 0041	CBR Compaction Plug ii		Controls S.r.l	34-T0091/B	Soil
42	TEL APP. No. 0042	CBR Compaction Plug iii		Controls S.r.l	34-T0091/B	Soil
43	TEL APP. No. 0043	Split Surcharge 1		Controls S.r.l	34-T0095/B	Soil
44	TEL APP. No. 0044	Split Surcharge 2		Controls S.r.l	34-T0095/B	Soil
45	TEL APP. No. 0045	Split Surcharge 3		Controls S.r.l	34-T0095/B	Soil
46	TEL APP. No. 0046	Split Surcharge 4		Controls S.r.l	34-T0095/B	Soil
47	TEL APP. No. 0047	Split Surcharge 5		Controls S.r.l	34-T0095/B	Soil
48	TEL APP. No. 0048	Split Surcharge 6		Controls S.r.l	34-T0095/B	Soil
49	TEL APP. No. 0049	Annular Surcharge 1		Controls S.r.l	34 - T0094/B	Soil
50	TEL APP. No. 0050	Annular Surcharge 2		Controls S.r.l	34 - T0094/B	Soil
51	TEL APP. No. 0051	Annular Surcharge 3		Controls S.r.l	34 - T0094/B	Soil
52	TEL APP. No. 0052	C Spanner 1		Controls S.r.l	34-T0090/B6	Soil
53	TEL APP. No. 0053	C Spanner 2		Controls S.r.l	34-T0090/B6	Soil
54	TEL APP. No. 0054	C Spanner 3		Controls S.r.l	34-T0090/B6	Soil

TECHNICAL ENGINEERING LABORATORY APPARATUS LIST

S.N.	TEL Serial Number	Apparatus Name	Range/Capacity/Size	Make	Model No.	Location
55	TEL APP. No. 0055	Tool For Base Plate 1		Controls S.r.l	34-T0090/B7	Soil
56	TEL APP. No. 0056	Tool For Base Plate 2		Controls S.r.l	34-T0090/B7	Soil
57	TEL APP. No. 0057	Tool For Base Plate 3		Controls S.r.l	34-T0090/B7	Soil
58	TEL APP. No. 0058	Straight edge 1		Controls S.r.l	34-T0099	Soil
59	TEL APP. No. 0059	Straight edge 2		Controls S.r.l	34-T0099	Soil
60	TEL APP. No. 0060	Perforated Plate with Adjustable Stem 1		Controls S.r.l	34-T0092	Soil
61	TEL APP. No. 0061	Perforated Plate with Adjustable Stem 2		Controls S.r.l	34-T0093	Soil
62	TEL APP. No. 0062	Perforated Plate with Adjustable Stem 3		Controls S.r.l	34-T0094	Soil
63	TEL APP. No. 0063	Receiver-1		Glenammer Eng. LTD.		Soil
64	TEL APP. No. 0064	Receiver-2		Glenammer Eng. LTD.		Soil
65	TEL APP. No. 0065	Straight Edge-3		Controls S.r.l	34-T0099	Con. & Agg.
66	TEL APP. No. 0066	Proctor Mould 1	2106cm ³	Controls S.r.l	33-T0071/E	Soil
67	TEL APP. No. 0067	Proctor Mould 2	2106cm ³	Controls S.r.l	33-T0071/E	Soil
68	TEL APP. No. 0068	Proctor Mould 3	2106cm ³	Controls S.r.l	33-T0071/E	Soil
69	TEL APP. No. 0069	4.5 Kg Rammer 1	4.5kg	Controls S.r.l	33-T0076/E	Soil
70	TEL APP. No. 0070	4.5 Kg Rammer 2	4.5kg	Controls S.r.l	33-T0076/E	Soil
71	TEL APP. No. 0071	1 Litter Mould 1	1Liter	Controls S.r.l	33-T0070/E	Soil
72	TEL APP. No. 0072	1 Litter Mould 2	1Liter	Controls S.r.l	33-T0070/E	Soil
73	TEL APP. No. 0073	1 Litter Mould 3	1Liter	Controls S.r.l	33-T0070/E	Soil
74	TEL APP. No. 0074	Oven 1	225 Liter	Genlab Ltd	Y7D170	Soil
75	TEL APP. No. 0075	Oven 2	425 Liter	Genlab Ltd	Y7H334	Asphalt
76	TEL APP. No. 0076	Oven 3	225 Liter	Genlab Ltd	Y7D169	Asphalt
77	TEL APP. No. 0077	Marshall Stability Machine	86 kg	Controls S.r.l	6010013	Asphalt
78	TEL APP. No. 0078	Marshall Load Ring	30 kN	Controls S.r.l	5117084	Asphalt

TECHNICAL ENGINEERING LABORATORY APPARATUS LIST

S.N.	TEL Serial Number	Apparatus Name	Range/Capacity/Size	Make	Model No.	Location
79	TEL APP. No. 0079	Marshall Compactor Machine	1/3 H.P.	Homboldt Mfg.Co.	2977	Asphalt
80	TEL APP. No. 0080	Digital Balance	60 Kg	OHAUS Corporation	0060319-6 kg	Soil
81	TEL APP. No. 0081	Digital Balance	22000g	OHAUS Corporation	1126031512	Con. & Agg.
82	TEL APP. No. 0082	Digital Balance	15 kg	OHAUS Corporation	0017667-6EJ	Asphalt
83	TEL APP. No. 0083	Master Digital Balance	6100g	OHAUS Corporation	1126032705	Manager Room
84	TEL APP. No. 0084	Compressive Machine	2000 kN	Controls S.r.l	06107365	Con. & Agg.
85	TEL APP. No. 0085	Coring Machine	110 kg	Controls S.r.l	07004771	Asphalt
86	TEL APP. No. 0086	Core bits	150 mm	Controls S.r.l		Asphalt
87	TEL APP. No. 0087	Core bits	102 mm	Bosch		Asphalt
88	TEL APP. No. 0088	Core bits	100 mm	Controls S.r.l		Asphalt
89	TEL APP. No. 0089	Core bits	77 mm	Bosch		Asphalt
90	TEL APP. No. 0090	Extractors	150 mm			Asphalt
91	TEL APP. No. 0091	Extractors	100 mm			Asphalt
92	TEL APP. No. 0092	Spanner				Asphalt
93	TEL APP. No. 0093	Caliper	300mm	Controls S.r.l	07604596	Con. & Agg.
94	TEL APP. No. 0094	Digital Caliper	155mm	Baker	BRD/1782	Manager Room
95	TEL APP. No. 0095	Schmidt Hammer		Proceq	160040	Con. & Agg.
96	TEL APP. No. 0096	Slump Cone 1		Controls S.r.l	54-C0150/A	Con. & Agg.
97	TEL APP. No. 0097	Slump Cone 2		Controls S.r.l	54-C0150/A	Con. & Agg.
98	TEL APP. No. 0098	Aluminum Scoop 1		Controls S.r.l	86-D1611	Soil
99	TEL APP. No. 0099	Aluminum Scoop 2		Controls S.r.l	86-D1611	Soil
100	TEL APP. No. 0100	Slump Cone Funnel 1		Controls S.r.l	54-C0150/P2	Con. & Agg.
101	TEL APP. No. 0101	Slump Cone Funnel 2		Controls S.r.l	54-C0150/P2	Con. & Agg.
102	TEL APP. No. 0102	Base Plate 1		Controls S.r.l	C0149/1	Con. & Agg.
103	TEL APP. No. 0103	Base Plate 2		Controls S.r.l	C0149/1	Con. & Agg.
104	TEL APP. No. 0104	Steel Tamping rod dia 16x600 mm 1		Controls S.r.l	55-C0140	Con. & Agg.
105	TEL APP. No. 0105	Steel Tamping rod dia 16x600 mm 2		Controls S.r.l	55-C0140	Con. & Agg.
106	TEL APP. No. 0106	Steel Rule 500 mm 1	500mm	Controls S.r.l		Con. & Agg.

TECHNICAL ENGINEERING LABORATORY APPARATUS LIST

S.N.	TEL Serial Number	Apparatus Name	Range/Capacity/Size	Make	Model No.	Location
107	TEL APP. No. 0107	Steel Rule 500 mm 2	500mm	Controls S.r.l		Con. & Agg.
108	TEL APP. No. 0108	Specific Gravity Frame		Controls S.r.l	11-D0612/A	Con. & Agg.
109	TEL APP. No. 0109	Specific Gravity Tank	40 Liter	Controls S.r.l	11-D0611/3	Con. & Agg.
110	TEL APP. No. 0110	Density Basket 200mm	200mm Dia	Controls S.r.l	11-D0612	Con. & Agg.
111	TEL APP. No. 0111	Sand Equivalent Shaker	48 kg	Controls S.r.l	07004140	Soil
112	TEL APP. No. 0112	Automatic Penetrometer	0.01mm division	Controls S.r.l	07000396	Asphalt
113	TEL APP. No. 0113	Spanner	24" - 600mm	Forged Steel		Soil
114	TEL APP. No. 0114	Tray 1				Soil
115	TEL APP. No. 0115	Tray 2				Soil
116	TEL APP. No. 0116	Tray 3				Soil
117	TEL APP. No. 0117	Tray 4				Soil
118	TEL APP. No. 0118	Tray 5				Soil
119	TEL APP. No. 0119	Tray 6				Soil
120	TEL APP. No. 0120	Tray 7				Soil
121	TEL APP. No. 0121	Tray 8				Soil
122	TEL APP. No. 0122	Tray 9				Soil
123	TEL APP. No. 0123	Tray 10				Soil
124	TEL APP. No. 0124	Tray 11				Soil
125	TEL APP. No. 0125	Tray 12				Soil
126	TEL APP. No. 0126	Tray 13				Soil
127	TEL APP. No. 0127	Tray 14				Soil
128	TEL APP. No. 0128	Tray 15				Soil
129	TEL APP. No. 0129	Tray 16				Soil
130	TEL APP. No. 0130	Tray 17				Soil
131	TEL APP. No. 0131	Shovel 1				Soil
132	TEL APP. No. 0132	Shovel 2				Soil
133	TEL APP. No. 0133	Shovel 3				Soil
134	TEL APP. No. 0134	Rigid Spatulas 1		Controls S.r.l		Soil
135	TEL APP. No. 0135	Rigid Spatulas 2		Controls S.r.l		Soil
136	TEL APP. No. 0136	Rigid Spatulas 3		Controls S.r.l		Soil
137	TEL APP. No. 0137	Rubber Hammer				Soil
138	TEL APP. No. 0138	Density Chisel 1		Controls S.r.l		Soil

TECHNICAL ENGINEERING LABORATORY APPARATUS LIST

S.N.	TEL Serial Number	Apparatus Name	Range/Capacity/Size	Make	Model No.	Location
139	TEL APP. No. 0139	Density Chisel 2		Controls S.r.l		Soil
140	TEL APP. No. 0140	Density Chisel 3		Controls S.r.l		Soil
141	TEL APP. No. 0141	Density Chisel 4		Controls S.r.l		Soil
142	TEL APP. No. 0142	Density Chisel 5		Controls S.r.l		Soil
143	TEL APP. No. 0143	Brush 1				Soil
144	TEL APP. No. 0144	Brush 2				Soil
145	TEL APP. No. 0145	Spoon 1		Controls S.r.l		Soil
146	TEL APP. No. 0146	Spoon 2		Controls S.r.l		Soil
147	TEL APP. No. 0147	Cement Trowel 1		Controls S.r.l		Soil
148	TEL APP. No. 0148	Cement Trowel 2		Controls S.r.l		Soil
149	TEL APP. No. 0149	Spatulas 1		Controls S.r.l		Soil
150	TEL APP. No. 0150	Spatulas 2		Controls S.r.l		Soil
151	TEL APP. No. 0151	Spatulas 3		Controls S.r.l		Soil
152	TEL APP. No. 0152	Spatulas 4		Controls S.r.l		Soil
153	TEL APP. No. 0153	Spatulas 5		Controls S.r.l		Soil
154	TEL APP. No. 0154	Spatulas 6		Controls S.r.l		Soil
155	TEL APP. No. 0155	Spatulas 7		Controls S.r.l		Soil
156	TEL APP. No. 0156	Plastic Cylinders 500 ml 1	500 ml	Controls S.r.l		Soil
157	TEL APP. No. 0157	Plastic Cylinders 500 ml 2	500 ml	Controls S.r.l		Soil
158	TEL APP. No. 0158	Plastic Cylinders 250 ml 1	250 ml	Controls S.r.l		Soil
159	TEL APP. No. 0159	Plastic Cylinders 250 ml 2	250 ml	Controls S.r.l		Soil
160	TEL APP. No. 0160	Asphalt Mixer	10 liter	Controls S.r.l	16-B0072	Asphalt
161	TEL APP. No. 0161	Balk Density Measure 1 Liter Cap.	1 Liter	Controls S.r.l	48-D0445/5	Soil
162	TEL APP. No. 0162	Balk Density Measure 5 Liter Cap.	5 Liter	Controls S.r.l	48-D0445/6	Soil
163	TEL APP. No. 0163	Pyknometer		Controls S.r.l	48-D0441	Asphalt
164	TEL APP. No. 0164	Glass Plate	500 X500 X 10 mm	Controls S.r.l	22-T0040/4	Asphalt
165	TEL APP. No. 0165	Wash Bottle 1		Controls S.r.l	86-D1537	Soil
166	TEL APP. No. 0166	Wash Bottle 2		Controls S.r.l	86-D1537	Soil
167	TEL APP. No. 0167	Wash Bottle 3		Controls S.r.l	86-D1537	Soil

TECHNICAL ENGINEERING LABORATORY APPARATUS LIST

S.N.	TEL Serial Number	Apparatus Name	Range/Capacity/Size	Make	Model No.	Location
168	TEL APP. No. 0168	Standard Compaction Mould 1		Homboldt Mfg.Co.		Asphalt
169	TEL APP. No. 0169	Standard Compaction Mould 2		Homboldt Mfg.Co.		Asphalt
170	TEL APP. No. 0170	Standard Compaction Mould 3		Homboldt Mfg.Co.		Asphalt
171	TEL APP. No. 0171	Standard Compaction Mould 4		Homboldt Mfg.Co.		Asphalt
172	TEL APP. No. 0172	Standard Compaction Mould 5		Homboldt Mfg.Co.		Asphalt
173	TEL APP. No. 0173	Standard Compaction Mould 6		Homboldt Mfg.Co.		Asphalt
174	TEL APP. No. 0174	Standard Compaction Mould 7		Homboldt Mfg.Co.		Asphalt
175	TEL APP. No. 0175	Standard Compaction Mould 8		Homboldt Mfg.Co.		Asphalt
176	TEL APP. No. 0176	Standard Compaction Mould 9		Homboldt Mfg.Co.		Asphalt
177	TEL APP. No. 0177	Standard Compaction Mould 10		Homboldt Mfg.Co.		Asphalt
178	TEL APP. No. 0178	Standard Compaction Mould 11		Homboldt Mfg.Co.		Asphalt
179	TEL APP. No. 0179	Standard Compaction Mould 12		Homboldt Mfg.Co.		Asphalt
180	TEL APP. No. 0180	Standard Compaction Mould 13		Homboldt Mfg.Co.		Asphalt
181	TEL APP. No. 0181	Standard Compaction Mould 14		Homboldt Mfg.Co.		Asphalt
182	TEL APP. No. 0182	Standard Compaction Mould 15		Homboldt Mfg.Co.		Asphalt
183	TEL APP. No. 0183	Standard Compaction Mould 16		Homboldt Mfg.Co.		Asphalt

