PRECON

Precast Structures Factory

مصنع الإنشاءات المسبقة الصنع

PRECAST STRUCTURES FACTORY(PRECON)

PREFACE

We are a group of companies operating mainly in the K.S.A , we built a strong name and quality through the completion of many , large and prestigious In-situ construction and Pre-cast projects , Due to the great increasing demand for pre-cast concrete , works the management decide to establish a well-organized pre-cast concrete manufacturing factory to cover the demand of the group and the local market in the region as well.

We have established PRECON since (2002) located in the eastern province Dammam – Abu Hedreya Highway .The total land area is 50,000 square meter with expected average annual production of 4,500 cubic meters . Since the starting of the factory (17 years ago) we have managed to execute some medium scale precast concrete projects .Our research and development team is constantly studying the market demand and introducing new systems and products to meet and suit the current market requirements.

We entered the market in this new millennium with strengthened, experienced man-agement and clear sense of mission. The continuous expansion of our or-ganzation in both skilled specialized qualified manpower and equipment is providing our fact-ory with opportunity to grow strategically, with creating a new strong look for the fu-ture. We will be depending on our technical superior-ity, schedule, commitments and management skills to successfully secure multi hundred million Saudi Riyals projects .

Our production covers a large variety of different pre-cast concrete elements for hospitals, schools, factories, showrooms, multi storey offices and apartment buildings, single and multi storey car parks, villas, shopping centers, mosques and boundary walls :

Some of our precast products is as follows:-

- Pre-Stressed hollow core floor and roof slabs.
- Pre-Stressed double tee slabs.
- Full wall frame system including external & internal load and non-load bearing wall panel units.
- Slabs stair cases and parapets etc.,
- Beams and columns frame system up to 15 stories high.
- External cladding panels either solid or thermal insulated sandwich wall panels.
- Boundary walls with different heights, shapes and finishes.

We have ideal in depth technical staff of designers and engineers with vast expereince to seek new exciting solutions in pre-cast concrete concept. Further, Erection, the most important item and service to be considered as an internal part of the total pre-cast concept. We have excellent qualified staff for erection.We would welcome the opportunity to demonstrate our capabilities. Wepresent this profile to our clients for favorable review and appreciation.

PRECON PRECAST STRUCTURE FACTORY

ABDALMAJEED AL-HOSSAN
General Manager


PRECON

GENERAL INFORMATION OF THE COMPANY

Name	PRECON PRECAST STRUCTURE FACTORY
Commercial Registration	2050041727
Ministerial Decree	Industrial License No: 1203
Address	Dammam, Abu Hadriyah Highway
Mailing Address	P.O Box # 2447, Dammam 31451, Kingdom of Saudi Arabia.
Website Address	www.precon.sa
E-mail	precon@precon.sa
Telephone No	+96613-8377773
Fax No	+96613-8373218

وزارة التجارة
Ministry of Commerce

شهادة تسجيل فرع مؤسسة

٧٠١٣٤٩٨٩٧٢
الرقم: ٢٠٥٠٠٤١٧٢٧
التاريخ: ١٤٢٣/٠٩/١٩ هـ

اسم التاجر: علي عبدالله محمد مرعي آل حصان الجنسية: سعودي تاريخ الميلاد: ١٣٧١ هـ
رقم السجل المدني/بطاقة الأحوال: ١٠١٨٢٧٥٩٧٢ تاريخه: ١٣٨٩/٠٤/٢٥ هـ مصدره: خميس مشيط
المركز الرئيسي: الدمام
ص.ب: الرمز البريدي: هاتف:
رقم سجل المركز الرئيسي: ٢٠٥٠٠٠٤٣٤٤
الاسم التجاري للفرع: مصنع الإنشاءات المسبقة الصنع للصناعة
العنوان: الدمام / طريق ابوحدرية مخطط ٣ غرب الاوجام
ص.ب: الرمز البريدي: هاتف:
النشاط: صناعة البلك الأسمنتي المفرغ والآجر، صناعة قواطع وألواح وأطر ومباني جاهزة من الخرسانة سابقة الصنع

رأس المال: ٥٠٠٠٠٠ خمسمائة ألف ريال فقط لا غير
اسم المدير أو الوكيل المفوض: عبدالمجيد بن علي بن عبدالله آل حصان
الجنسية: سعودي تاريخ الميلاد: ١٤٠٤ هـ
رقم السجل المدني - الإقامة: ١٠١٨٢٧٦٠١٢ تاريخه: ١٤١٩/١٠/٣٠ هـ مصدره: الدمام
سلطات المدير
يشهد مكتب السجل التجاري بمدينة الدمام بأنه تم تسجيل هذه الموسسة بسجل مدينة الدمام
وتنتهي صلاحية الشهادة في ١٤٤٩/١٢/١٩ هـ بموجب الإيصال رقم: ٥٩٧٤٥٩١٩ و تاريخ: ١٤٤٢/٠١/١٢ هـ