TECHNICAL ENGINEERING LABORATORY APPARATUS LIST

S.N.	TEL Serial Number	Apparatus Name	Range/Capacity/Size	Make	Model No.	Location
184	TEL APP. No. 0184	Plastic Sand Jar 5 Liter	1 5 Liter	Controls S.r.l		Soil
185	TEL APP. No. 0185	Plastic Sand Jar 5 Liter	2 5 Liter	Controls S.r.l		Soil
186	TEL APP. No. 0186	Plastic Sand Jar 5 Liter	3 5 Liter	Controls S.r.l		Soil
187	TEL APP. No. 0187	Plastic Sand Jar 5 Liter	4 5 Liter	Controls S.r.l		Soil
188	TEL APP. No. 0188	Plastic Sand Jar 5 Liter	5 5 Liter	Controls S.r.l		Soil
189	TEL APP. No. 0189	Plastic Sand Jar 5 Liter	6 5 Liter	Controls S.r.l		Soil
190	TEL APP. No. 0190	Plastic Sand Jar 5 Liter	7 5 Liter	Controls S.r.l		Soil
191	TEL APP. No. 0191	Metal tray		Controls S.r.l	35-T0130/3	Soil
192	TEL APP. No. 0192	Sand density Con		Controls S.r.l	35-T1028/1	Soil
193	TEL APP. No. 0193	Cube mould	1 150 X 150 X 150mm	Burgan		Con
194	TEL APP. No. 0194	Cube mould	2 150 X 150 X 150mm	Burgan		Con. & Agg.
195	TEL APP. No. 0195	Cube mould	3 150 X 150 X 150mm	Burgan		Con. & Agg.
196	TEL APP. No. 0196	Cube mould	4 150 X 150 X 150mm	Burgan		Con. & Agg.
197	TEL APP. No. 0197	Cube mould	5 150 X 150 X 150mm	Burgan		Con. & Agg.
198	TEL APP. No. 0198	Cube mould	6 150 X 150 X 150mm	Burgan		Con. & Agg.
199	TEL APP. No. 0199	Cube mould	7 150 X 150 X 150mm	Burgan		Con. & Agg.
200	TEL APP. No. 0200	Cube mould	8 150 X 150 X 150mm	Burgan		Con. & Agg.
201	TEL APP. No. 0201	Cube mould	9 150 X 150 X 150mm	Burgan		Con. & Agg.
202	TEL APP. No. 0202	Cube mould	10 150 X 150 X 150mm	Burgan		Con. & Agg.
203	TEL APP. No. 0203	Cube mould	11 150 X 150 X 150mm	Burgan		Con. & Agg.
204	TEL APP. No. 0204	Cube mould	12 150 X 150 X 150mm	Burgan		Con. & Agg.
205	TEL APP. No. 0205	Cube mould	13 150 X 150 X 150mm	Burgan		Con. & Agg.
206	TEL APP. No. 0206	Cube mould	14 150 X 150 X 150mm	Burgan		Con. & Agg.
207	TEL APP. No. 0207	Cube mould	15 150 X 150 X 150mm	Burgan		Con. & Agg.
208	TEL APP. No. 0208	Cube mould	16 150 X 150 X 150mm	Burgan		Con. & Agg.
209	TEL APP. No. 0209	Cube mould	17 150 X 150 X 150mm	Burgan		Con. & Agg.
210	TEL APP. No. 0210	Cube mould	18 150 X 150 X 150mm	Burgan		Con. & Agg.
211	TEL APP. No. 0211	Cube mould	19 150 X 150 X 150mm	Burgan		Con. & Agg.
212	TEL APP. No. 0212	Cube mould	20 150 X 150 X 150mm	Burgan		Con. & Agg.
213	TEL APP. No. 0213	Cube mould	21 150 X 150 X 150mm	Burgan		Con. & Agg.
214	TEL APP. No. 0214	Cube mould	22 150 X 150 X 150mm	Burgan		Con. & Agg.
215	TEL APP. No. 0215	Cube mould	23 150 X 150 X 150mm	Burgan		Con. & Agg.

TECHNICAL ENGINEERING LABORATORY APPARATUS LIST

S.N.	TEL Serial Number	Apparatus Name	Range/Capacity/Size	Make	Model No.	Location
216	TEL APP. No. 0216	Cube mould 24	150 X 150 X 150mm	Burgan		Con. & Agg.
217	TEL APP. No. 0217	Cube mould 25	150 X 150 X 150mm	Burgan		Con. & Agg.
218	TEL APP. No. 0218	Digital thermometer 1	-50 to 1000	Testo	691005	Con. & Agg.
219	TEL APP. No. 0219	Master Digital thermometer 2	-50 to 1000	Testo	691005	Manager Room
220	TEL APP. No. 0220	Moisture Content tin 1	75mm Dia X 30 mm	Controls S.r.l		Asphalt
221	TEL APP. No. 0221	Moisture Content tin 2	75mm Dia X 30 mm	Controls S.r.l		Asphalt
222	TEL APP. No. 0222	Moisture Content tin 3	75mm Dia X 30 mm	Controls S.r.l		Asphalt
223	TEL APP. No. 0223	Moisture Content tin 4	75mm Dia X 30 mm	Controls S.r.l		Asphalt
224	TEL APP. No. 0224	Moisture Content tin 5	75mm Dia X 30 mm	Controls S.r.l		Asphalt
225	TEL APP. No. 0225	Moisture Content tin 6	75mm Dia X 30 mm	Controls S.r.l		Asphalt
226	TEL APP. No. 0226	Moisture Content tin 7	75mm Dia X 30 mm	Controls S.r.l		Asphalt
227	TEL APP. No. 0227	Moisture Content tin 8	75mm Dia X 30 mm	Controls S.r.l		Asphalt
228	TEL APP. No. 0228	Moisture Content tin 9	75mm Dia X 30 mm	Controls S.r.l		Asphalt
229	TEL APP. No. 0229	Moisture Content tin 10	75mm Dia X 30 mm	Controls S.r.l		Asphalt
230	TEL APP. No. 0230	Moisture Content tin 11	75mm Dia X 30 mm	Controls S.r.l		Asphalt
231	TEL APP. No. 0231	Moisture Content tin 12	75mm Dia X 30 mm	Controls S.r.l		Asphalt
232	TEL APP. No. 0232	Moisture Content tin 13	75mm Dia X 30 mm	Controls S.r.l		Asphalt
233	TEL APP. No. 0233	Moisture Content tin 14	75mm Dia X 30 mm	Controls S.r.l		Asphalt
234	TEL APP. No. 0234	Moisture Content tin 15	75mm Dia X 30 mm	Controls S.r.l		Asphalt
235	TEL APP. No. 0235	Moisture Content tin 16	75mm Dia X 30 mm	Controls S.r.l		Asphalt
236	TEL APP. No. 0236	Moisture Content tin 17	75mm Dia X 30 mm	Controls S.r.l		Asphalt
237	TEL APP. No. 0237	Moisture Content tin 18	75mm Dia X 30 mm	Controls S.r.l		Asphalt

TECHNICAL ENGINEERING LABORATORY APPARATUS LIST

S.N.	TEL Serial Number	Apparatus Name	Range/Capacity/Size	Make	Model No.	Location
238	TEL APP. No. 0238	Moisture Content tin 19	75mm Dia X 30 mm	Controls S.r.l		Asphalt
239	TEL APP. No. 0239	Moisture Content tin 20	75mm Dia X 30 mm	Controls S.r.l		Asphalt
240	TEL APP. No. 0240	Moisture Content tin 21	75mm Dia X 30 mm	Controls S.r.l		Asphalt
241	TEL APP. No. 0241	Moisture Content tin 22	75mm Dia X 30 mm	Controls S.r.l		Asphalt
242	TEL APP. No. 0242	Moisture Content tin 23	75mm Dia X 30 mm	Controls S.r.l		Asphalt
243	TEL APP. No. 0243	Porcelain dish	120mm Dia	Controls S.r.l		Asphalt
244	TEL APP. No. 0244	Penetration Sample cup 1	55mm Dia X 400mm Deep	Controls S.r.l		Asphalt
245	TEL APP. No. 0245	Penetration Sample cup 2	55mm Dia X 400mm Deep	Controls S.r.l		Asphalt
246	TEL APP. No. 0246	Penetration Sample cup 3	55mm Dia X 400mm Deep	Controls S.r.l		Asphalt
247	TEL APP. No. 0247	Penetration Sample cup 4	55mm Dia X 400mm Deep	Controls S.r.l		Asphalt
248	TEL APP. No. 0248	Penetration Sample cup 5	55mm Dia X 400mm Deep	Controls S.r.l		Asphalt
249	TEL APP. No. 0249	Penetration Sample cup 6	55mm Dia X 400mm Deep	Controls S.r.l		Asphalt
250	TEL APP. No. 0250	KD2 Machine		Decagon		Con. & Agg.
251	TEL APP. No. 0251	LOS Angeles Machine	975X785X937mm		48-D0500/D	Out Side
252	TEL APP. No. 0252	LOS Angeles Charge ball				Out Side
253	TEL APP. No. 0253	Riffle box 1	26 dm ³	Controls S.r.l		Out Side
254	TEL APP. No. 0254	Riffle box 2		Controls S.r.l		Out Side
255	TEL APP. No. 0255	Riffle box 3		Controls S.r.l		Soil
256	TEL APP. No. 0256	Thickness Gauge	200g	Controls S.r.l	47-D0540	Con. & Agg.
257	TEL APP. No. 0257	Right Angle	200mm X 300mm	Vmade		Con. & Agg.

TECHNICAL ENGINEERING LABORATORY APPARATUS LIST

S.N.	TEL Serial Number	Apparatus Name	Range/Capacity/Size	Make	Model No.	Location
258	TEL APP. No. 0258	Sand Equivalent Set		Controls S.r.l		Soil
259	TEL APP. No. 0259	Flow Meter	0.01- 10mm	Rupac		Asphalt
260	TEL APP. No. 0260	Dial gauge	0.01mm			Soil
261	TEL APP. No. 0261	Stirrup		Controls S.r.l		Con. & Agg.
262	TEL APP. No. 0262	Methylene Chloride				Asphalt
263	TEL APP. No. 0263	Centrifuge Extractor Machine				Asphalt
264	TEL APP. No. 0264	Water bath				Asphalt
265	TEL APP. No. 0265	Stability mould				Asphalt
266	TEL APP. No. 0266	Hydraulic Jack				Asphalt
267	TEL APP. No. 0267	Filler Gauge	0.03 To 0.5mm	Moore & Wright	387M	Con. & Agg.
268	TEL APP. No. 0268	Straight Edge-4		Controls S.r.l	34-T0099	Con. & Agg.
269	TEL APP. No. 0269	Master Measuring Tape	10 Meter		33-896	Manager Room
270	TEL APP. No. 0270	Right Angle	30cm	Stanly	46-536	Con. & Agg.
271	TEL APP. No. 0271	1 Meter Scale	100cm			Con. & Agg.
272	TEL APP. No. 0272	Stop Watch	19hrs 59 sec. 59.99sec.	EXTECH Instruments	365535	Con. & Agg.
273	TEL APP. No. 0273	Filler Gauge	.05 To 10mm	HUNTER		Con. & Agg.
274	TEL APP. No. 0274	Data Logger	-40 °C to +125 °C	ETI LTD	D10480434	Curing Room
275	TEL APP. No. 0275	Digital Caliper 300mm		Baker		All Section
276	TEL APP. No. 0276	working Sieve	6.30mm/300mm Dia	Glenammer Eng. LTD.	0225305	Soil
277	TEL APP. No. 0277	working Sieve	5.00mm/300mm Dia	Glenammer Eng. LTD.	0225441	Soil
278	TEL APP. No. 0278	working Sieve	1.70mm/300mm Dia	Impact	0184215	Soil
279	TEL APP. No. 0279	Master Sieve	1.70mm/300mm Dia	Impact	0184217	Manager Room
280	TEL APP. No. 0280	Core bits	162 mm	Tyrolit		
281	TEL APP. No. 0281	Length gauge	6.3mm to 50mm			Con. & Agg.
282	TEL APP. No. 0282	Master Stop Watch	19hrs 59 sec. 59.99sec.	EXTECH Instruments	365535	Manager Room
283	TEL APP. No. 0283	working Sieve	75.0mm/300mm Dia	Glenammer Eng. LTD.	10010189	Soil
284	TEL APP. No. 0284	working Sieve	63.0mm/300mm Dia	Glenammer Eng. LTD.	10010718	Soil
285	TEL APP. No. 0285	working Sieve	50.0mm/300mm Dia	Glenammer Eng. LTD.	10010178	Soil
286	TEL APP. No. 0286	working Sieve	37.5mm/300mm Dia	Glenammer Eng. LTD.	09110345	Soil
287	TEL APP. No. 0287	working Sieve	28.0mm/300mm Dia	Glenammer Eng. LTD.	09110086	Soil
288	TEL APP. No. 0288	working Sieve	14.0mm/300mm Dia	Glenammer Eng. LTD.	09110076	Soil

TECHNICAL ENGINEERING LABORATORY APPARATUS LIST

S.N.	TEL Serial Number	Apparatus Name	Range/Capacity/Size	Make	Model No.	Location
289	TEL APP. No. 0289	working Sieve	3.35mm/300mm Dia	Impact	1848809	Soil
290	TEL APP. No. 0290	working Sieve	1.18mm/300mm Dia	Glenammer Eng. LTD.	10010017	Soil
291	TEL APP. No. 0291	working Sieve	300µm/300mm Dia	Glenammer Eng. LTD.	10010010	Soil
292	TEL APP. No. 0292	working Sieve	212µm/300mm Dia	Glenammer Eng. LTD.	809913	Soil
293	TEL APP. No. 0293	working Sieve	63µm/300mm Dia	Glenammer Eng. LTD.	809981	Soil
294	TEL APP. No. 0294	Standard Weight	1Kg	Glenammer Eng. LTD.	809677	Manager Room
295	TEL APP. No. 0295	Master Sieve	1.18mm/300mm Dia	Glenammer Eng. LTD.	10010024	Manager Room
296	TEL APP. No. 0296	Master Sieve	300µm/300mm Dia	Glenammer Eng. LTD.	10010009	Manager Room
297	TEL APP. No. 0297	Master Sieve	212µm/300mm Dia	Glenammer Eng. LTD.	809912	Manager Room
298	TEL APP. No. 0298	Master Sieve	63µm/300mm Dia	Glenammer Eng. LTD.	809982	Manager Room
299	TEL APP. No. 0299	working Sieve	10.0mm/300mm Dia	Glenammer Eng. LTD.	10010212	Soil
300	TEL APP. No. 0300	working Sieve	20.0mm/300mm Dia	Glenammer Eng. LTD.	091100831	Soil
301	TEL APP. No. 0301	Glass beads	0.040 to 0.070 mm Diameter	National Industrial Co.		Manager Room
302	TEL APP. No. 0302	Glass beads	0.070 to 0.110 mm Diameter	National Industrial Co.		Manager Room
303	TEL APP. No. 0303	Glass beads	0.100 to 0.200 mm Diameter	National Industrial Co.		Manager Room
304	TEL APP. No. 0304	Glass beads	0.400 to 0.600 mm Diameter	National Industrial Co.		Manager Room
305	TEL APP. No. 0305	Glass beads	0.500 to 0.750 mm Diameter	National Industrial Co.		Manager Room
306	TEL APP. No. 0306	Glass beads	0.750 to 1.000 mm Diameter	National Industrial Co.		Manager Room
307	TEL APP. No. 0307	Glass beads	1.000 to 1.230 mm Diameter	National Industrial Co.		Manager Room
308	TEL APP. No. 0308	Glass beads	1.550 to 1.850 mm Diameter	National Industrial Co.		Manager Room
309	TEL APP. No. 0309	Glass beads	1.700 to 2.000 mm Diameter	National Industrial Co.		Manager Room
310	TEL APP. No. 0310	Glass beads	2.000 to 2.300 mm Diameter	National Industrial Co.		Manager Room

TECHNICAL ENGINEERING LABORATORY APPARATUS LIST

S.N.	TEL Serial Number	Apparatus Name	Range/Capacity/Size	Make	Model No.	Location
311	TEL APP. No. 0311	Glass beads	0.200 to 0.300 mm Diameter	National Industrial Co.		Manager Room
312	TEL APP. No. 0312	working Sieve (ASTM)	37.5mm/300mm Dia	Impact	220832	Soil
313	TEL APP. No. 0313	working Sieve (ASTM)	25.0mm/300mm Dia	Impact	230376	Soil
314	TEL APP. No. 0314	working Sieve (ASTM)	19.0mm/300mm Dia	Impact	230372	Soil
315	TEL APP. No. 0315	working Sieve (ASTM)	12.5mm/300mm Dia	Impact	230363	Soil
316	TEL APP. No. 0316	working Sieve (ASTM)	9.5mm/300mm Dia	Impact	230358	Soil
317	TEL APP. No. 0317	working Sieve (ASTM)	4.75mm/300mm Dia	Impact	230190	Soil
318	TEL APP. No. 0318	working Sieve (ASTM)	2.36mm/300mm Dia	Impact	237435	Soil
319	TEL APP. No. 0319	working Sieve (ASTM)	1.70mm/300mm Dia	Impact	204618	Soil
320	TEL APP. No. 0320	Digital Balance	12 Kg	Citizen	CTG-12H+	Asphalt
321	TEL APP. No. 0321	Tray 18				Soil
322	TEL APP. No. 0322	Tray 19				Soil
323	TEL APP. No. 0323	Tray 20				Soil
324	TEL APP. No. 0324	Tray 21				Soil
325	TEL APP. No. 0325	Tray 22				Soil
326	TEL APP. No. 0326	Tray 23				Soil
327	TEL APP. No. 0327	Tray 24				Soil
328	TEL APP. No. 0328	Tray 25				Soil
329	TEL APP. No. 0329	Tray 26				Soil
330	TEL APP. No. 0330	Tray 27				Soil
331	TEL APP. No. 0331	Aluminum Scoop 3				Soil
332	TEL APP. No. 0332	Aluminum Scoop 4				Soil
333	TEL APP. No. 0333	Riffle box 4	75mm			Out Side
334	TEL APP. No. 0334	Square Tray 1		Ozti		Soil
335	TEL APP. No. 0335	Square Tray 2		Ozti		Soil
336	TEL APP. No. 0336	Square Tray 3		Ozti		Soil
337	TEL APP. No. 0337	Square Tray 4		Ozti		Soil
338	TEL APP. No. 0338	Square Tray 5		Ozti		Soil
339	TEL APP. No. 0339	Evaporating dish				Asphalt
340	TEL APP. No. 0340	Wire brush 1				Soil
341	TEL APP. No. 0341	Wire brush 2				Soil

TECHNICAL ENGINEERING LABORATORY APPARATUS LIST

S.N.	TEL Serial Number	Apparatus Name	Range/Capacity/Size	Make	Model No.	Location
342	TEL APP. No. 0342	Brush 3				Soil
343	TEL APP. No. 0343	Brush 4				Soil
344	TEL APP. No. 0344	Glass Measuring Cylinder	1 Litter			Soil
345	TEL APP. No. 0345	Tray 28				Soil
346	TEL APP. No. 0346	Plastic Bucket				Asphalt
347	TEL APP. No. 0347	Spirit Level	60cm	Stanley		Asphalt
348	TEL APP. No. 0348	Plastic Bucket 2				Curing Room
349	TEL APP. No. 0349	Plastic Bucket 3				Curing Room
350	TEL APP. No. 0350	Rotary Tool -1 Master		Greatneck		Manager Room
351	TEL APP. No. 0351	Rotary Tool -2		Greatneck		Con. & Agg.
352	TEL APP. No. 0352	Rotary Tool -3		Greatneck		Con. & Agg.
353	TEL APP. No. 0353	Temping Rod				Con. & Agg.
354	TEL APP. No. 0354	CBR Dial Gauge		Controls S.r.l	VA405412	
355	TEL APP. No. 0355	Hammer-1				
356	TEL APP. No. 0356	Hammer-2				
357	TEL APP. No. 0357	Trowel				
358	TEL APP. No. 0358	Tray 29				
359	TEL APP. No. 0359	Tray 30				
360	TEL APP. No. 0360	Tray 31				
361	TEL APP. No. 0361	Tray 32				
362	TEL APP. No. 0362	Tray 33				
363	TEL APP. No. 0363	Tray 34				
364	TEL APP. No. 0364	Tray 35				
365	TEL APP. No. 0365	Tray 36				
366	TEL APP. No. 0366	Schmidt Hammer		Geotechnical uk brand	3S0029	Con. & Agg.
367	TEL APP. No. 0367	working Sieve	31.5mm/300mm Dia	Geotechnical, UK	16090283	Con. & Agg.
368	TEL APP. No. 0368	working Sieve	16mm/300mm Dia	Geotechnical, UK	16090284	Con. & Agg.
369	TEL APP. No. 0369	working Sieve	8mm/300mm Dia	Geotechnical, UK	16090286	Con. & Agg.
370	TEL APP. No. 0370	working Sieve	4mm/300mm Dia	Geotechnical, UK	16090375	Con. & Agg.
371	TEL APP. No. 0371	working Sieve	1mm/300mm Dia	Geotechnical, UK	16090261	Con. & Agg.
372	TEL APP. No. 0372	working Sieve	500µm/300mm Dia	Geotechnical, UK	16090257	Con. & Agg.

TECHNICAL ENGINEERING LABORATORY APPARATUS LIST

S.N.	TEL Serial Number	Apparatus Name	Range/Capacity/Size	Make	Model No.	Location
373	TEL APP. No. 0373	working Sieve	250µm/300mm Dia	Geotechnical, UK	16090258	Con. & Agg.
374	TEL APP. No. 0374	working Sieve	125µm/300mm Dia	Geotechnical, UK	16090259	Con. & Agg.
375	TEL APP. No. 0375	working Sieve	106µm/300mm Dia	Geotechnical, UK	16090260	Con. & Agg.
376	TEL APP. No. 0376	working Sieve	12.5mm/300mm Dia			Store
377	TEL APP. No. 0377	4.54 Kg Rammer	4.54kg			Soil
378	TEL APP. No. 0378	2.49 Kg Rammer	2.49kg			Soil
379	TEL APP. No. 0379	CBR Mould ASTM	6" (152.4 mm) dia. x 7" (177.8 mm) height	Geotechnical, UK		Soil
380	TEL APP. No. 0380	Hammer-3				
381	TEL APP. No. 0381	ASTM Proctor 6-in. Mould	6.000 ± 0.026-in. (152.4±0.7-mm) average inside	ELE International	24-9066	Soil
382	TEL APP. No. 0382	Impact Apparatus				Con. & Agg.

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MAJOR PROJECTS

- ◆ **MAJOR COMPLETED PROJECTS**
- ◆ **MAJOR KAHRAMAA PROJECTS**
- ◆ **MAJOR ONGOING PROJECTS**



MAJOR COMPLETED PROJECTS



Client: Nassir Abdulla Al Kaabi

Project: 2B+G+7 Residential Building

Location: Al Muntazah

Scope of Work: Concrete & Soil Material Testing



Client: Mohamed Al Mansoury

Project: Proposed 2B+G+M+7

Location: Al Muntazah

Scope of Work: AI Material Testing

COMPLETED PROJECTS

S.N	Client	Project	Location
1	Kahramaa	GTC-142B/2006	Al Bhahara Super to Al Bharha South (BAS to ABS)
2	NDIA	New Doha International Airport	Doha
3	Kahramaa	GTC 318A/2009	66KV Cabal Rout Bet New Doha A S/S to Finalcial Dist S/S
4	Kahramaa	GTC 318A/2009	66KV Cabal Rout Bet New Doha New Hitmi S/S
5	Kahramaa	GTC 318A/2009	66 KV Cable Route Between Doha North Super to Khuraitiyat South S/S
6	Kahramaa	GTC 318A/2009	66 KV Ain Khalid Super S/S to Al Khalid North
7	Qatar Charitable Society	Propose B+G+7 Flats	Al Mansoura
8	Kahramaa	GTC/372F/2010	66kv Cable Route bet Al Wajba Super S/S To Al Wajba South S/S
9	Mohsin Othman Buzwair	Villa + Satellite + Penthouse	Al Khratiyat
10	Kahramaa	Qatar Power Transmission System Expansion Phase 10 - EHV Power	2 X 66 KV DIS S/S to DIF DIF S/S
11	Kahramaa	GTC/372F/2010	66 KVCable Route bet Ain Khalid Super S/S to Ain Khalid North S/S
12	Kahramaa	GTC/372F/2010	66 KVCable Route bet Ain Khalid Super S/S to Al Wadi West S/S
13	Kahramaa	GTC 372F/2010	132 KV Cable Route Between Umm Salal Mohammed Super S/S to Al khissa west S/S
14	Ali Abdullah Al Dabbagh	4 Villa	Isghawah
15	Nasser Mohamed J Al Neami	Residential Building (B + G + 7)	Umm Ghuwailina
16	Awqaf Ministry	Masjid & Imam House	Gharrafa
17	Kahramaa	GTC/372F/2010	132 KV Cable Route bet Saliyah Primary S/S to Al Wajbah Super S/S
18	Kahramaa	GTC/318A/2009	220 KV Cable Route between Al Wajba Sipes S/S to Doha Centre S/S
19	Sulaman Haider	B+G+7 Apparent Building	Mansura
20	Habiba Hussain Al Khayat	G + 1 + P Kitchen	Wakra
21	Saied Abdullah Mafia - Mohamed Abdullah Mafi:	Finish Work for 2 Villa	Rawdat Aba Al Hairah
22	Al Ali Projects W.L.L	Concrete Plant	Industrial Area
23	Ahmed Elasa Al Zamil Al Khulaifi	B+G+7	Al Saad
24	Abdulla Al Mudahka	Villa & Satellites	Al Khor - Al Thakhirah
25	Qatari Diar	Lusail Development CP5B Construction Package	Lusail
26	Kahramaa	Qatar Power Transmission System PH-10 EHV Power Cables	66 KV Cable Route From WBS-1 To SP S/S
27	Heirs of Ali Akbar G. Radwani & Heirs of Ibrahim G. Radwani	Majlis	Al Muntazah
28	Hamad Fqraj Hamad Azran Al Marri	Labour Accomoation	Industrial Area St.No-46
29	Ali Rashid Al Ali Al Madeed	Store+Labour Accomodution	Industrial Area St.No-44
30	Lusail	Lusail Development Primary Infracture	Lusail-66KV Cable route between LDS-2 to Golf-1 s/s

COMPLETED PROJECTS

S.N	Client	Project	Location
31	Kahramaa	Qatar Power Transmission System PH-X EHV Power Cables	66 KV Cable Route From Duhail Super S/S to North Gate S/S
32	Nassir Abdulla Al Kaabi	2B+G+7 Residential Building	Rawdat Al Khail
33	Shekh Abdulla Al Rahaman Abdullah Naser Al Ahmed Al Thani	Extansion of Kitchen	Muraikh
34	Kahramaa	GTC/543B/2012	Doha
35	Kahramaa	Saliyah Super S/S to Rawdat Abel Heeran Super S/S	Saliyah
36	Shk.Khalid Abdul Rahman Mohd	Residential Building G+7	Muntazah
37	Kahramaa	Al-Thumama Super S/S to DSS (220KV)	Al Thumamah
38	Kahramaa	Wakrah-2 S/S and Mesaieed (MPC)	Wakrah
39	Kahramaa	DSS S/S to Al Baraha Super S/S (220KV)	DSS S/S to Al Baraha Super S/S
40	Kahramaa	Qatar Power Transmission System Expansion - Phase XI, EHV & HV Cables (Addeendum) Package C16	66 Cable Route From Al-Kheesa West S/S To Al-Kheesa East S/S
41	Kahramaa	Al-Thumamah Super S/S to Wakrah S/S	Al Thumamah
42	Husain Abdul Malik Mohd	Villa+ Majlis+ Satalite	Al-Rawda- Al Thumama
43	Kahramaa	GTC/543B/2012	Umm AlAmad
44	Kahramaa	GTC/543B/2012	Ras Al Noof
45	Kahramaa	Qatar Power Transmission System Expansion - Phase XI, EHV Cables	Rah Super S/S - Rah 1 S/S Route , Al Saliya
46	Musfer Nasser Al Shahwani	Villa G+2	Al Rayyan Bani Hajer
47	Kahramaa	Phase-11 , Route -DIC to Milaha Logictic	Industrial Area
48	Kahramaa	Naeaja West - South District A	Naeaja West
49	Kahramaa	Naeaja Super S/S to Montazah S/S	Naeaja Super to Montazah
50	Kahramaa	GTC/543B/2012	AL Khaesa
51	Nassir Abdulla Al Kaabi	2B+G+7 Residential Building	Muntazah
52	Mohd Abdul Rahman Essa Al Manna	G+M+Labour Residential	Industrial Area Rd.36
53	Saud Bukshasha	B+G+2 Commercial Building	Freej Al Sudan
54	Nasser Jeham Abdul Aziz Al Kuwari	Villa at Dafna G+1	Dafna
55	Ashghal	NOH2	Abu Nakhlah
56	Kahramaa	GTC/450I/2011 Package C-16	Saliyah Super S/S to Al Khalidiyah S/S
57	Kahramaa	Qatar Power Transmission System Expansion - Phase XI, Package C16	Gharafa S/S to Al Markhiyah S/S Cable Route
58	Kahramaa	Qatar Power Transmission System Expansion - Phase 11- EHV & HV Cables (Addendum)- Packages C15, C16 & C18	Wadi Al Banat South S/S to Wadi Al Banat North S/S
59	Abdul Aziz Ahamad Al Nasser	Villa G+1	Abu Hamour
60	Mohamed Noor Al Obadli	B+G+M+7	Al Muntazah
61	Kahramaa	Qatar Power Transmission System Expansion Phase- XI Pakage C-18	Doha Industrial Estate -Pss 6 S/S to Pss 4 Cable Route
62	Kahramaa	QEZ P/S & BUL Hemmad S/S	Bul Hemmad

COMPLETED PROJECTS

S.N	Client	Project	Location
64	NPP	NPP-0032	Um-Said
65	Sheikh Khalid Al Thani	Basement Car Parking	Al Wakrah
66	Kahramaa	GTC/450D/2011	Naeaja Super to Muntazah
67	Kahramaa	GTC-450 I/2011 Package C-18	Mebairek Super S/S to PSS-6 S/S
68	Saoud Ajlan SA Al Kaabi	B+G+3 Flat Residential Building	Old Airport
69	Kahramaa	GTC/642C/2014- C4 Package - Phase -12	Doha South Super S/S to Al Thumamah Central Cable Route
70	Kahramaa	Lilo Existing 132KV Bani Hajer Super -Barzan Camp-1 at Al Jahaniya -1	Al Jahaniya
71	Kahramaa	Semaisma S/S to Al Daayen S/S	Al Daayen
72	Kahramaa	Qatar Power System Expansion Phase II Stage 1 C12 Package	LDS -1 S/S to Al Khessa Central S/s to Al Khessa South
73	Mahmod Abdullah & Al Mahmod	4 Villas	Gharafa
74	Kahramaa	GTC/642C/2014- C4	University South S/S to POG2 S/S
75	Ministry of Awqaf And Islamik Affairs	Masjed (Mosque) in um Salal Mohd.	um Salal Mohd.
76	Kahramaa	GTC/642A/2014 Package C1 & C2	QEZ S/S / Bul-Hemmaid S/S
77	Mr.Ahmed Eisa Ali Zamil Al Khulaifi	Hotel	Bin Mahmoud
78	PMC (Project Management Company)	NPP	DPCT
79	Ali Al Neemi	Villa	Khatriyat
80	Kahramaa	GTC/372B/2010	RAAS S/S GHA S/S
81	Kahramaa	Qatar Power TR System Expansion- Ph 12	Ain Khalid
82	Al Zamil Real Estate Development	2B+G+7	Rawdat Al Khail
83	Kahramaa	Al Waab Super to Al Waab City Metro S/S	Al Waab
84	Saif Abdulla Saeed Mansour Al Kaabi	Villa G+ 1+P.H Out Kitchen & Out Majlis	Umm Salal Ali
85	Kahramaa	GTC/642D/2014- Package - C8	Montazah S/S - Bin Derem S/S
86	Kahramaa	Birakat Al Awameer 1 S/S - Birakat Al Awameer-5 S/S	Birakat
87	Kahramaa	Birakat Al Awameer 2 S/S - Birakat Al Awameer-5 S/S	Birakat
88	Mohamed Al Mansoury	2B+G+M+8	Al Muntazah
89	Kahramaa	Logistic Zone Super S/S - Birkat Al Awameer-1 S/S	Birakat
90	Kahramaa	Ras Laffan OHL1 to Doha West Metro S/S	Sahaniya
91	Kahramaa	QPTSE 220 kV cable route between RASLA - DWEMT S/S	Sahaniya
92	Kahramaa	GTC/488C/2012	Abu Hamour S/S & South District to Maamoura South S/S
93	Kahramaa	Birakat Al Awameer 4 to Birakat Al Awameer-2	Birakat
94	Kahramaa	GTC/450I/2011, Q. P. T. S Expansion Pashe-11 EHV & HV Cable (Addendum) - Package -C18	Mebaireek Super S/S to PSS-4 S/S
95	Kahramaa	Logistic Zone Super S/S - Birkat Al Awameer-4 S/S	Birakat