مدير السجل التجاري: نايف صالح الطاسان
التوقيع:

يمكنك التحقق من صحة هذة الشهادة بالدخول على http://v.mci.gov.sa To Verify the information of this certificate visit

Industrial Liecence

غـــرفـــة الشرقـيـة
ASHARQIA CHAMBER

شهادة اشتراك

رقم العضوية: 4465

الدرجة : الثالثة

تاريخ الاصدار :1438/05/29

تشهد الغرفة التجارية الصناعية بالمنطقة الشرقية بأن :

مؤسسة علي الحصان للمقاولات

المقيدة بالسجل التجاري / الترخيص رقم (2050004344)

مشتركة لدينا لهذا العام

وينتهي سريان هذه الشهادة في1443/05/08

صندوق البريد 2447 الدمام 31451

صدرت في : 1438/05/29 الموافق 2017/2/26 م

رقم السند :1-242720509 /60 تاريخ الاشتراك :1424/07/18 هـ 11606

Membership No :4465

Classification: Third

Date of Issue: 26/2/2017

Asharqia Chamber Certifies that :

ALI AL HOSAAN

Commercial Register No (2050004344)

Registered for this year

The certificate expires on12/12/2021

P.O.Box 2447 DAMMAM 31451

التوقيع

الختم

غـــرفـــة الشرقـيـة
ASHARQIA CHAMBER
مركـــز خدمـــات
غـــرب الدمـــام

Unified number 92000 1361
Fax 013 8570607

الرقم الموحد ٩٢٠٠٠١٣٦١
فاكس ٠١٣٨٥٧٠٦٠٧

نعمل معاً... لغدٍ أفضل

SF-MB-02/REV.05 / 01/ 07 / 2012

أي كشط أو تعديل في هذه الشهادة يلغيها

www.chamber.org.sa E-mail: info@chamber.org.sa

Chamber Membership

وزارة الطاقة والصناعة والثروة المعدنية
المملكة العربية السعودية

رؤية VISION 2030
المملكة العربية السعودية
KINGDOM OF SAUDI ARABIA

ترخيص منشأة صناعية

استثمار وطني

رمز المنشأة	١٥١٢٠٣	تاريخ الترخيص	١٤٤١-٠٤-٠٨	تاريخ القرار	١٤٤١-٠٤-٠٨
نوع القرار	تعديل	رقم القرار	١١	تاريخ الانتهاء	١٤٤٤-٠٤-٠٨

اسم المنشأة الصناعية	مصنع الإنشاءات المسبقة الصنع	هاتف	+٩٦٦٦٥٩٤٢٥٦-٣٧
السجل التجاري للمنشأة الصناعية	٢٠٥٠٠٤١٧٢٧	فاكس	
مالك المنشأة	علي بن عبدالله بن محمد آل حصان	موقع المنشأة الصناعية	(N26.494769894500788 ,E49.95705159937563)
رقم الهوية	١٠١٨٢٧٥٩٧٢	المنطقة	المنطقة الشرقية
الجنسية	العربية السعودية	المدينة	الدمام
النشاط الرئيسي	صنع اصناف من الخرسانة والاسمنت والجص / ٢٣٩٥		

عدد العمالة	٩٠	تسعون فرداً	
حجم الاستثمار	١٥٠٣٦١٤٥.٠٠	خمسة عشر مليون و ستة و ثلاثون ألفا و مائة و خمسة و أربعون ريال	

رمز المنتج	وصف المنتج	النشاط الصناعي	الطاقة الانتاجية	الوحدة
٦٨١٠٩١٠٠	الواح خرسانية مسبقة الصنع	٢٣٩٥٤٠ / صناعة قواطع وألواح وأطر ومباني جاهزة من الخرسانة سابقة الصنع	٩٠٠٠.٠	متر مربع
٦٨١٠٩١٠٠	حوائط داخلية مسبقة الصنع	٢٣٩٥٤٠ / صناعة قواطع وألواح وأطر ومباني جاهزة من الخرسانة سابقة الصنع	١٢٠٠٠.٠	متر مربع
٦٨١٠١١٠٠	طابوق بانواعه	٢٣٩٥١٠ / صناعة البلك الأسمنتي المفرغ والتجر	٢٥٠٠٠٠.٠	وحدة

وزير الصناعة والثروة المعدنية

بندر بن إبراهيم الخريف

Industrial Liecence

APPROVALS

THE CERTIFICATION INTERNATIONAL

CERTIFICATION OF REGISTRATION

This is to certify that

Quality Management Systems

of

PRECAST STRUCTURES FACTORY (PRECON)

Abu Hedreya Highway, Dammam, Saudi Arabia.

Has been assessed and found to meet the requirements of:

ISO 9001:2015

The certificate is valid for the following scope of operation:

Precast Concrete Products.