COMPLETED PROJECTS

S.N	Client	Project	Location
96	Kahramaa	Qatar Power Transmission System Phase-11 Package C-16-17-18	Mebaireek Super S/S to PSS-4 S/S
97	NPP	New Port Project (Npp0057)	NPP0057 - Mesaieed
98	Kahramaa	GTC/642C/2014 Package - C4	Logistics Village to Al Bahya S/S
99	Mohamed Al Motawaa	Private Villa	Radwat Al Hamama
100	Kahramaa	Qatar Power Transmission System Phase-12 EHV Cable	66kV Cable Route Between PSS3 S/S & PSS4 S/S (F-1)
101	Kahramaa	Package C6 / Phase 12	Wakra North S/S to Ras Abu Fantas South S/S
102	Kahramaa	GTC/450J/2011 - 220 Kv Cable Route AWS - MEHSU	Al - Wajbah / Muaither
103	Kahramaa	220 Kv Cable Route AWS - MEHSU S/S	Al - Wajbah
104	Ahamed Ali Alyafei	Adding 1 Room on Roof	Abu Hamour
105	Kahramaa	Qatar Power Transmission System Phase-12 EHV & HV Cable Package C-8	Bu Garn S/S to Umm Shahrain S/S Cable Route
106	Mawani	Wakra Port	Wakra
107	Kahramaa	66 Kv EHV Cable Work	Doha Industrial F to Doha Industrial G
108	Hamad Ali H R Almannai	2 Villa (G+1+PH) + Externals Kitchen	Al Kheesa
109	Kahramaa	GTC/642C/2014 - C4 Package - Phase -12	Abu Nakhlah Super S/S to Al Bahya S/S
110	Kahramaa	GTC/642C/2014 - 132 kv X2000 Sq. mm Cable	Al Karaana Substation
111	Kahramaa	Phase 12 Substations - Package S-6	Wakrah-2 S/S & Existing Wakrah S/S to Wakrah Replacement S/S
112	National Contracting Company	Qatar Power Transmission System Phase -12	Raf South
113	Kahramaa	Phase 12 Substations, Package S-1	Umm Al Amad S/S to LDS-2 S/S to Al Sakhamah S/S (Loop-In)
114	Kahramaa	GTC/642D/2014 - Q.P.T.S. Phase-12, C6, C7 & C8 - 132KV	Bul Hemmaid - Wukair 11
115	Kahramaa	GTC/642C/2014 - C4	Al Jahhaniya-1 S/S to Al Jahhaniya-3 S/S
116	Kahramaa	Q.P.T.S. Phase-11, Stage-1, EHV & HV Cables Package C-7	2x132KV Cable Circuits Between SED S/S and Bidda Metro S/S
117	Fatma Abdulla M Al Medfa	Office Building (B+G+2)	Madina Khalifa
118	Kahramaa	Al Wajbah Super S/S to Mehairja Super S/S	Al - Wajbah
119	Kahramaa	Qatar Power Transmission System Expansion	400KV Cable Route From Doha South Super S/S to Al Sowaidy Super S/S
120	Kahramaa	Ras Abu Fontas Metro S/S Ras Abu Fontas-2 S/S	Barwa
121	Kahramaa	Q.P.T.S. Phase-12 EHV & HV Cable Package C-6	Al Sakhama S/S to Lusail Metro S/S
122	Sheikh Faisal Bin Thani Al Thani	Proposed B+G+4 Apartment Building	Al Sadd
123	Abdallahman Mohd. H. B Al Sada	Addition Floor	Jarayan Janaiat
124	Shikh Khalid Abdulrahman M A Al-Thani	(2B+GF+7+Ph) 2 Bed & 1 Bed Flat Hotel Apartments	Fareej Bin Dirham - Doha

COMPLETED PROJECTS

S.N	Client	Project	Location
125	Kahramaa	132KV Qatar Power Transmission System Expansion, Phase-12, EHV & HV Cable Package C-6	Al Sowaidi Super S/S - Al Bidda Metro S/S
126	Hamad Al Manai	Proposed B+G+3 Apartment Building	Bin Omran
127	Naser Al Kaabi / Representative TADMUF	2B+G+7+P.H	Al Mansoura Area
128	Kahramaa	Umm Al Amad Super S/S and Bu Garn S/S	Umm Al Amad - Bu Garn
129	Kahramaa	Qatar Power Transmission System Expansion, Phase-12	220 kV Cable LILO Works at Doha West Metro (Dukhan Road Super and Bani Hajer Super S/S)
130	Mr. Cherian Vrughest	Premco Precast	Messaid
131	Kahramaa	GTC/450I/2011, Phase- 11	Doha Industrial B, Industrial Area
132	Kahramaa	Qatar Power Transmission System Expansion, Phase-12 EHV & HV Cable Package C-6	Al Sowaidi Super S/S - Feriq Al Ameer S/S
133	Sheikh Khalid Abdul Rahman Al Thani	2B+G+7+P.H	Al Mansoura
134	German School	German School Play Ground	Al Mamoura
135	Kahramaa	GTC/643D/2014	West Bay Tower South-1 S/S to West Bay Tower South-2 S/S
136	Kahramaa	GTC/643A/2014 Phase 12 Substations, Packages S-7	Airport Super S/S to Ras Abu About Super S/S to Khalifat-2 S/S
137	Ahmed Elasa Al Zamil Al Khulaifi	Palas+Villa+Satalites	Al Maamoura
138	Kahramaa	Qatar Power Transmission System Expansion Phase-13 Substation, Packages - S1, S6, S11, S19 & S20	66 KV, OHL Conductor Diversion From Existing Umm Salal S/S to Umm Al Ghahab S/S at Tower No.30A to Existing umm Al Amad Super S/S
139	Nasser Abdullah Saeed Al - Kaabi	2 Villa Attached (G+1+PH+2 Service Blocks)	Rawdat Al Hamama, Al Daayen
140	Sheikh Fahad Mohamed S A Al-Thani	Proposed (G+3) Residential Flat Building	Al Doha Al jadeeda
141	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, EHV & HV Cable Package C-7 & C-9	Al Wukair 11 to Al Mashaf-2 S/S
142	Kahramaa	Q. P. T. S. E Phase-12 Substation, Packages - S11	Mehraija Super S/S to Mehraija-1 S/S
143	Fahed Kafood	B+G+1 Private Villa	Al Thumama
144	Kahramaa	GTC/450I/2011, Phase- 11	DIA to NDIB
145	Kahramaa	Birakat Al Awameer -2 to Birakat Al Awameer-3	Birakat
146	Kahramaa	Logistic Super Zone to Birakat Al Awame - 3	Birakat
147	Shika Malfi Salekh Al Suker Al Mahanry	Villa (G+1+PH+Satalight)	Al Gharafa
148	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, Package C-1	Doha South Super S/S – Al Sowaidi Super S/S

COMPLETED PROJECTS

S.N	Client	Project	Location
149	Kahramaa	Qatar Power Transmission System Expansion, Phase-12, Substation Packages -S11	Mehairja Super S/S to Mehairja-1 S/S
150	Mahamed Ibrahim Abdulla Abidan Fakrc	(B+M+2) Building	Umm Ghuwilina
151	Shikha Mooza Fahad J M Al-Thani	Dafna - 2	Al- Doha - Dafna
152	Nasser Abdulla S A Al Kaabi	Villa (G+1+PH) + External Kitchen	Sakhama
153	Abdulla. Al Aziz Jasim Al Moftah, Moftah Jasim Al Moftah	Proposed Villa (G+3) Residential and Commercial Building	Al Doha Al jadeeda
154	Nasser Abdulla Al Kaabi	(2B+G+M+7) Hotel Apartment	Mansoura
155	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, Substation Packages -S1-S6, S11, S19 & S20	Al Waab Super S/S & Doha Super S/S
156	Kahramaa	GTC/736F/2015 - (Package C-10)	66kV Cable Circuits From Al Wadi West S/S to Abu Hamour West S/S
157	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, Package - C10	Al Wadi West S/S to Abu Humour West S/S
158	Abdulaziz Jassim M Al Muftaha	Proposed G+5 Residential Building	Mansoura
159	A. Rahman Mahmed Al Jufairi	Family Compound, (Five Villa, Majlis, Kitchen & Swimming Pool)	Al Daayen
160	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, EHV & HV Cable Package C1, C2, C3 & C4	Naeaja Super to Doha Super S/S
161	Hassan Sokri H Al Mahsin	2B+G+7 Residential Building	Mansoura
162	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, Substation Packages -S1-S6, S11, S19 & S20	From Existing Airport Super S/S to Doha Super S/S
163	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, Substation Packages -S1-S6, S11, S19 & S20	New Assiri S/S - Ali Bin Abu Talib S/S
164	Sheikh Ahmad	Clarteck Oil Recycling Factory	Mesaieed
165	Kahramaa	GTC/736E/2015, C4M2	Al Sakhama - Umm Eboriya
166	Kahramaa	GTC/736E/2015, C4M3	Al Sakhama - Umm Garn
167	Kahramaa	GTC/736E/2015	Semaisma - Umm Garn
168	Mahamed Hasin Mohamed Al Khayyarin	Additional 1st Floor + Pent House	Bani Hajer
169	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, Substation Packages -S1-S6, S11, S19 & S20	Abu Samra S/S Upgrade
170	Kahramaa	Qatar Power Transmission System Expansion, Phase-12, Substation Packages -S7	Airport Super S/S to RAS Abo Aboud Super S/S
171	Kahramaa	Nuaijah Super 2 to Nuaijah 2	Nuaijah
172	Abdelazez Alobidaly	Villa (G+1)	Al Wakra

COMPLETED PROJECTS


S.N	Client	Project	Location
173	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, Package C-1	4Doha S/S – Al Sowaidi Super S/S
174	Abdul Rhman & Ali Mobarak Naser Al-Ali Al Maadeed	B+G+7 Residential Building	Al Sadd
175	Mr. Abull Aziz Hamad Nasir Al Khalifah	Private Villa (G+1+PH)	Rawdat Al Hamama
176	H.E.Shk. Hamad Bin Jassim Bin Jabor Al-Thani	4 Palaces @ Al-Wajba	Al -Wajba
177	M. Rashed Al Medadi	Commercial Building (G+2)	Al Hilal
178	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, EHV & HV Cable Package C1, C2 C3 & C4	Al Thumamah Super S/S to Old Airport S/S
179	Noora Saeed Al-Kaabi	Proposed 2Villa (G+1+PH) + Outside Kitcher	Al Khartiyat
180	Al Awqaf	Mosque DM11 & Imam House IH7	Rawdat Al Hamama
181	Kahramaa	GTC/643A/2014	Airport Super S/S - RAS Abo About S/S to Khalifa -2 S/S
182	Kahramaa	Phase - 13 Bul Hemmaid to Al Wukair-8	Al Wukair
183	Kahramaa	66 kV 1000 Sqmm Cable Between AWBS to MEHSU LILO at Al Waab Upgrade	Al Waab Upgrade
184	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, EHV & HV Cable Packages -C5, C6, C11, C12, C13, C14 & C15	Al Themaïd-1 S/S and Rawdat Egdim-2 S/S
185	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, EHV & HV Cable Packages -C5, C6, C11, C12, C13, C14 & C15	Umm Garn S/S to Al Daayen -2 S/S
186	Rashid Al Mohanady	Markhia Villa (G)	Al markhia
187	Sulaiman Saed J S Abdulla	Proposed Shop and Residential Building (G+2 Typical)	Madina Khalifa South
188	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, EHV & HV Cable Package C-2	Doha South Super to Abu Hamour Super S/S
189	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, EHV & HV Cables- Packages C-10	Police Training Institute (PTI) S/S to Sailiya Camp-1 S/S
190	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, Substation Packages -S1-S6, S11, S19 & S20	Montazah North S/S to Old Ghanim S/S
191	Kahramaa	Qatar Power Transmission System Expansion, Phase-11, State -1 EHV & HV Cable Packages C-7	2 X 132 KV Circuit Between Sed S/S to Al Bidda Metro S/S
192	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, EHV & HV Cables- Package C5, C6, C11, C12, C13, C14, & C15	Gharafa S/S - Al Markhiya S/S to 66kV GIS at Khalifa Town South-1 S/S
193	Kahramaa	Phase - 12, GTC/642/2014 - (Package C-4)	Izaghawa North S/S to Al Faroosh S/S

COMPLETED PROJECTS

S.N	Client	Project	Location
194	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, EHV & HV Cable Packages C5, C6, C11, C12, C13, C14 & C15	Bin Mohmoud- 2 to Al Bidda Metro S/S
195	Kahramaa	GTC/642C/2014 Phase: 12, Package C-4	Jeryan Jenaihat Super S/S to Al Kheesa West S/S
196	Al Majed Group	24 Flats	Umm Ghuwilina
197	Sh. Khalifa Jassim Ahamed Khalifa Al Than	4 Villa (G+1+PH)	Muraikh
198	Mhd. Shek Abdulla Al Kaabi	Villa (G+1+PH) + Ancillary	Al Kheesa
199	Ashghal	P003 Lusail Expressway	Cycle Way EDEE 200X200X200
200	Sheikh Saud Abdulla M. Al - Thani	Proposed Palace (B+G)	Rawdat Al Hamama - Al Daayen
201	Nouf Naser Al Atiya	Villa	Al Shammal
202	Hyatt Plaza	Hyatt Plaza Portecochere	Aspire Zone (Al Waab)
203	Shiekh Abdel Rahman, Mohamed Abdel Rahman Al Thani	Grand Albero Villas, Al Wukair 15 Villas	Al Wukair
204	Hassan Mubarak Mahammed Al Mohanady	Commercial Building (B+G+M+2)	Al Khor
205	Khalid Zabin F Al-Dosari	Villa Addition Out Majlis	Al Rayyan - Rawadat Aqdiam
206	Mohammed Khamis S H Al - Mansoori	Villa (G+1+PH) + Out Kitchen+ Driver Room	Lijmiliya
207	Mr. Hamad Mohammad Al Sada	Proposed (G+1+PH) Villa + Out Building	Umm Salal (Rawdat Al Hamama)
208	Noora Saeed Al-Kaabi	Proposed 2Villa (G+1+PH) + Outside Kitcher	Al Khartiyat
209	Shiekh Abdel Rahman, Mohamed Abdel Rahman Al Thani	Grand Albero Villas, Al Wukair 10 Villas	Al Wukair
210	Prime Power	Boundary Wall	Umm Salad Mahamed
211	Ahmed Abdul A A Ahmed	Villa (B+G+1+PH)	Lusail
212	Khaled Mosa	Villa	Dafna
213	Al Awqaf	Mosque DM11 & Imam House IH7	Rawdat Al Hamama
214	Muna Abdulla Hassan	Residential Building (G+2)	Fareej Kulaib
215	Khalid Saqr K F Albuain	Proposed Villa (G+1+PH) + Out Kitchen + Out Majlis + Gym & Swimming Pool Block (B+G)	Al Daayen
216	Mohamed Mallalla Abdulla Al Bader	G+M+2	Najma
217	Mohd Othman M O Al Khelaifi	Villas (G+1st+Penthouse) + Majlis	Rawdat Al Hamama
218	Mohd Sulyman Hyder	G+6 Building	Najma



MAJOR KAHRAMAA PROJECTS

 **الهيئة العامة للكهرباء والمياه**
Qatar General Electricity & Water Corporation
Technical Affairs - Electricity Projects Department




Fax

To:	M/s. Larsen & Toubro Ltd.	From:	A/Head of Electricity Projects
Attention:	Mr. G. Sridhar Cluster Head – Cable Projects	Date:	13 AUG 2018
Fax No.:	+974 – 4455 1286	Our Ref.:	TA/TEP/FX/18/0300
Contract No.:	GTC/736A/2015	Pages:	1

Qatar Power Transmission System Expansion – Phase 13 – EHV & HV Cables
Packages C5, C6, C11, C12, C13, C14 & C15

PQ Subcontractor Proposal for Material Testing Services / Site Sampling / NDT Works
M/s Technical Engineering Laboratory

 **الهيئة العامة للكهرباء والمياه**
Qatar General Electricity & Water Corporation
Technical Affairs - Electricity Projects Department




Fax

To:	M/s. Furukawa Electric Co. Ltd.	From:	A/ Head of Electricity Projects
Attention:	Mr. Hironori Sugano Project Director	Date:	29 NOV 2017
Fax No.:	+974 - 44 51 3708	Our Ref.:	TA/TEP/FX/17/1418
Contract No.:	GTC/736D/2015	Pages:	1

Qatar Power Transmission System Expansion – Phase 13 – EHV Power Cables
Package C-1 (Feeder 1)

Pre-qualification Documents for M/s Technical Engineering Laboratory (TEL)

 **الهيئة العامة للكهرباء والمياه**
Qatar General Electricity & Water Corporation
Technical Affairs - Electricity Projects Department



Fax

To:	M/s. LS Cable & System	From:	A/ Head of Electricity Projects
Attention:	Mr. Jin Goo Kim Project Manager	Date:	24 MAY 2018
Fax No.:	+974 – 4487 7058	Our Ref.:	TA/TEP/FX/18/0585
Contract No.:	GTC/736C/2015	Pages:	1

Qatar Power Transmission System Expansion – Phase 13 – EHV Power Cables
Packages C7 & C9

Approval of M/s Technical Engineering Laboratory for Material Testing

KAHRAMAA PROJECTS

S.N	Client	Project	Location
1	Kahramaa	GTC 318A/2009	66KV Cabal Rout Bet New Doha .A S/S to Finalcial Dist S/S
2	Kahramaa	GTC 318A/2009	66KV Cabal Rout Bet New Doha New Hitmi S/S
3	Kahramaa	GTC 318A/2009	66 KV Cable Route Between Doha North Super to Khuraitiyat South S/S
4	Kahramaa	GTC 318A/2009	66 KV Ain Khalid Super S/S to Al Khalid North
5	Kahramaa	GTC/372F/2010	66kv Cable Route bet Al Wajba Super S/S To Al Wajba South S/S
6	Kahramaa	Qatar Power Transmission System Expansion Phase 10 - EHV Power Cables	2 X 66 KV DIS S/S to DIF DIF S/S
7	Kahramaa	GTC/372F/2010	66 KVCable Route bet Ain Khalid Super S/S to Ain Khalid North S/S
8	Kahramaa	GTC/372F/2010	66 KVCable Route bet Ain Khalid Super S/S to Al Wadi West S/S
9	Kahramaa	GTC 372F/2010	132 KV Cable Route Between Umm Salal Mohammed Super S/S to Al khissa west S/S
10	Kahramaa	GTC/372F/2010	132 KV Cable Route bet Saliyah Primary S/S to Al Wajbah Super S/S
11	Kahramaa	GTC/318A/2009	220 KV Cable Route between Al Wajba Sipes S/S to Doha Centre S/S
12	Kahramaa	Qatar Power Transmission System PH-10 EHV Power Cables	66 KV Cable Route From WBS-1 To SP S/S
13	Kahramaa	Qatar Power Transmission System PH-X EHV Power Cables	66 KV Cable Route From Duhail Super S/S to North Gate S/S
14	Kahramaa	GTC/543B/2012	Doha
15	Kahramaa	Saliyah Super S/S to Rawdat Abel Heeran Super S/S	Saliyah
16	Kahramaa	Al-Thumama Super S/S to DSS (220KV)	Al Thumamah
17	Kahramaa	Wakrah-2 S/S and Mesaieed (MPC)	Wakrah
18	Kahramaa	DSS S/S to Al Baraha Super S/S (220KV)	DSS S/S to Al Baraha Super S/S
19	Kahramaa	Qatar Power Transmission System Expansion - Phase XI, EHV & HV Cables (Addeendum) Package C16	66 Cable Route From Al-Kheesa West S/S To Al-Kheesa East S/S
20	Kahramaa	Al-Thumamah Super S/S to Wakrah S/S	Al Thumamah
21	Kahramaa	GTC/543B/2012	Umm AlAmad
22	Kahramaa	GTC/543B/2012	Ras Al Noof
23	Kahramaa	Qatar Power Transmission System Expansion - Phase XI, EHV Cables	Rah Super S/S - Rah 1 S/S Route , Al Saliya
24	Kahramaa	Phase-11 , Route -DIC to Milaha Logictic	Industrial Area
25	Kahramaa	Naeaja West - South District A	Naeaja West

KAHRAMAA PROJECTS

S.N	Client	Project	Location
26	Kahramaa	Naeaja Super S/S to Montazah S/S	Naeaja Super to Montazah
27	Kahramaa	GTC/543B/2012	AL Khaesa
28	Kahramaa	GTC/450I/2011 Package C-16	Saliyah Super S/S to Al Khalidiyah S/S
29	Kahramaa	Qatar Power Transmission System Expansion - Phase XI, Package C16	Gharafa S/S to Al Markhiyah S/S Cable Route
30	Kahramaa	Qatar Power Transmission System Expansion - Phase 11- EHV & HV Cables (Addendum)- Packages C15, C16 & C18	Wadi Al Banat South S/S to Wadi Al Banat North S/S
31	Kahramaa	Qatar Power Transmission System Expansion Phase- XI Pakage C-18	Doha Industrial Estate -Pss 6 S/S to Pss 4 Cable Route
32	Kahramaa	QEZ P/S & BUL Hemmad S/S	Bul Hemmad
34	Kahramaa	GTC/450D/2011	Naeaja Super to Muntazah
35	Kahramaa	GTC-450 I/2011 Package C-18	Mebairek Super S/S to PSS-6 S/S
36	Kahramaa	GTC/642C/2014- C4 Package - Phase -12	Doha South Super S/S to Al Thumamah Central Cable Route
37	Kahramaa	Lilo Existing 132KV Bani Hajer Super -Barzan Camp-1 at Al Jahaniya -1	Al Jahaniya
38	Kahramaa	Semaisma S/S to Al Daayen S/S	Al Daayen
39	Kahramaa	Qatar Power System Expansion Phase II Stage 1 C12 Package	LDS -1 S/S to Al Khessa Central S/s to Al Khessa South
40	Kahramaa	GTC/642C/2014- C4	University South S/S to POG2 S/S
41	Kahramaa	GTC/642A/2014 Package C1 & C2	QEZ S/S / Bul-Hemmaid S/S
42	Kahramaa	GTC/372B/2010	RAAS S/S GHA S/S
43	Kahramaa	Qatar Power TR System Expansion- Ph 12	Ain Khalid
44	Kahramaa	Al Waab Super to Al Waab City Metro S/S	Al Waab
45	Kahramaa	GTC/642D/2014- Package - C8	Montazah S/S - Bin Derem S/S
46	Kahramaa	Birakat Al Awameer 1 S/S - Birakat Al Awameer-5 S/S	Birakat
47	Kahramaa	Birakat Al Awameer 2 S/S - Birakat Al Awameer-5 S/S	Birakat
48	Kahramaa	Logistic Zone Super S/S - Birkat Al Awameer-1 S/S	Birakat
49	Kahramaa	Ras Laffan OHL1 to Doha West Metro S/S	Sahaniya
50	Kahramaa	QPTSE 220 kV cable route between RASLA - DWEMT S/S	Sahaniya
51	Kahramaa	GTC/488C/2012	Abu Hamour S/S & South District to Maamoura South S/S
52	Kahramaa	Birakat Al Awameer 4 to Birakat Al Awameer-2	Birakat
53	Kahramaa	GTC/450I/2011, Q. P. T. S Expansion Pashe-11 EHV & HV Cable (Addendum) - Package -C18	Mebaireek Super S/S to PSS-4 S/S
54	Kahramaa	Logistic Zone Super S/S - Birkat Al Awameer-4 S/S	Birakat

KAHRAMAA PROJECTS

S.N	Client	Project	Location
55	Kahramaa	Qatar Power Transmission System Phase-11 Package C-16-17-18	Mebaireek Super S/S to PSS-4 S/S
56	Kahramaa	GTC/642C/2014 Package - C4	Logistics Village to Al Bahya S/S
57	Kahramaa	Qatar Power Transmission System Phase-12 EHV Cable	66kV Cable Route Between PSS3 S/S & PSS4 S/S (F-1)
58	Kahramaa	Package C6 / Phase 12	Wakra North S/S to Ras Abu Fantas South S/S
59	Kahramaa	GTC/450J/2011 - 220 Kv Cable Route AWS - MEHSU	Al - Wajbah / Muaither
60	Kahramaa	220 Kv Cable Route AWS - MEHSU S/S	Al - Wajbah
61	Kahramaa	Qatar Power Transmission System Phase-12 EHV & HV Cable Package C-8	Bu Garn S/S to Umm Shahrain S/S Cable Route
62	Kahramaa	66 Kv EHV Cable Work	Doha Industrial F to Doha Industrial G
63	Kahramaa	GTC/642C/2014 - C4 Package - Phase -12	Abu Nakhlah Super S/S to Al Bahya S/S
64	Kahramaa	GTC/642C/2014 - 132 kv X2000 Sq. mm Cable	Al Karaana Substation
65	Kahramaa	Phase 12 Substations - Package S-6	Wakrah-2 S/S & Existing Wakrah S/S to Wakrah Replacement S/S
66	Kahramaa	Phase 12 Substations, Package S-1	Umm Al Amad S/S to LDS-2 S/S to Al Sakhamah S/S (Loop-In)
67	Kahramaa	GTC/642D/2014 - Q.P.T.S. Phase-12, C6, C7 & C8 - 132KV	Bul Hemmaid - Wukair 11
68	Kahramaa	GTC/642C/2014 - C4	Al Jahhaniya-1 S/S to Al Jahhaniya-3 S/S
69	Kahramaa	Q.P.T.S. Phase-11, Stage-1, EHV & HV Cables Package C-7	2x132KV Cable Circuits Between SED S/S and Bidda Metro S/S
70	Kahramaa	Al Wajbah Super S/S to Mehairja Super S/S	Al - Wajbah
71	Kahramaa	Qatar Power Transmission System Expansion	400KV Cable Route From Doha South Super S/S to Al Sowaidy Super S/S
72	Kahramaa	Ras Abu Fontas Metro S/S Ras Abu Fontas-2 S/S	Barwa
73	Kahramaa	Q.P.T.S. Phase-12 EHV & HV Cable Package C-6	Al Sakhama S/S to Lusail Metro S/S
74	Kahramaa	132KV Qatar Power Transmission System Expansion, Phase-12, EHV & HV Cable Package C-6	Al Sowaidi Super S/S - Al Bidda Metro S/S
75	Kahramaa	Umm Al Amad Super S/S and Bu Garn S/S	Umm Al Amad - Bu Garn
76	Kahramaa	Qatar Power Transmission System Expansion, Phase-12	220 kV Cable LILO Works at Doha West Metro (Dukhan Road Super and Bani Hajer Super S/S)
77	Kahramaa	GTC/450I/2011, Phase- 11	Doha Industrial B, Industrial Area
78	Kahramaa	Qatar Power Transmission System Expansion, Phase-12 EHV & HV Cable Package C-6	Al Sowaidi Super S/S - Feriq Al Ameer S/S
79	Kahramaa	GTC/643D/2014	West Bay Tower South-1 S/S to West Bay Tower South-2 S/S

KAHRAMAA PROJECTS

S.N	Client	Project	Location
80	Kahramaa	GTC/643A/2014 Phase 12 Substations, Packages S-7	Airport Super S/S to Ras Abu About Super S/S to Khalifat-2 S/S
81	Kahramaa	Qatar Power Transmission System Expansion Phase-13 Substation, Packages - S1, S6, S11, S19 & S20	66 KV, OHL Conductor Diversion From Existing Umm Salal S/S to Umm Al Ghahab S/S at Tower No.30A to Existing umm Al Amad Super S/S
82	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, EHV & HV Cable Package C-7 & C-9	Al Wukair 11 to Al Mashaf-2 S/S
83	Kahramaa	Q. P. T. S. E Phase-12 Substation, Packages - S11	Mehraiija Super S/S to Mehraiija-1 S/S
84	Kahramaa	GTC/450I/2011, Phase- 11	DIA to NDIB
85	Kahramaa	Birakat Al Awameer -2 to Birakat Al Awameer-3	Birakat
86	Kahramaa	Logistic Super Zone to Birakat Al Awame - 3	Birakat
87	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, Package C-1	Doha South Super S/S – Al Sowaidi Super S/S
88	Kahramaa	Qatar Power Transmission System Expansion, Phase-12, Substation Packages -S11	Mehairja Super S/S to Mehairja-1 S/S
89	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, Substation Packages -S1-S6, S11, S19 & S20	Al Waab Super S/S & Doha Super S/S
90	Kahramaa	GTC/736F/2015 - (Package C-10)	66kV Cable Circuits From Al Wadi West S/S to Abu Hamour West S/S
91	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, Package - C10	Al Wadi West S/S to Abu Humour West S/S
92	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, EHV & HV Cable Package C1, C2, C3 & C4	Naeaja Super to Doha Super S/S
93	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, Substation Packages -S1-S6, S11, S19 & S20	From Existing Airport Super S/S to Doha Super S/S
94	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, Substation Packages -S1-S6, S11, S19 & S20	New Assiri S/S - Ali Bin Abu Talib S/S
95	Kahramaa	GTC/736E/2015, C4M2	Al Sakhama - Umm Eboriya
96	Kahramaa	GTC/736E/2015, C4M3	Al Sakhama - Umm Garm
97	Kahramaa	GTC/736E/2015	Semaisma - Umm Garn
98	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, Substation Packages -S1-S6, S11, S19 & S20	Abu Samra S/S Upgrade
99	Kahramaa	Qatar Power Transmission System Expansion, Phase-12, Substation Packages -S7	Airport Super S/S to RAS Abo About Super S/S
100	Kahramaa	Nuajjah Super 2 to Nuajjah 2	Nuajjah
101	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, Package C-1	4Doha S/S – Al Sowaidi Super S/S

KAHRAMAA PROJECTS

S.N	Client	Project	Location
102	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, EHV & HV Cable Package C1, C2 C3 & C4	Al Thumamah Super S/S to Old Airport S/S
103	Kahramaa	GTC/643A/2014	Airport Super S/S - RAS Abo Aboud S/S to Khalifa -2 S/S
104	Kahramaa	Phase - 13 Bul Hemmaid to Al Wukair-8	Al Wukair
105	Kahramaa	66 kV 1000 Sqmm Cable Between AWBS to MEHSU LILO at Al Waab Upgrade	Al Waab Upgrade
106	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, EHV & HV Cable Packages -C5, C6, C11, C12, C13, C14 & C15	Al Themaïd-1 S/S and Rawdat Egdïm-2 S/S
107	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, EHV & HV Cable Packages -C5, C6, C11, C12, C13, C14 & C15	Umm Garn S/S to Al Daayen -2 S/S
108	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, EHV & HV Cable Package C-2	Doha South Super to Abu Hamour Super S/S
109	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, EHV & HV Cables- Packages C-10	Police Training Institute (PTI) S/S to Sailiya Camp-1 S/S
110	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, Substation Packages -S1-S6, S11, S19 & S20	Montazah North S/S to Old Ghanim S/S
111	Kahramaa	Qatar Power Transmission System Expansion, Phase-11, State -1 EHV & HV Cable Packages C-7	2 X 132 KV Circuit Between Sed S/S to Al Bidda Metro S/S
112	Kahramaa	Phase - 12, GTC/642/2014 - (Package C-4)	Izaghawa North S/S to Al Faroosh S/S
113	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, EHV & HV Cable Packages C5, C6, C11, C12, C13, C14 & C15	Bin Mohmoud- 2 to Al Bidda Metro S/S
114	Kahramaa	GTC-142B/2006	Al Bhahara Super to Al Bharha South (BAS to ABS)
115	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, EHV & HV Cables- Package C5, C6, C11, C12, C13, C14, & C15	Gharafa S/S - Al Markhiya S/S to 66kV GIS at Khalifa Town South-1 S/S
116	Kahramaa	GTC/642C/2014 Phase: 12, Package C-4	Jeryan Jenaihat Super S/S to Al Kheesa West S/S