Certificate No. Q-01426

Original Issue Date: 24/03/2020 **Issue Date: 24/03/2020** **Valid Till: 23/03/2023**

1st Surv. Due on: 09/03/2021 **2nd Surv. Due Before: 09/03/2022**

*After successful completion of surveillance audit, new certificate shall be issued

In the course of validity of the present certificate client management system must permanently satisfy the requirements of the International Regulations. The fulfilment of these regulations will be regularly controlled by The Certification International.

THE CERTIFICATION INTERNATIONAL

UNITED ACCREDITATION FOUNDATION UAF

Director

The Certification International

Website: www.thecertification.org Email:info@thecertification.org

Accreditation by United Accreditation Foundation

3510, Colmar, Norfolk 23509, VA, United States of America (USA)

To check certification status: http://uafaccreditation.org/list-organisation-certified-uaf-accredited-certification-bodies

APPROVALS

المملكة العربية السعودية
وزارة الصحة
مديرية الشؤون الصحية بمحافظة الأحساء

وزارة الصحة
Ministry of Health

الرقم : / /
التاريخ : / / ١٤٣٦
المرفقات :

إلى من يهمة الأمـر

نفيد بأن مؤسسة على الحصان للمقاولات قد قامت بتنفيذ مشروع استبدال سور مستشفى الملك فهد بالهفوف بوحدات خرسانية مسبقة الصنع .

وقد أنهت جميع اعمالها في الوقت المحدد وحسب الطرق الفنية المتبعة للتنفيذ.

وقد منحت هذه الشهادة دون أي مسئولية

ولكم أطيب تحياتي وتقديري .....

المهندس / سلمان طاهر العمران
مدير إدارة المشاريع والصيانة
التوقيع /

الأحساء – الهفوف – تلكس رقم ٨٦١٣٨٧ – تلفون ٥٧٥١٩٦٠ – ٥٧٥٤١١٤ – فاكس ٥٧٥٦٤١٠ (pc3/٣/ربيع ثاني ٢٥)

APPROVALS

بسم الله الرحمن الرحيم

وزارة التعليم العالي
جامعة الملك فهد للبترول والمعادن
الإدارة العامة للمشاريع
(٠٣٦)

Ministry of Higher Education
King Fahd University of Petroleum & Minerals
Projects Department
(036)

التاريخ: ١٤٣٠/١٠/٨هـ

الموضوع: اعتماد مورد البريكاست لمشروع (أسوار جامعة الملك فهد للبترول والمعادن بالظهران (المرحلة الثانية).

السادة/ مؤسسة علي الحصان للمقاولات المحترمين

السلام عليكم ورحمة الله وبركاته...

إشارةً إلى الموضوع أعلاه، نفيدكم باعتماد الجامعة لمصنع الإنشاءات المسبقة الصنع (بريكون) وذلك كمورد رئيسي لأعمال البريكاست بالمشروع.

وتقبلوا تحياتي،،،

مدير عام المشاريع

م. صالح بن عبدالله الغنام

ص.ب ٥٠١٩ • الظهران ٣١٢٦١ • المملكة العربية السعودية • تلفون: ٤٥٠٠-٨٦٠ (٠٣) • فاكس: ٤٥٥٥-٨٦٠ (٠٣)
KFUPM Box 5019 • DHAHRAN 31261 • SAUDI ARABIA • Tel.: (03) 860 - 4500 • Fax: (03) 860 - 4555 • e-mail: projects@kfupm.edu.sa

APPROVALS

بسم الله الرحمن الرحيم

Ministry of Higher Education
King Fahd University of Petroleum & Minerals
Projects Department

وزارة التعليم العالي
جامعة الملك فهد للبترول والمعادن
الإدارة العامة للمشاريع

التاريخ: ١٤٣٢/٧/١٣هـ

شهادة لمن يهمه الأمر

بناءاً على طلب مؤسسة/ علي الحصان للمقاولات التي طلبت إصدار شهادة إتمام عمل لمشروع (تسوير شاطئ الجامعة) الواقع في شاطئ نصف القمر.

عليه فإنه تم إصدار هذه الشهادة بأن المقاول قد قام بإتمام التسوير بشاطئ الجامعة بنظام الخرسانة مسبقة الصنع (البريكاست) في عام ١٤٢٨هـ وقد تم إعطاء الشركة هذه الشهادة دون أدنى مسؤولية.

والله الموفق،،،

مدير عام المشاريع

م. صالح بن عبدالله الغنام

ص.ب ٥٠١٩ • الظهران ٣١٢٦١ • المملكة العربية السعودية • تلفون: ٨٦٠-٤٥٠٠ (٠٣) • فاكس: ٨٦٠-٤٥٥٥ (٠٣)
KFUPM Box 5019 • DHAHRAN 31261 • SAUDI ARABIA • Tel.: (03) 860 - 4500 • Fax: (03) 860 - 4555 • e-mail: projects@kfupm.edu.sa

APPROVALS

Kingdom of Saudi Arabia
Ministry of Water & Electricity
General Directorate of Water Eastern Province

المملكة العربية السعودية
وزارة المياه والكهرباء
المديرية العامة للمياه بالمنطقة الشرقية
٢٧٦

الموضوع : اعتماد مورد اسوار

السادة / مصنع الإنشاءات المسبقة الصنع (بريكون) المحترمين
ص.ب ٢٤٤٧ الدمام ٣١٤٥١
السلام عليكم ورحمة الله وبركاته

إشارة إلى تقديمكم لطلب اعتماد المصنع كأحد الموردين لأسوار المديرية مسبقة الصب ، وبعد الإطلاع على تأهيل المصنع وسابق اعتمادكم لدى الجهات الأخرى وخروج لجنة فنية لمعاينة المصنع والعرض على سعادة المدير العام بتوصيات اللجنة.

نفيدكم بأنه لا مانع من اعتمادكم لدينا كأحد الموردين للأسوار مسبقة الصب طبقا للشروط والمواصفات والنماذج على أن يتم التصنيع والإشراف عليه من قبل استشاري المديرية وأخذ العينات بمعرفة مختبر محايد وهذا الاعتماد لمدة سنتان من تاريخه ويحق للمديرية إلغاء هذا الاعتماد في حالة مخالفة شروط ومواصفات العقد.

ولكم تحياتنا،،،

مدير عام المشاريع بالإنابة

٢١٤٢/١١/٢

م/ إبراهيم بن عمران العمران

الرقم : ..... التاريخ : ..... المشفوعات : .....

ص . ب ٤٦٥٠ – الدمام ٣١١٩٨ – هاتف : ٨٢٧٥٥٥٥ – فاكس : ٨٢٧٥٧٢٨

APPROVALS

وزارة البيئة والمياه والزراعة
Ministry of Environment, Water & Agriculture
المملكة العربية السعودية
الإدارة العامة لخدمات المياه بالمنطقة الشرقية
إدارة المشاريع (٢٧٤)

الوارد العام
الرقم ١٤٣٩١٣٠٠١٦١٧٢٥٢٥
التاريخ ١٤٣٩١٠٧١١٢
المرفقات بدون

الموضوع : تجديد اعتماد مصنع بريكون للإنشاءات مسبقة الصنع

السادة / مصنع الإنشاءات المسبقة الصنع (بريكون) المحترمين
ص ب ٢٤٤٧ الدمام ٣١٤٥١ فاكس ٠١٣-٨٣٧٤٦٦٢
السلام عليكم ورحمة الله وبركاته

إشارة إلى خطابكم رقم (أ/م/١٤٣٩) بتاريخ ١٤٣٩/٠٥/٢٥هـ بخصوص طلب تجديد اعتماد مصنعكم كأحد الموردين للأسوار مسبقة الصب بمشاريع المديرية العامة للمياه بالمنطقة الشرقية .

نفيدكم بأنه لا مانع لدينا من تجديد اعتماد مصنعكم للأسوار مسبقة الصب ضمن مشاريعنا ، وذلك طبقاً لشروط ومواصفات المديرية وهذا الاعتماد لمدة سنه من تاريخه ، كما يحق للمديرية سحب أو إلغاء هذا الاعتماد في حالة مخالفة الشروط والمواصفات وعلى أن يتم التصنيع والإشراف عليه من قبل استشاري المديرية .

ولكم تحياتنا ،،،

مدير عام المشاريع
م / علي بن سعيد العامري

info@.mewa.gov.sa
www.mowe.gov.sa
ص.ب ٤٦٥٠ الدمام ٣١١٩٨
هاتف : ٥٥٥٥ ٨٢٧ ١٣ ٩٦٦+
فاكس : ٢٨٩١ ٨٢٦ ١٣ ٩٦٦+
الرقم الموحد: 800 247 2220

APPROVALS

KINGDOM OF SAUDI ARABIA
Royal Commission for Jubail & Yanbu
Royal Commission in Jubail
(246 / 7)

المملكة العربية السعودية
الهيئة الملكية للجبيل وينبع
الهيئة الملكية بالجبيل
(٢٤٦ / ٧)

ZAID ALHUSSAIN & BROTHERS GROUP
P.O. Box 4756
Riyadh 11412
Kingdom of Saudi Arabia
Tel: (966) 1 462 0111
Fax: (966) 1 465 5555

Attention: Mohammed Ali Ahmad
Project Manager

Subject: Contract No. 31i-C04
RIC Landscape and irrigation – Phase 1
Precast Structures Supplier - PRECON

Gentlemen,

In response to your request for the approval of PRECON as your supplier for Precast Structures, please be advised that your request has been approved by the Royal Commission.