MAJOR ONGOING PROJECTS



Client: Kahramaa

Project: 400KV Cable Route Phase-13, Package C-1

Location: Doha South Super – Al Sowaidi Super S/S

**Scope of Work: Soil Investigation Works
& Backfill Material Testing**



Client: Ahmed Elasa Al Zamil Al Khulaifi

Project: Proposed G+6 Residential Building

Location: Al Mansoura

Scope of Work: Material Testing

ONGOING PROJECTS

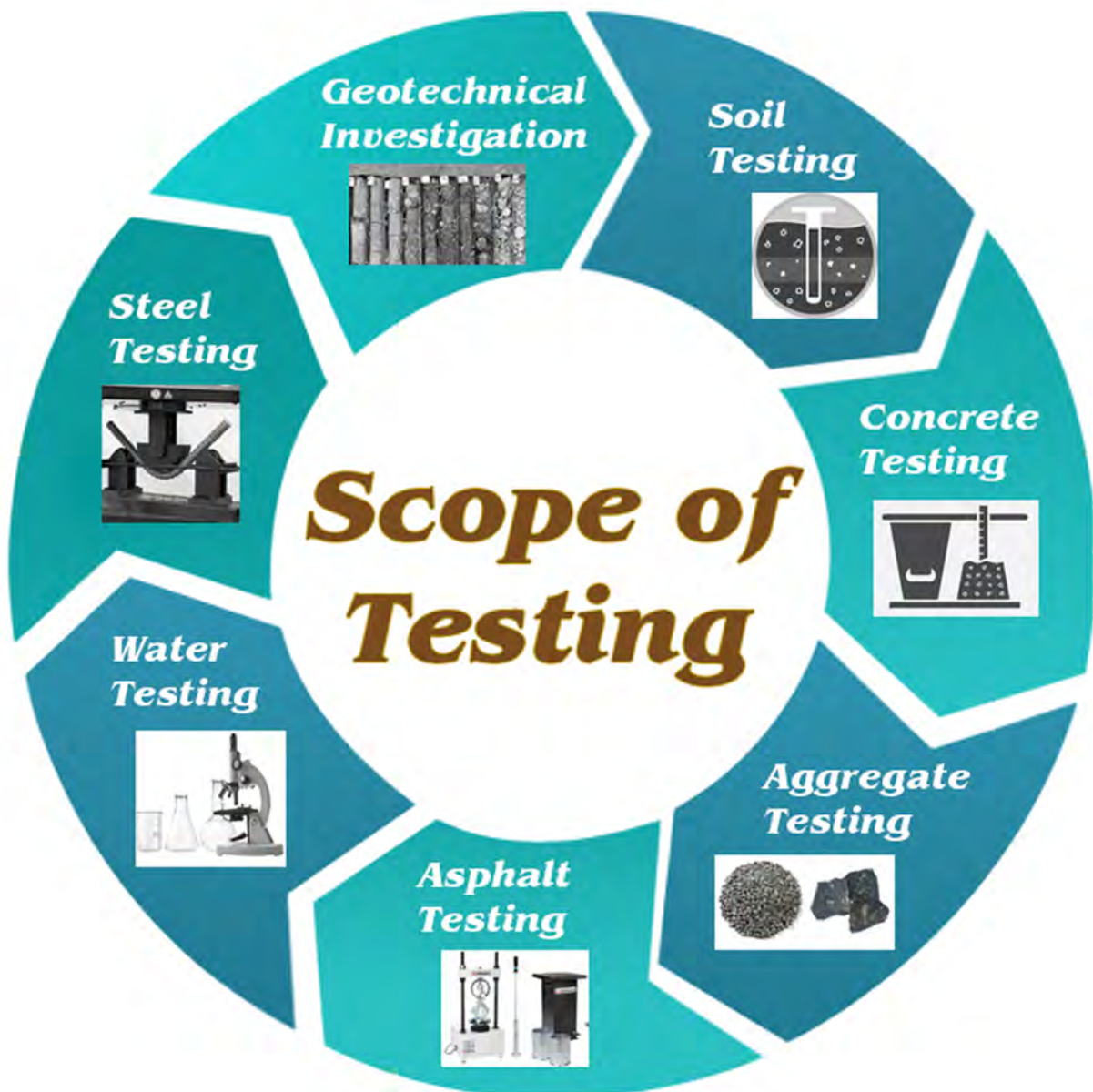
S.N	Client	Project	Location
1	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, Package - C10	Al Wadi West S/S to Abu Humour West S/S
2	Abdulaziz Jassim M Al Muftaha	Proposed G+5 Residential Building	Mansoura
3	A. Rahman Mahmed Al Jufairi	Family Compound, (Five Villa, Majlis, Kitchen & Swimming Pool)	Al Daayen
4	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, EHV & HV Cable Package C1, C2, C3 & C4	Naeaja Super to Doha Super S/S
5	Hassan Sokri H Al Mahsin	2B+G+7 Residential Building	Mansoura
6	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, Substation Packages -S1-S6, S11, S19 & S20	From Existing Airport Super S/S to Doha Super S/S
7	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, Substation Packages -S1-S6, S11, S19 & S20	New Assiri S/S - Ali Bin Abu Talib S/S
8	Sheikh Ahmad	Clearateck Oil Recycling Factory	Mesaieed
9	Kahramaa	GTC/736E/2015, C4M2	Al Sakhama - Umm Eboriya
10	Kahramaa	GTC/736E/2015, C4M3	Al Sakhama - Umm Garm
11	Kahramaa	GTC/736E/2015	Semaisma - Umm Garn
12	Mahamed Hasin Mohamed Al Khayyarin	Additional 1st Floor + Pent House	Bani Hajer
13	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, Substation Packages -S1-S6, S11, S19 & S20	Abu Samra S/S Upgrade
14	Kahramaa	Qatar Power Transmission System Expansion, Phase-12, Substation Packages -S7	Airport Super S/S to RAS Abo Aboud Super S/S
15	Kahramaa	Nuaijah Super 2 to Nuaijah 2	Nuaijah
16	Abdelazez Alobidaly	Villa (G+1)	Al Wakra
17	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, Package C-1	4Doha S/S – Al Sowaidi Super S/S
18	Abdul Rhman & Ali Mobarak Naser Al-Ali Al Maadeec	B+G+7 Residential Building	Al Sadd
19	Mr. Abull Aziz Hamad Nasir Al Khalifah	Private Villa (G+1+PH)	Rawdat Al Hamama
20	H.E.Shk. Hamad Bin Jassim Bin Jabor Al-Thani	4 Palaces @ Al-Wajba	Al -Wajba
21	M. Rashed Al Medadi	Commercial Building (G+2)	Al Hilal
22	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, EHV & HV Cable Package C1, C2 C3 & C4	Al Thumamah Super S/S to Old Airport S/S
23	Noora Saeed Al-Kaabi	Proposed 2Villa (G+1+PH) + Outside Kitchen	Al Khartiyat
24	Al Awqaf	Mosque DM11 & Imam House IH7	Rawdat Al Hamama
25	Kahramaa	GTC/643A/2014	Airport Super S/S - RAS Abo Aboud S/S to Khalifa -2 S/S
26	Kahramaa	Phase - 13 Bul Hemmaid to Al Wukair-8	Al Wukair

ONGOING PROJECTS

S.N	Client	Project	Location
27	Kahramaa	66 kV 1000 Sqmm Cable Between AWBS to MEHSU LILO at Al Waab Upgrade	Al Waab Upgrade
28	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, EHV & HV Cable Packages -C5, C6, C11, C12, C13, C14 & C15	Al Themaid-1 S/S and Rawdat Egdim-2 S/S
29	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, EHV & HV Cable Packages -C5, C6, C11, C12, C13, C14 & C15	Umm Garn S/S to Al Daayen -2 S/S
30	Rashid Al Mohanady	Markhia Villa (G)	Al markhia
31	Sulaiman Saed J S Abdulla	Proposed Shop and Residential Building (G+2 Typical)	Madina Khalifa South
32	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, EHV & HV Cable Package C-2	Doha South Super to Abu Hamour Super S/S
33	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, EHV & HV Cables- Packages C-10	Police Training Institute (PTI) S/S to Sailya Camp-1 S/S
34	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, Substation Packages -S1-S6, S11, S19 & S20	Montazah North S/S to Old Ghanim S/S
35	Kahramaa	Qatar Power Transmission System Expansion, Phase-11, State -1 EHV & HV Cable Packages C-7	2 X 132 KV Circuit Between Sed S/S to Al Bidda Metro S/S
36	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, EHV & HV Cables- Package C5, C6, C11, C12,	Gharafa S/S - Al Markhiya S/S to 66kV GIS at Khalifa Town South-1 S/S
37	Kahramaa	Phase - 12, GTC/642/2014 - (Package C-4)	Izaghawa North S/S to Al Faroosh S/S
38	Kahramaa	Qatar Power Transmission System Expansion, Phase-13, EHV & HV Cable Packages C5, C6, C11, C12, C13, C14 & C15	Bin Mohmoud- 2 to Al Bidda Metro S/S
39	Kahramaa	GTC/642C/2014 Phase: 12, Package C-4	Jeryan Jenaihat Super S/S to Al Kheesa West S/S
40	Al Majed Group	24 Flats	Umm Ghuwilina

5

SCOPE OF TESTING





INTERNATIONAL
ACCREDITATION
SERVICE®



SCOPE OF ACCREDITATION

IAS Accreditation Number	TL-453
Company Name	Technical Engineering Laboratory
Address	Villa No. 31, Hitteen Street, Muntazah Near Al- Muntazah Health Center P.O. Box 47428 Doha, Qatar
Contact Name	Mr. Badri Kumar, Manager Dr. Mustafa Al Hawli, Chairman Mr. Hari Bhakta, Senior Technician
Telephone	+4450 7437
Effective Date of Scope	June 5, 2016
Accreditation Standard	ISO/IEC 17025:2005

CMT

ASTM C131/C131M	Standard test method for resistance to degradation of small-size coarse aggregate by abrasion and impact in the Los Angeles machine
BS 812-103.1	Methods for determination of particle size distribution sec 103.1: sieve tests
BS 812-105.1	Testing aggregates- methods for determination of particle shape- flakiness index
BS 812-105.2	Testing aggregates- methods for determination of particle shape-elongation index of coarse aggregate
BS 1377-2	Methods of test for soils for civil engineering purposes- classification tests (clause 9.2 and 9.3)
BS 1377-4	Methods of test for civil engineering purposes- compaction-related tests (clause 3.6)
BS EN 12390-3	Testing hardened concrete- compressive strength of test specimen
BS EN 12390-7	Testing hardened concrete, density of hardened concrete

International Accreditation Service, Inc.
3060 Saturn Street, Suite 100, Brea, California 92821 U.S.A
Telephone +1 562-364-8201 — IASInfo@iasonline.org
www.iasonline.org



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SCOPE OF ACCREDITATION

BS EN 12697-6

Bituminous mixtures- test methods for hot mix asphalt-determination of bulk density of bituminous specimens (section 9.2)

BS EN 12697-36

Bituminous mixtures- test methods for hot mix asphalt-determination of thickness of bituminous pavement-Test #4

TL-453
Technical Engineering Laboratory



Page 2 of 2

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SCOPE OF TESTING

- Testing construction materials and building components including aggregates, soils, concrete, reinforcing steel and bituminous materials
- Chemical analysis of soil, water, aggregates and concrete materials.
- Quality control on construction sites and production plants.
- In-situ testing of soil and concrete.

List of Laboratory and Field Tests

S.N. Soil Testing

1	Soil Sampling
2	Moisture Content (Oven Drying)
3	Sieve Analysis (Gradation)
4	Sand Equivalent
5	Maximum Dry Density & Optimum Moisture Content (MDD & OMC)
6	California Bearing Ratio (CBR)
7	Field Density (Sand Replacement Method)
8	Field Density (Nuclear Gauge Method)
9	% Passing 0.075mm & 0.063mm
10	Hydrometer Test
11	Atterberg Limits (Liquid Limit & Plasticity Index)
12	Acid Soluble Sulphate Content
13	Water Soluble Sulphate Content
14	Acid Soluble Chloride Content
15	Water Soluble Chloride Content
16	Organic Matter
17	Soundness Test
18	Plate Bearing test
19	Thermal Conductivity/resistivity of Soil
20	Thermal Dry Out Curve

Aggregate Testing

20	Sieve Analysis (Gradation)
21	% Passing 0.075mm & 0.063mm
22	Clay Lumps & Friable Particles
23	Elongation Index
24	Flakiness Index
25	Shell Content
26	10% fine Value
27	Aggregate Crushing Value
28	Aggregate Impact Value
29	Material Passing 150 micron
30	Specific Gravity & Water Absorption
31	Bulk Density
32	Moisture Content
33	Aggregate Sampling
34	Organic impurities
35	Magnesium Sulphate Soundness

SCOPE OF TESTING

36	Acid Soluble Sulphate Content
37	Acid Soluble Chloride Content
38	Los Angeles Abrasion
39	Light Weight Pieces
40	Drying Shrinkage
41	Sand Equivalent of Fine Aggregate
42	Potential Alkali Reactivity
43	Methylene Blue Absorption Value of Fine Agg.
44	Water Absorption

Concrete Testing

45	Sampling for Fresh Concrete
46	Temperature & Slump
47	Making & Curing of Concrete Test Specimen
48	Making Cubes From Fresh Concrete
49	Shape & Dimension of Specimen
50	Compression Strength of Concrete Cubes
51	Compression Strength of Masonry Blocks
52	Compression Strength of Concrete Core
53	Compression Strength of Kerbstone
54	Water Absorption of Kerbstone
55	Transverse Strength of Kerbstone
56	Flexural Strength of Beam
57	Determination of Water Absorption
58	Density of Harden Concrete
59	Rapid Chloride Permeability
60	Water Permeability
61	Chloride Migration coefficient
62	Acid Soluble Sulphate in Concrete
63	Water Soluble Sulphate in Concrete
64	Acid Soluble Chloride in Concrete
65	Water Soluble Chloride in Concrete
66	Concrete Core Drilling(100mm)
67	Concrete Core Drilling(150mm)
68	Water Absorption of Masonry Blocks
69	Water Absorption of Paving Blocks
70	Finesse of Cement
71	Setting Time of Cement
72	Mortar Cubes Strength (2,7 & 28 Days)
73	Physical Analysis of Cement
74	Chemical Analysis of Cement
75	Rebound Hammer Test for Concrete (Non Destructive Tests)

Asphalt Testing

76	Sampling of Asphalt
77	Sieve Analysis Bitumen Extract
78	Soluble Binder Content

SCOPE OF TESTING

79	Asphalt Core Thickness
80	Bulk Density of Bitumen Specimen
81	Penetration Test of Bitumen
82	Softing Point of Bitumen
83	Flash & Fire Points
84	Marshall Properties Stability & Flow
85	Viscosity of Asphalt
86	Temperature Measurement
87	Theoretical Maximum Specific Gravity & Density
88	Asphalt Core Cutting

Water Testing

89	Physical & Chemical test for Drinking, Dewatering, Irrigation & Concrete Mix Water
90	pH
91	Electrical Conductivity
92	Turbidity
93	Total Solids
94	Total Suspended Solids (TSS)
95	Total Dissolved Solids (TDS)
96	Biochemical Oxygen Demand (BOD)
97	Chemical Oxygen Demand (COD)
98	Ammonia
99	Nitrate
100	Nitrite
101	Total Chlorine
102	Residual Chlorine
103	Chloride
104	Phosphate
105	Sulphate
106	Sulphide
107	Fluoride
108	Total Hardness
109	Total Alkalinity
110	Calcium
111	Sodium
112	Manganese
113	Magnesium
114	Iron
115	Aluminum
116	Boron
117	Copper
118	Carbonate
119	Bicarbonate
120	Odor
121	Total Bacterial Count
122	Total Coli form
123	E- Coli

SCOPE OF TESTING

Steel Testing

124 Tensile Strength

125 Yield & Elongation

126 Chemical Composition of Carbon Steel

127 Rebend Test

128 Bend Test

Geotechnical Investigation

129 Description of Soil & Rock

130 Soil and rock sampling and conducting field and laboratory testing.

131 Off-shore Geotechnical Investigation

132 Preparing Rock Core Specimens to Dimensional & Shape Tolerances

133 Compressive Strength of Rock Core Specimen

134 Point Load Index

6

QUALITY & HSE POLICY

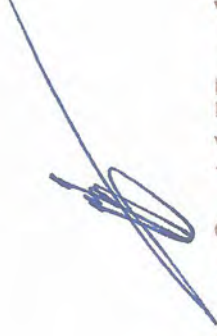
TEL TECHNICAL ENGINEERING LABORATORY

Quality Policy

TEL is committed to achieve growth, total customer satisfaction and implementation of documented system.

TEL is committed to achieve these by:

- ❖ *Providing quality and reliable testing services,*
- ❖ *Complying requirements of ISO/IEC 17025 and customers,*
- ❖ *Providing accuracy in testing as per relevant national/international standards,*
- ❖ *Continual improvement in performance,*
- ❖ *Motivation to all employees,*



Dr. Mustafa Al Hawli
General Manager

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TEL	Technical Engineering Laboratory Health, Safety and Environment (HSE) Policy	No.	HSE/02
		Revision No.	02
		Date	05-01-2020


We are committed to have healthy, safe and environment friendly workplace for all, protecting our and clients personnel.

Health & safety measures and conservation of environment being our prime concerns, we integrate them in all our business processes. We are conscious of our responsibility for creating, maintaining and ensuring quality services towards our client, safe and clean environment; reduce health and safety hazards through application of efficient technology and safe work practices.

We are achieving this through the following initiatives:

- Promoting awareness of Health, Safety & Environment Policy and Practices amongst personnel and encouraging their participation to improve its effectiveness.
- Follow safe work practices and continually improve the effectiveness of system.
- Taking proactive measures for prevention of work related injuries, health hazards and pollution
- Creating and environment of teamwork as well as increase the system awareness to personnel
- Complying with applicable legal & other requirements related to Health, Safety & Environment
- Continually improving our Health, Safety & Environment Management System to keep our record of zero accidents, good health and pollution free environment

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Approved by	Signature	Page
<i>Technical Manager</i>		1 of 1

7

EMPLOYEES CV



C.V.