Very truly yours,

C. ALTOFT
Resident Engineer
Authorized Representative

Jubail Industrial City 31961
P.O. Box : 10001
Tel.: (013) 341 3000
Fax: (013) 341 9691

25272-L-882-(31i-C04)-0044
6 Muharram 1441H
(05 September 2019G)

مدينة الجبيل الصناعية ٣١٩٦١
ص.ب ١٠٠٠١
هاتف : ٣٤١ ٣٠٠٠ (٠١٣)
فاكس : ٣٤١ ٩٨٩١ (٠١٧)
www.rcjy.gov.sa
suggestion@RCJubail.gov.sa

APPROVALS

البيئة مخططون ومعماريون ومهندسون
PLANNERS , ARCHITECTS & ENGINEERS Beeah

رؤية VISION 2030

المشروع : استكمال الاسوار والبوابات للمدينة الجامعية بالفرعاء
الموضوع: التقديم الفنى لمصانع الخرسانة المسبقة الصب
الرقم : ٢٠١٨/F&G/١٠٠١
التاريخ :١٤٣٩/٧/٨هـ الموافق ٢١٠٨/٠٣/٢٥

السادة / مؤسسة على الحصان للمقاولات
عناية المهندس/ محمد رمضان مدير المشروع
السلام عليكم ورحمة الله وبركاته
بالاشارة الى خطابكم رقم ٢٠١٨\١٢ بخصوص مراجعة واعتماد مصانع خرسانة مسبقة الصنع
- مصنع الانشاءات المسبقة الصنع
- الفينيق للخرسانة مسبقة الصنع
- فوزى النجرانى للخرسانة مسبقة الصنع
نفيدكم بالموافقة المبدئية على مصنع الانشاءات المسبقة الصنع التابع لمؤسستكم على ان يتم زيارة المصنع والاطلاع على طريقة التصنيع والتجهيز ومطابقته للكود فى موعد يحدد مع مدير المشروع الجهة المالكة

وتقبلوا خالص التحية

- صورة لسعادة الدكتور وكيل الجامعة للمشاريع
- صورة لسعادة الدكتور مدير عام المشروع مكتب البيئة

مدير المشروع

مهندس/ نصر محمود عبيد

البيئة Beeah مخططون ومعماريون ومهندسون

Location: 4034 Al-Husain Bin Ali Al-Mastif Riyadh 7815-12468
العنوان: 4034 الحسين بن علي - المعصيف - الرياض 7815-12468
المراسلات: ص.ب 85745 - الرياض 11612 - المملكة العربية السعودية هاتف : 4543330 (011) - فاكس 4550664 (011) - س.ت 1010461905 الغرفة تجارية 6613
P.O. Box 85745, Riyadh 11612, Saudi Arabia e-mail: albeeah2006@gmail.com Tel: +966 (11) 4543330 Fax: +966 (11) 4550664

APPROVALS

البيئة مخططون ومعماريون ومهندسون Beeah

مشروع المدينة الجامعية

الحسان HOSSAN

Item No. (BOQ) and Description :........................	مصنع الإنشاءات مسبقة الصنع PRECON
اعتماد مورد لسور البريكاست بلوحات خرسانية ولوحات معدنية للسور & البوابات	Date: 7/10/2019
PROJECT : استكمال الأسوار والبوابات للمدينة الجامعية لجامعة الملك خالد بالفرعاء	
Contractor : مؤسسة علي الحسان للمقاولات	
Division : أعمال الأسوار	SUBMITTAL REFERANCE

مدني ☐ معماري ☐ كهرباء ☐ ميكانيكا ☐

Consultant Recommendation	Recommendation Status
ننصح باعتماد المصنع المذكور [illegible] مع الالتزام بجميع المواصفات واشتراطات المشروع [illegible] Date:......	1- Approved ☐ 2- Approved As noted ☑ 3- Revise &Resubmite ☐ 4- Rejected ☐

مدير عام المشروع	مدير الإشراف	مهندس الجوده
د/ ثامر الغندور	م/ ياسر [illegible]	م/ هشام سعيد فتحي
....	....	هشام

kku — الجامعة

يعتمد المورد مع الأخذ بجميع ملاحظات الاستشاري وهذا ما رأته اللجنة

م/ محمود العري	م/ محمد حيدر 19-10-2019	1- Approved ☐ 2- Approved As noted ☑ 3- Revise & Resubmite ☐ 4- Rejected ☐
م / محمد علي القحطاني	أ/ يحيى آل موسى	

اعتماد رئيس اللجنة

م/ عبد الرحمن بن عايض القحطاني

Date: 14/10/2019

APPROVALS

وزارة الصحة
مدينة الملك سعود الطبية
إدارة المشاريع
نموذج اعتماد الموردين والمواد والمخططات ومقاولي الباطن
Drawing/Material/Suppliers & Subcontractor Approval Sheet

مدينة الملك سعود الطبية
KING SAUD MEDICAL CITY

شعار المقاول

المالك : مدينة الملك سعود الطبية	طلب اعتماد تقديمات Submittals Approval Request	المقاول : مؤسسة علي العصمان ص.ب : — الرياض هاتف : فاكس :
رقم الاحالة:	التاريخ: ١٤ / ٣ / ٢٠١٨م	المهندس المختص:
□ الحفظ	□ اعداد دراسة	□ ابداء الرأي والافادة	□ إكمال اللازم	الاجراء:

Project :	المشروع: اعادة تأهيل وتطوير اسوار مدينة الملك سعود الطبية
Submittals Description وصف التقديمات	اعتماد مصنع بريكاست خرسانة مسبقة الصنع ١) - مصنع بريكولد ٢) - مصنع فوزي البحراني ٣) - مصنع الفينيق
تاريخ التقديم Submittals date	يوم / شهر / سنة Day / monthly/ year — New Submittals تقديم جديد ☑ — Re-Submittals إعادة تقديم □
رقم التقديم Submittals NO	14/3/2018
رمز التقديم Submittals code	مدني ☑ — ميكانيكي □ — كهربائي □ — معماري □ — عام □
مستندات العقد Contract Document	
المرفقات Enclosures	Sample عينة □ — Drawing مخطط □ Catalogue كتالوج ☑ — C.V سيرة □ Description وصف □ — □
ملاحظات comments	تعميد بريكولد د. عبدالمحسن 15/3 ١٥ / ٣
	Code: □ A ☑ B □ C □ D
التقييم Submittal is	☑ يعتمد حسب التقديم Approved as submitted — □ مرفوض ويعاد التقديم بعد تلبية الملاحظات Disapproved Resubmission required — □ On hold □ يعتمد حسب الملاحظات Approved as noted — □ مرفوض وتقدم عينات أخرى Disapproved Resubmission simple — □ مرتجع بدون إجراء Returned without action
متابعة التقديم Submittal follow up	Client مدينة الملك سعود الطبية Approved by المراجعة بواسطة: Name : الاسم: Sign& stamp التوقيع والختم : Date : التاريخ :
	Contractor المقاول: مؤسسة علي العصمان Approved التقديم بواسطة : Name : الاسم: م/ محمد صالح الباجا Sign& stamp التوقيع الختم : Date : التاريخ ١٤ / ٣ / ٢٠١٨م

مؤسسة علي العصمان للمقاولات
الدمام ص.ب ٢٠٥٠٠٠٠٤٢٤٤
Dammam - C.R. 2050004344
ALI AL-HOSAN EST. FOR CONTRACTING

APPROVALS

MANA S. AL-KHAMSAN EST.
FOR CONTRACTING

مؤسسة مانع صالح آل خمسان
للمقاولات

October 30, 2019

CERTIFICATE OF WORK COMPLETED

This is to certify that **M/s Precon**, Precast Structures Factory, P.O Box 2447, Dammam 31451, Abu Hedriya Highway, KSA, supplied and erected Prefab Elements for the Saudi Aramco work which involved supply and erection of 26 No. of buildings in NGPD and SGPD areas for facility Security Forces.

The project is completed.

Yours faithfully,

M.N Kamal,
General Manager,
Mana S. Al-Khamsan Est.

مؤسسة مانع صالح آل خمسان للمقاولات
بقيق
س.ت ٢٠٥٩٠٠٠٩٤٧

المكتب الرئيسي: ص.ب ٢٤٤ - بقيق ٣١٩٩٢ - س.ت ٢٠٥٩٠٠٠٩٤٧ - غرفة التجارة / ٢٥١٨٣ - ت ٥٦٥٠٧٧٧ (٠٣) - فاكس ٥٦٥٠٨٨٨ (٠٣) - بقيق - المملكة العربية السعودية
Head Office : P.O. Box 244 - Abqaiq 31992 - C.R. 2059000947 - Chamber of Commerce / 25183 - Tel.: (03) 5650777- Fax : (03) 5650888 - Saudi Arabia

APPROVALS

بسم الله الرحمن الرحيم

المملكة العربية السعودية
وزارة الدفـــاع
القوات الجوية الملكية السعودية
قاعدة الملك عبد العزيز الجوية بالقطاع الشرقي
إدارة التشغيل والصيانة
الدرسات والإشراف
(٢٧٣)

الرقم : ٤/١٣/٣١/٣/ ١١٩٢
التاريخ : ٧/٣/١٤٤١هـ
المرفقات:
الموضوع: مشهد حسن تنفيذ أعمال

مشهد حسن تنفيذ إلى من يهمه الأمر

السلام عليكم ورحمة الله وبركاته.

١. إشارة إلى مشروع إنشاء أسوار أمنية بقاعدة الملك عبدالعزيز الجوية بالقطاع الشرقي عقد رقم (م ع ٣٨/٤٥/هـ. أ) وتاريخ (١٤٣٩/٠٩/١٢هـ).