Name	MUSTAFA M. HAMIAL - HAWLI
Birth Date & place	10/12/1951, Lebanon
Martial Status	Married, four children.
Nationality	Lebanese.
Qualification	B. Sc. Civil Engineering 1972. Baghdad University.
Languages	Excellent English & Arabic; talk, read & write
Current Address & Contact	57 Hitteen St. Al Muntazah, Doha - Qatar, P. O. Box: 47428 Doha- Qatar. E-mail: must@qatar.net.qa , mustafa_alhawli@hotmail.com Mob.:55854514, Tel: 44507437, Fax: 44580716
Profile	Civil Engineer, veteran; experienced in Managing and Supervising Roads, Highways, Bridges, Infra Structures, big, prestigious projects such as; 5 - star Hotels, Presidential & VIP palaces, clubs, Restaurants and Sports Facilities. Experienced in Geotechnical Studies, Material Testing & Laboratory Works.
Key Skills	Versed in ISO 17025 Requirements and implementation, Versed in professional correspondence, Terms & Conditions Of Contract, Conditions Of Particular Application, dispute settlement. Pursuing, Innovation, possessing excellent Liaising & Interpersonal skills.
Character	Leading, Confident, Decision Maker, Organized Well-presented, Lively, Initiative, Creative have a considerable background and familiarity with most of other engineering disciplines. Motivated, with keen attitude towards excellence.
Computer Expertise	Fully conversant with: MS Dos, C++, windows 7 Pro, MS office 2010, Auto CAD 2010, project 2010, Robot 97, Primavera, Math CAD and many other software, plus, Web professional skills.
Membership & Classification	Classified 'A class' by the Qatari professional Engineering Comity, Chartered member of Iraqi Engineering Union, Member of Iraqi Contractors Union, Member of Iraqi Consulting Engineering Offices Union, Member of Lebanese Engineering Union, Certified by Lebanese Ministry of Works to 'Pursue Engineering Profession'

Projects	Capacity	Period	Employer's Name / Address	Description of Job Duties
Many projects belong to the clients of the laboratory	General Manager, Technical Manager Acting QA/QC Engineer	June 2007 to date	Technical Engineering Laboratory	All duties requirements of the three positions
CONSER Head Office (Qatar); About 45 projects, Some of the Roads Supervision Projects Are : CP-200 Doha 2006, Asian Games Village/Underpass & Access Roads ERC1400C4 Airport St. 6.4 Km Dual Carriageway ERC1400D6S1 RIW in zone 40 and in zone 41 ERC579C1 RIW South of Doha - Musameer Rd ERC535C1 NDOD Block 800.3 ERC547C1 Al Shamal Industrial Area Supervision ERC575C1 Uqba Bin Nafie Street ERC588C1 North of Duhail-stage 2 ERC593C1 Shamal Municipality ERC593C3 RIW East of Kharatiyat Link Rd- zone 71 ERC 593C4 RIW At Madinat Al Kaaban ERC595C1 RIW Access Rd to Al Ghariyah ERC598C1 RIW at Al Wukair ERC610C1 RIW at Industrial Area(zone 57) ERC610C2 Service Road at salwa Industrial Area ERC612C1 RIW At New Rayyan ERC617C1 Muaitheer Major Rds ERC649C1 New District of Doha, zone 61 ERC659C2 RIW Central Rayyan ERC684C2 RIW Al Salam Street - zone 42 ERC684C7 RIW Al Nuaija West ERC684C8 RIW Ain Khalid ERC684C9 RIW Al salata & Al Khulifaat Area ERC684C11 Road Construction works in Doha west zone 56 (Taxi) ERC684C13 RIW at Al Mattar Al Qadeem Block 8 zone 45 ERC684C14 RIW at Al Mattar Al Qadeem Block 9 zone 45 ERC684C15 Earth works at Musameer Area (zone & 56) ERC683S1 RIW Doha Rd Supervision ERC1304C3 Protection fencing for link roads to major roads	(Head of supervision department)	July 2004 to June 2007	Conser Consulting Eng. P.O. Box: 22646 Fax: 4435119 Tel: 4412508, 4410851	<ul style="list-style-type: none"> • Tendering (priing, assigning required staff, preparing method statement, QA/AC procedures. Study, propose candidates, and all other tender requirements), •provide professional officec supports for all supervision staff and enforce central administration. • Be an immediate replacement of any project manager, SRE or RE if and when required. Keeping close following up for the projects, makes it possible to have a smooth continuation of our services; I have replaced the Res for about one month each time at the following projects: 1- Doha 2006, Asian Games Village / Underpass & Access Roads (tow times) 2- RIW At New Rayyan Rd 3 - RIW At Salam Street - Zone (42) 4 - RIW at Al Wukair 5 - Doha Roads Project 6 - Industrial Area Roads Project •Following up the closing of finished and old projects. •Holding regular meetings with senior staff, and providing them with latest tehcnical knowledge, programs, procedures and advices.

Projects	Capacity	Period	Employer's Name / Address	Description of Job Duties
Cultural village project; over a plot of 1 M sqM 46 buildings, amphitheatre, 2 theatres, multipurpose hall, infrastructures, landscaping, 170000 sqM roads & yards, marine works & 1.1 KM beach facilities (Qatar).	Resident Engineer	1/2004 - to 7/2004	Maunsell consultancy swevices.	<ul style="list-style-type: none"> •Dealing with contractual issues, court case & clims + full RE's duties.
Al-Udeid Expeditionary Village; 150 billets, 20 latrines, kitchen, cinema, Roads, Yards,...(Qatar)	Construction & Contract Manager	2003-2004	Khalid Bin Ahmed Est.(KBA) P.O. Box: 5817	<ul style="list-style-type: none"> •Management (contract obligation) •Following V.Os. & sub-contractors' full implementation ontract terms & condition
Roads in wakrah; 11.7 Km single & dual Carriage way, with services, street lighting, Medians & pedestrian walk ways. (Qatar)	Consultant; Resident Engineer	2001-2003	Pragoproject consultants C-Ring Road, Um-Guailenah P.O.Box:22124 Doha, Qatar Tel: 4621919 Fax: +974 4626114	<ul style="list-style-type: none"> •Consultancy supervision. •Ensuring the Contractor full compliance with contract terms & conditions •Settling disputes of owner with contrator. Approving valuations, MARs, RFIs & site diaries. <ul style="list-style-type: none"> •Preparing site instructions, variation orders, Ros •Issuing monthly reports, site memos & RPs. •Liaising with all related firms & personal. •Conducting progress meeting.
Ramada Hotel Doha, 328 Rooms(5 star) Renovation, Health club, landscaping, Roads, parking & 3 New Restaurants.(Qatar)	Project Manager & Owner Representative	1997-2001	HE sheikh Ghanem Bin Ali Al Thani & sons Holding co. GATH salwa Rd., Opposite to Centre, P.O.Box:5319	<ul style="list-style-type: none"> •Preliminary planning. •Studying Feasibility & Ranking . Potions. <ul style="list-style-type: none"> •Estimating Budgets. •Preparing design brief & presentations to owner. •Editing & issuing contracts.
Ramada Hotel Doha (5 star) Extension, pre-contract phase, enabling work, Developing adjacent shopping areas & Roads.(Qatar)	Project Manager & Owner Representative	1996-1998	Ramada Hotel Doha; P.O.Box: 1768 Doha, Qatar	<ul style="list-style-type: none"> •Forecasting & monitoring cash flow, work progress, Material & Machinery Requirements. <ul style="list-style-type: none"> • Following up bank loans, bank gurantees, payments, invoices & purchases. •Appointing consultants, contractors, sub-contractors & Recruiting Manpower. •Liaising with all related firms & personnell. •Ensuring contrators' Fulfillment of terms & conditions.

Projects	Capacity	Period	Employer's Name/Address	Description of Job Duties
Kifri Kalar Highway; Dual carriage way (24 Km). (Iraq)	Resident Engineer	1994-1996	Pragoproject Consultants Saadon St. P.O.Box: 877333 Baghdad, Iraq Tel: 8880253 Fax: +964 1 4559330	<ul style="list-style-type: none"> •Directing my team (12 persons) to accomplish together the RE office duties: •Ensuring the contractor full compliance with contract terms & conditions. •Approving valuations, MARS, RFIs & site diaries. •Preparing site instructions, variation orders. •Issuing monthly reports, site memos & RPs. •Liaising with all related civil & military, firms & personal. •Conducting progress
Industrial projects, buildings, area development, roads & shop yards.(Iraq)	Consultant Engineer	1992-1994		
Babylon HT and LT networks and power station with roads & yards.(Iraq)	Project Manager / Partner	1993-1993	M.A.M. HANI & partners 3 rd to 5 th floor, Hasib Salih Building, Nidal St. P.O.Box: 83 Baghdad iraq	<ul style="list-style-type: none"> •A very long list includes most of what is mentioned above plus: Quantity surveying, shop drawing designing, detailing and Hyper supervision of projects as a consultant engineer. •Leading Independently groups of site engineers & project staff.
Railway signaling and sub-structures & service Roads phase III (470 KM). (Iraq)	Consultant Engineer	1990-1992		
VIP, presidentila palaces, compound, Rest house + Roads & 8000Acre artficial lake in Ojah, Tharthar & Baghdad. (Iraq)	Consultant Engineer	1986-1989		
Najaf land softening & drainage (150 KM), colletive drain & service Roads (Iraq)	Project Manager	1985-1986		
Countryside Development, Roads and 57 telephone network. (Iraq)	Civil works Manager	1980-1984		
12 power sub-station +2 main stations with their access roads & yards. (Iraq)	Project Manager	1978-1984		
Railway signaling and sub-structures & service Roads phase II (580 KM). (Iraq)	Site Engineer	1975-1977		
Hawiga Hospital. (iraq)	PM / Patner	1973-1974		
Railway signaling, sub-structures & service Roads, phase I (445 KM). (Iraq)	Site Engineer	1972-1973		

Certificate of Completion

This is to certify that

Mustafa Al Hawli

has attended and successfully completed the course on
ISO/IEC 17025:2017 Awareness Training

Certificate No. :- PA/2019/10324
Issued On :- 10th December 2019
Duration :- 2.5 Hours

There.

Mr. Devang Jhaveri
CEO, Punyam Academy

PA/2019
10324



Certificate of Completion

This is to certify that

Mustafa Al Hawli

has attended and successfully completed the course on
ISO/IEC 17025:2017 Certified Internal Auditor Training

Certificate No. :- PA/2019/10325
Issued On :- 10th December 2019
Duration :- 12 Hours

There.

Mr. Devang Jhaveri
CEO, Punyam Academy

PA/2019
10325



CURRICULAM – VITAE

HARI BHATKA SHRESTHA

Doha Qatar

Mobile No. +97470133378

E-mail:- pramish27@gmail.com

Academic Qualification

➤ **School Livening Certificate (SLC)**

Board: His Majesty Government (HMG)

School: Shree Dedithumka Higher Secondary School

Year: 2058 (2002)

Division Achieved: Pass

➤ **Secondary Level (+2)**

Board: Higher Secondary Education Board (HSEB)

School: Shree Dedithumka Higher Secondary School

Year: 2060-2063 (2004-2006)

Division Achieved: Pass

Technical Qualifications

a) Basic Course:

Course: MS-Windows, MS-Word, MS-Excel, MS-PowerPoint, E-mail and Internet

Institute: Computer Training Program, kunta Links,
Kavrepalanchok, Nepal

Year: 2003

Duration: 3 Month

b) Advance Course

Course: Hardware Installation, Program Installation, Programming, Computer
Networking and (with some knowledge of Web Designing and Graphics
Designing.)

Institute: 1st Drop Computer Institute (Associated with Style Nepal Team) Jorpati
Katmandu Nepal

Year: November 2006 to July 2007

Duration: 8 Month

c) Internal Auditor Training

Course: Enhancing Skills of Internal Audit for ISO/IEC 17025:2005,
General requirements for the competence of Testing and Calibration
Laboratories
Institute: Punyam Management Services pvt. Ltd. Ahmedabad–380 006,
Gujarat, India
Year: 2nd December 2010 to 3rd December 2010
Duration: 2 Days

Job Profile

➤ 17th July 2006 to 16th December 2007:

Position: Lab Technician

Company: Ankara Materials Testing Laboratory Pvt. Ltd.

Hattigauda, Kathmandu, Nepal

Working as laboratory technician and experienced in Concrete & Soil/Aggregate testing producers.

- Responsible for testing and sampling in accordance with ASTM and BS Standards
- Receive Sample and start testing of sample as per the defined standard.
- Report all routine, non routine and quality analysis data to sr. technician.
- Calibrate lab instruments according to calibration schedule as given in the calibration status of the instruments.
- Get customer complaints
- Follow lab instructions and supervisor's instructions
- Testing and monitoring of lab equipment as per designed schedule
- Follows the lab shift schedule time keeping and all technician instruction related to lab work.

Wide practical knowledge in testing as follows:

- Shape, Dimensions and Other Requirements of Specimens and Moulds (*BS EN 12390-1*)
- Making and Curing Specimens for Strength Tests (*BS EN 12390-2*)
- Compressive Strength of Test Specimens (*BS EN 12390-3*)
- Density of Harden Concrete (*BS EN 12390-7*)
- Testing slump from Fresh Concrete (*BS EN 12350-2*)
- Determination of Water Absorption (*BS 1881 Part 122*)
- Concrete core drilling (100mm/150mm)
- Determination of Moisture Content (*BS 1377-2 Clause 3.2*)
- Determination of Liquid Limit – Cone Penetrometer Method (*BS 1377-2 Clause 4.3*)
- Determination of Plastic Limit & Plasticity Index (*BS 1377-2 Clause 5*)
- Particle Size Distribution - Sieve Analysis - Wet & Dry (*BS 1377-2 Clause 9.2 & 9.3*)
- Determination of Moisture Dry Density (MDD) / Moisture content relationship – Method using 4.5kg rammer for soils with coarse gravel size particles (*BS 1377-4 Clause 3.6*)

- Determination of California Bearing Ratio – CBR (*BS 1377-4 Clause 7*)
- In-Situ Test - Sand Replacement Method(*BS 1377-9 Sec. 2.1*)
- Sand Equivalent Value (ASTM D-2419)
- Dry Density of Rock
- TR Test Rock/Soil
- Standard test method of resistance to degradation of Small-Size Coarse Aggregate by abrasion and Impact the Los Angeles Machine (*ASTM C - 131-06*)
- Method for Determination of Particle Size Distribution, Section 103.1 Sieve Test (*BS 812-103.1:1985*)
- Methods of Determination of particle Shape, Section 105.1 Flakiness Index (*BS 812.1:1989*)
- Methods of Determination of Particle Shape, Section 105.2 Elongation Index of Coarse Aggregate (*BS 812.2:1990*)
- Methods of Determination of Density. Clause 5, Determination of particle Densities and Water Absorption.(*BS 812-2:1995*)
- Soluble Binder Content & Grading (*BS EN 12697-1:2005-Test B.1.5*)
- Determination of Particle Size Distribution (*BS EN 12697-2*)
- Determination of Density and Compaction of Asphalt Core (*BS 598-104:2005 Clause No.4*)
- Determination of the thickness of a bituminous (*BS EN 12697-36*)

➤ 2007 December to till

Position: Senior Technician
 Company: Technical Engineering Laboratory
 Al Muntazah, Doha Qatar

Responsibility

- To report to the Technical Manager on day-to-day activities.
- To identify and to provide training to the subordinates.
- To check effectiveness of the training provided to the employees.
- To ensure effective implementation of ISO/IEC 17025 system.
- Responsible for maintenance and calibration of equipments in co-ordination with the concerned person
- Calibrate the Laboratory instruments / Coordinate the Preventive Maintenance activities based on instruments Calibration / PM schedule.
- Report Technical Manager about the purchase request of required instruments, spare parts, consumable, standards, chemicals and reagents that is necessary to run the test as per the approved method.
- Coordinate Operation test runs, troubleshooting, and issue the findings final report.
- Conduct field trips to collect samples upon request.
- Work with the supplier engineer to commission the new laboratory instruments, issues the new instrument commissioning report, and add all required new instrument information to the Management system.
- Investigate and troubleshoot out of limit lab instruments, issue repair request to instrument Sr. Technician or service vendor, and put instrument back in operation after repair.
- Follows Laboratory standard Safety rules and regulations.

- To calculate the measurement uncertainty of the identified testing and to ensure that the same is within control.
- Perform critical analysis.
- To do re-testing of the retained sample as well as to do inter laboratory comparison of the samples with the accredited lab as per the schedule of QC / QA as guided by the Technical Manager.
- To ensure smooth testing of the samples received for testing with the strict adherence to the relevant standard as per the defined sampling schedule.

Authority

- To stop the non-conforming work / process / system etc.
- To decide method of disposal of chemicals.
To review and approve the test and calibration records.