٢. نفيدكم بأن مؤسسة علي الحصان للمقاولات قامت بتنفيذ المشروع المذكور أعلاه بالخرسانة مسبقة الصب من مصنع الإنشاءات المسبقة الصنع حسب المواصفات الفنية وكان التنفيذ جيد وعليه تم منحهم هذا المشهد دون أدنى مسؤلية عن قاعدة الملك عبدالعزيز الجوية بالقطاع الشرقي.

٣. أمل بعد الإطلاع والإحاطة. والسلام عليكم.

العقيد المهندس

زكريا بن علي الغامدي
مدير إدارة التشغيل والصيانة المكلف

قائمة التوزيع مرفقة.

APPROVALS

المعاملات الداخلية
الرقم ١٤٤١٠٣٨٢٧٠٥٠٥٦٨١
التاريخ ١٤٤٩/٠٨/٢٣
المرفقات

nwc
المياه الوطنية

سعادة نائب الرئيس للمشاريع والخدمات الفنية سلمه الله

السلام عليكم ورحمة الله وبركاته،،،

إشارة إلى الايميل المرسل من إدارة سلسلة الإمداد (م. موسى البارقي) بتاريخ ١٤٤١/٨/١هـ، بشأن طلب مصنع الانشاءات المسبقة الصنع (PRECON) اعتماد منتجات المصنع من الالواح والاسوار الخرسانية مسبقة الصنع، وحيث أكمل المصنع متطلبات التأهيل، فقد أوصت هذه الإدارة باعتماد ما يلي (علماً بأن عدد المصانع المعتمدة في هذا المجال مصنع واحد):

المصنع	المنتجات
مصنع الانشاءات المسبقة الصنع (PRECON)	الاسوار الخرسانية مسبقة الصنع

عليه آمل موافقة سعادتكم اعتماد منتجات المصنع للمنتجات المشار اليها بالجدول أعلاه، وذلك لمدة عامين من تاريخه، أو التوجيه بما ترونه.