Delegation of Duties during Absence (Indicate Position Title:

- Authorities – Technical Manager
- Responsibilities – Technician

Personal Information

Permanent Address:	Kavrepalanchok, Nepal
Temporary Address:	P.O. Box # 47428, Al Muntazah, Doha Qatar
Date of Birth:	15 th April 1985
Father Name:	Krishna Kumar Shrestha
Nationality:	Nepali
Passport No.:	07643859
Passport Expiry Date:	17 th July 2024
Gender:	Male
Marital Status:	Married
Religion:	Hindu
Language:	English, Hindi, Nepali
Driving License:	Qatari Driving License (<i>Validity 15 September 2019</i>) Nepali Driving License (<i>Validity 3 April 2020</i>)

Thank you

-

Certificate of Completion

This is to certify that

Hari Bhakta Shrestha

has attended and successfully completed the course on
ISO/IEC 17025:2017 Awareness Training

Certificate No. :- PA/2019/10321
Issued On :- 9th December 2019
Duration :- 2.5 Hours

Shrestha

Mr. Devang Jhaveri
CEO, Punyam Academy

PA/2019
10321



Certificate of Completion

This is to certify that

Hari Bhakta Shrestha

has attended and successfully completed the course on
ISO/IEC 17025:2017 Certified Internal Auditor Training

Certificate No. :- PA/2019/10326
Issued On :- 10th December 2019
Duration :- 12 Hours

Shrestha

Mr. Devang Jhaveri
CEO, Punyam Academy

PA/2019
10326



CURRICULAM – VITAE



PRADIP RIJAL

Doha Qatar

Mobile No. 0097477261906

E-mail:- rijal.pradip2015@gmail.com

Academic Qualification

➤ **School Livening Certificate (SLC)**

Board: His Majesty Government (HMG)
School: Shree Mahakali Higher Secondary School
Year: 2060 (2004)
Division Achieved: second

Technical Qualifications

➤ **Computer Skills**

a) Basic Course:

Course: MS-Windows, MS-Word, MS-Excel, MS-PowerPoint, E-mail and Internet
Institute: Eureka Global Academy,
Bag bazaar Kathmandu, Nepal
Year: 2007
Duration: 6 Month

Job Profile

- 2008 February to 2010 January
- Position: Laboratory Technician
 - Company: Sharma & Sharma Laboratory
Gulfutar, Kathmandu
- 2010 February 15 to till
- Position: Laboratory Technician
Company: Technical Engineering Laboratory
Muntazah, Doha Qatar

Wide practical knowledge in testing as follows:

Concrete

- Shape, Dimensions and Other Requirements of Specimens and Moulds (*BS EN 12390-1:2000*)
- Making and Curing Specimens for Strength Tests (*BS EN 12390-2:2000*)
- Compressive Strength of Test Specimens (*BS EN 12390-3:2009*)
- Density of Harden Concrete (*BS EN 12390-7:2000*)
- Testing slump from fresh concrete
- Determination of water absorption
- Concrete core drilling (100mm/150mm)

Soil/Aggregate

- Determination of Moisture Content (*BS 1377-2 Clause 3.2:1990*)
- Determination of Liquid Limit – Cone Penetrometer Method (*BS 1377-2 Clause 4.3:1990*)
- Determination of Plastic Limit & Plasticity Index (*BS 1377-2 Clause 5:1990*)
- Sieve Analysis - Wet & Dry (*BS 1377-2 Clause 9.2 & 9.3:1990*)
- Determination of Moisture Dry Density (MDD) / Moisture content relationship – Method using 4.5kg rammer for soils with coarse gravel size particles (*BS 1377-4 Clause 3.6:1990*)
- Determination of California Bearing Ratio – CBR (*BS 1377-4 Clause 7:1990*)
- Sand Replacement Method
- Los Angeles Absorption
- Determination of Water Absorption
- Standard test method of resistance to degradation of Small-Size Coarse Aggregate by abrasion and Impact the Los Angeles Machine (*ASTM C 131-06*)
- Method for Determination of Particle Size Distribution, Section 103.1 Sieve Test (*BS 812-103.1:1985*)
- Methods of Determination of particle Shape, Section 105.1 Flakiness Index (*BS 812.1:1989*)
- Methods of Determination of Particle Shape, Section 105.2 Elongation Index of Coarse Aggregate (*BS 812.2:1990*)
- Methods of Determination of Density. Clause 5, Determination of particle Densities and Water Absorption. (*BS 812-2:1995*)

Asphalt

- Determination of Density and Compaction of Asphalt Core (*BS 598-104:2005 Clause No.4*)

Responsibility

- Check the condition of the received samples, and reject improperly taken, or samples with incomplete information.
- Receive the sample from the Sample receipt area and start testing of the sample as per the defined standards
- Perform required analysis as per the approved international reference test methods.
- Report all analysis data to the Sr. Technician in form of work sheets
- Maintain the integrity of lab instruments and testing equipment, inform Sr. Technician of test related abnormalities and Maintains good housekeeping in his testing area.
- Calibrate Lab instruments according to Calibration schedule as given in the Calibration status of the instruments.
- Conduct field trips to collect samples upon request.
- Follows the Lab shift schedule time keeping and all Sr. Technician instruction related to Lab work.

Personal Information

Permanent Address:	Dhading bhumesthan -7, Nepal
Temporary Address:	P.O. Box # 47428, Muntaza, Doha Qatar
Date of Birth:	30 th November 1986
Father Name:	Badri Prashad Rijal
Nationality:	Nepali
Passport No.:	07289294
Passport Expiry Date:	26 th April 2024
Gender:	Male
Marital Status:	Married
Religion:	Hindu
Height:	5'10"
Weight:	60 kg
Language:	English, Hindi, Nepali
Mobile No.	0097430836419
Mobile No. in Nepal	009779841439308

Thank you

-

Certificate of Completion

This is to certify that

Pradip Rijal

has attended and successfully completed the course on
ISO/IEC 17025:2017 Awareness Training

Certificate No. :- PA/2019/10327
Issued On :- 11th December 2019
Duration :- 2.5 Hours

There.

Mr. Devang Jhaveri
CEO, Punyam Academy

PA/2019
10327



Certificate of Completion

This is to certify that

Pradip Rijal

has attended and successfully completed the course on
ISO/IEC 17025:2017 Certified Internal Auditor Training

Certificate No. :- PA/2019/10328
Issued On :- 11th December 2019
Duration :- 12 Hours

There.

Mr. Devang Jhaveri
CEO, Punyam Academy

PA/2019
10328



Curriculum Vitae

RITESH MAHARJAN

DOHA, QATAR

EMAIL : mhjrivesh710@gmail.com

Contact no. : +974 66547615

Education Qualification

- June 2007 : School Leaving Certificate passed from
MARIGOLD BOARDING HIGH SCHOOL.
- July 2010 : 10+2 passed from
CARIBBEAN COLLEGE

Technical Skills

Computer course:-

Oct. 2016 to Jan 2017 : Basic Course (BLCCA) in computer from
Aptech Computer Institute Kumaripati
Lalitpur, Nepal.

Work Experience

- Feb. 2017 to Mar. 2018 : As a lab assistant in akara materials testing laboratory Pvt. Ltd.
Hattigauda, Kathmandu.
- Aug. 2018 to till : As a technician in Technical Engineering Laboratory
Muntazah, Doha, Qatar.

Responsibility

- : Check the condition of the received samples and reject improperly taken or samples with incomplete information.
 - : Receive the sample from the sample receipt area and start testing of the sample as per the defined standards.
 - : Perform required analysis as per the approved international reference test methods.
 - : Report all analysis data to the Sr. Technician in form of work sheets.
 - : Maintain the integrity of lab instruments and testing equipment, inform Sr. Technician of test related abnormalities and maintains good housekeeping in his testing area.
 - : Calibrate lab instruments according to calibration schedule as given in the calibration status of the instruments.
 - : Conduct field trips to collect samples upon request.
 - : Follows the lab shift schedule time keeping and all Sr. Technician instruction related to lab work.
- : Authority
- : To reject the improper sample received for testing.

Delegation of duties during absence (indicate position title)

Authorities : Sr. Technician
Responsibilities : Other Technicians

Wide practical knowledge in testing as follows:

- : Shape, Dimensions and Other Requirements of Specimens and Moulds
- : Making and Curing Specimens for Strength Tests
- : Compressive Strength of Test Specimens
- : Density of Harden Concrete
- : Schmidt hammer
- : Determination of Moisture Content
- : Sieve Analysis - Wet & Dry
- : Determination of Moisture Dry Density (MDD) / Moisture content relationship –
Method using 4.5kg rammer for soils with coarse gravel size particles
- : Sand Replacement Method

Nationality : Nepali
Permanent Address : Chapat-8, Lalitpur, Nepal
Temporary Address : Al Muntazah, Doha Qatar, P.O. Box. 47428
Date of Birth : 05 July 1990
Father Name : Prem Maharjan
Passport No. : 09955238
Passport Expiry Date : 20 August , 2026
Gender : Male
Marital Status : Single
Religion : Hindu
Language : Nepal, English, Hindi, Newari (mother language)

8

PHOTOS



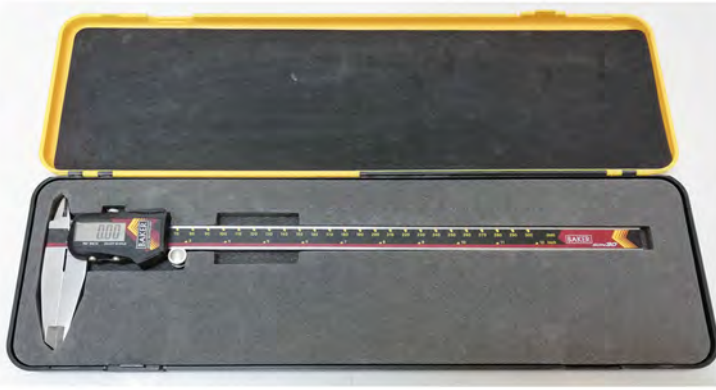
Compressive Machine



Specific Gravity Apparatus



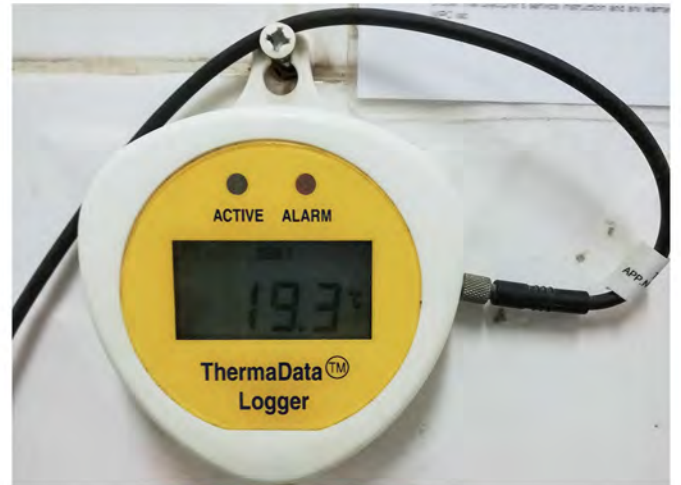
Drying Oven



Digital Caliper



Digital Thermometer



Data Logger



KD2 Thermal Properties Analyzer



Mould



Sieves



Sand Equivalent Shaker



SCHMIDT HAMMER



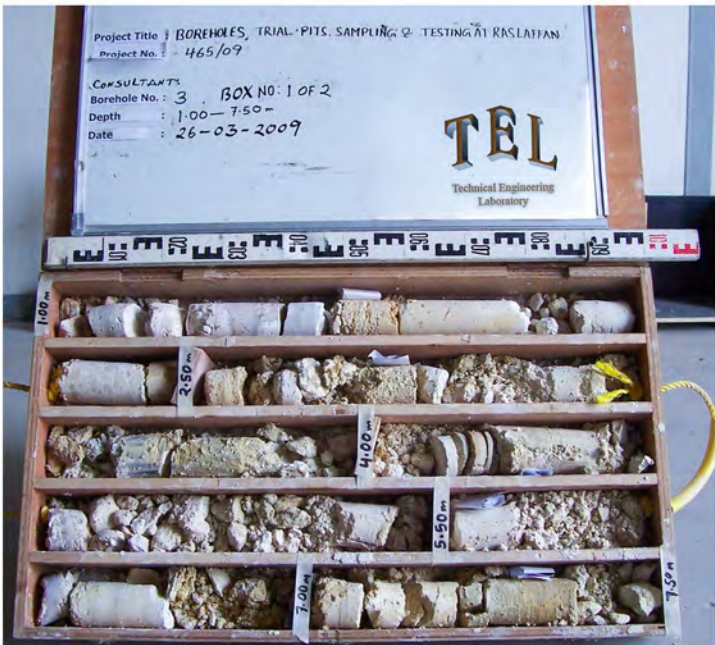
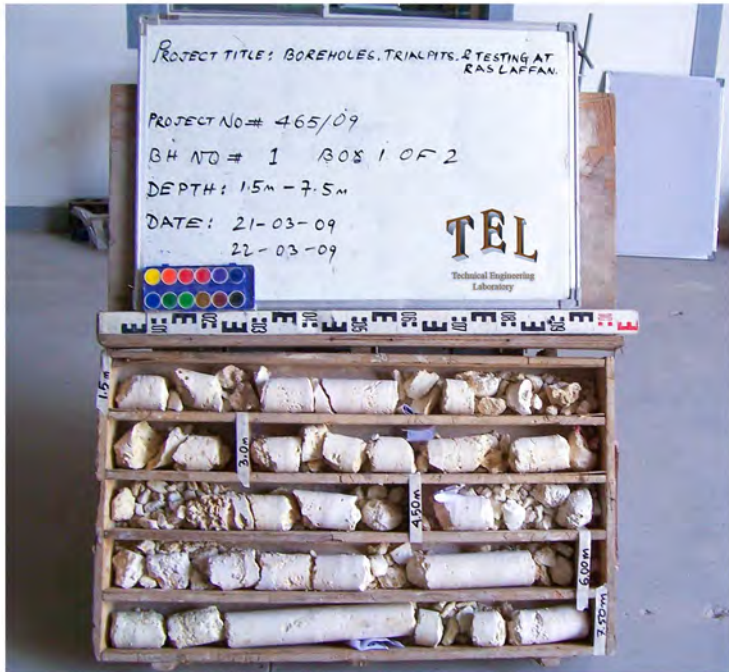
Electronic Balance



Impact Apparatus

BOREHOLE PHOTOGRAPHS

PROJECT: GEOTECHNICAL INVESTIGATION @ RASLAFFAN 2009

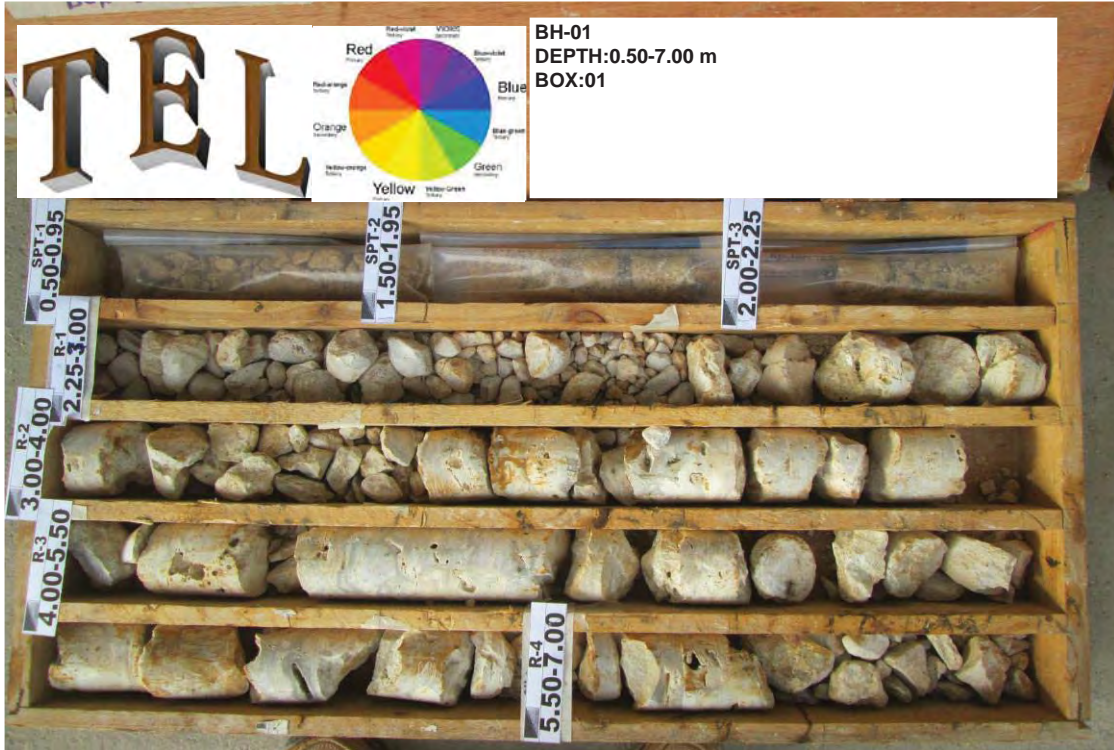


BOREHOLE PHOTOGRAPHS

TEL Lab. G-1692

PROJECT: GEOTECHNICAL INVESTIGATION NEAR ONAIZA 65 AREA

Date 22-12-2018



BH-01, BOX:01, DEPTH: 0.50-7.00 (m)



BH-01, BOX:02, DEPTH: 7.00-10.00 (m)

BOREHOLE PHOTOGRAPHS

TEL Lab. G-1692
Date 22-12-2018

PROJECT:GEOTECHNICAL INVESTIGATION NEAR ONAIZA 65 AREA



BH-02, BOX:01,DEPTH:0.50-7.00(m)



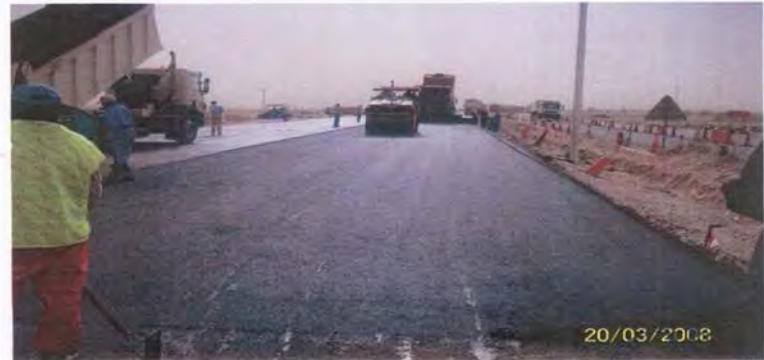
BH-02,BOX:02, DEPTH:7.00-10.00 (m)

BOREHOLE PHOTOGRAPHS

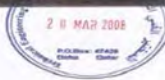
PROJECT: GEOTECHNICAL INVESTIGATION @ OLD AIRPORT



Salwa Road Supervision for Quality Control 2008



Supervision for quality control.



Supervision for quality control.



Supervision for quality control.