مع أطيب تحياتي،،،

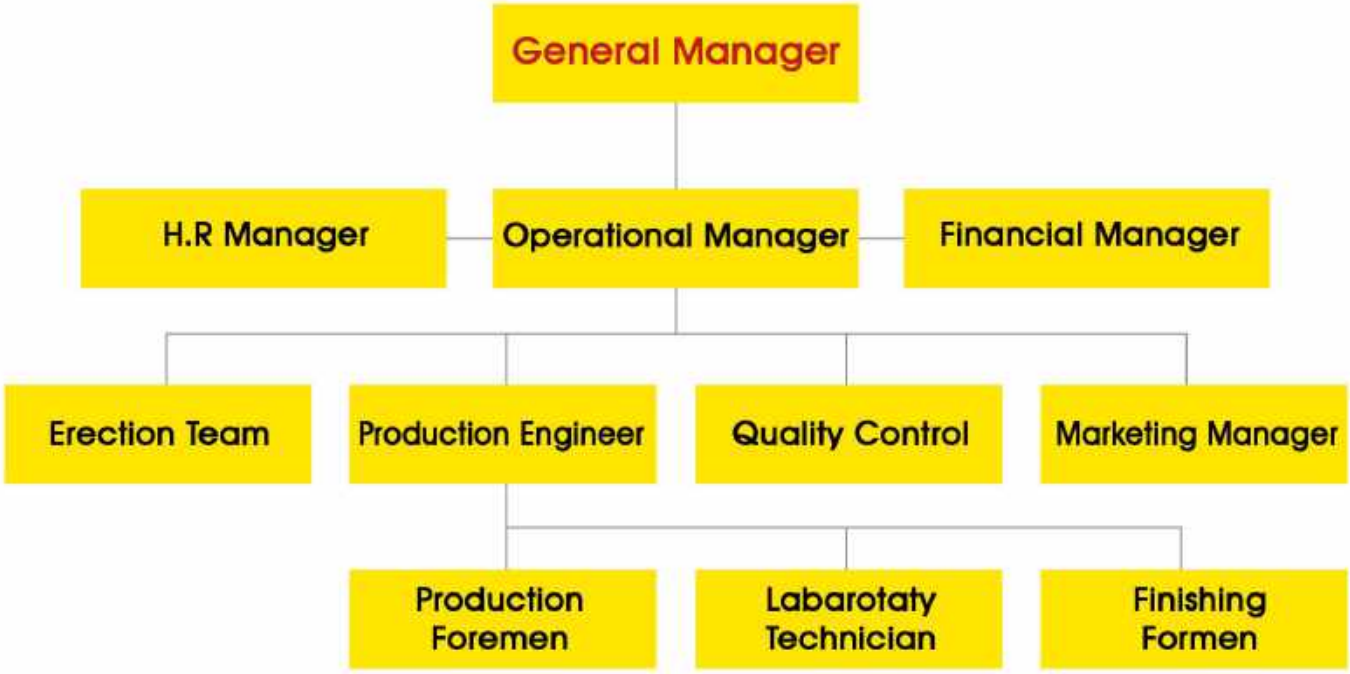
مدير عام إدارة الخدمات الفنية

م. ماجد بن محمد الرويلي

14 APR 2020

19 APR 2020

PRECON ORGNIZATIONAL CHART



LIST OF PERSONNELS & EMPLOYEES

S.No	Category	Nos
	General Manager	1
1	Operational Manager	1
2	Administration Deptt:	2
3	Technical Department	12
4	Financial Depattment:	5
5	Public Relations & Marketing	3
	Total	23
1	Specialist Forms Fabricators	5
2	Professional Welders	15
3	Steel Fixers	20
4	Carpenters	6
5	Masons	20
6	Sandblasters	5
7	Precast Erectors	30
8	Plumbers	3
9	Electricians	5
10	Drivers	5
11	Labor	25
12	Batching Plant Operators	3
13	Auto Electricians	2
14	Hydraulic & Diesel Mechanics	5
15	Stressing Foremen	3
	Total	152

LIST OF TOOLS AND EQUIPMENTS

1- Laboratory :

#	Machines / Apparatus	Quantity	Status	Date
1	Compression Testing Machine	1	Calibrated	15/03/2015
2	Flexural Testing Machine	1	Calibrated	15/03/2015
3	Digital Balance	2	Calibrated	15/03/2015
4	Industrial Dry Oven	1	----------	----------
5	Sieve Shaker Machine	1	----------	----------
6	Sieves	20	----------	----------
7	Curing Tub	1	----------	----------
8	Slump testing Apparatus	1	----------	----------
9	Measuring Bowl	1	----------	----------
10	Temperature Meter	1	----------	----------
11	Trowel	1	----------	----------
12	Tamping Rod	1	----------	----------
13	Funnel	1	----------	----------
14	measure for Water	1	----------	----------

LIST OF TOOLS AND EQUIPMENTS

2- *Factory :*

#	Machines / Apparatus	Quantity	Status	Date
1	Batch Plant No. 1 Capacity 60 (m^3/ hr) - Cement Scale - Aggregates scale - water Meter	1	Calibrated	August 2015
2	Batch Plant No. 2 Capacity 80 (m^3/ hr) - Cement Scale - Aggregates scale - water Meter	1	Calibrated	July 2015
3	Concrete Transport Bucket - 1.8 cubic meter Capacity	3	------	------
4	Aggregate Washer - 40 cubic meter/hour Capacity	1	------	------
5	Casting Tables - Tilting Tables - Fixed Tables	 23 20	------	------
6	Over Head Cranes - 10 Tones capacity - 8 Tones capacity - Semi-Gantry 5 Tones capacity	 2 1 2	------	------
7	Tower Crane	1	------	------
8	Mobile Cranes - 80 Tones capacity - 50 Tones capacity - 25 Tones capacity	 1 1 2	------	------
9	Wheel loader	2	------	------
10	Forklift - 7 Tones capacity - 5 Tones capacity	 1 1	------	------
11	Concrete Element Transport Trolley	2	------	------
12	Air compressors	2	------	------
13	Sand Blasting Machines	2	------	------

BATCH PLANT # 1 CALIBRATION

AL-HOTY CALIBRATION SERVICES
A BRANCH OF AL-HOTY CO. LTD.

Calibration Laboratory
C.R. 2051015391
P.O. Box 31729, Al-Khobar 31952
Kingdom of Saudi Arabia
Tel. : (013) 864 4150 / 894 8020 / 894 5452
Fax : (013) 898 1644 / 894 3980
E-Mail : acs.kh@al-hoty.com
Website: www.alhotycalibration.com

ACCREDITED
Calibration Cert #: 3467.01

Certificate of Calibration

Certificate No: 2009-222152

Customer Name : Precast Structures Factory (PRECON)
Address : P. O. Box 2447, Dammam 31451, Kingdom of Saudi Arabia

Product Identification and Specification

Item Submitted	Aggregate Scale	Page No	1 of 2
Manufacturer	Sewha	Received Date	17 September 2020
Model	SI 4100	Calibration Date	17 September 2020
Serial Number	0707160	Calibration Due Date	17 March 2021
Asset Number	N/A	Certificate Issue Date	17 September 2020
Customer P.O	01	Received Condition	In tolerance
		Returned Condition	In tolerance

Calibration Procedure : ICP-I-071

Summary of Procedure : The Unit Under Test (UUT), an aggregate scale was carried-out by build-up test method using known weights with material or other product used during production. The test weights were placed onto the hopper and reading was then taken from the scale / indicator.

Environmental Condition : 42.8 ± 0.7°C / 36.9 ± 0.6%RH

Calibration Results : *(see the next page)*

Calibration Notes:

Basis of Tolerance : ASTM C94/C94M-20
Location : Abu Hadriyah Highway, Dammam
Max. Capacity : 4,000 kg / Min. Division : 1 kg
The statement of compliance was based on the performance of the unit under test (UUT) against ASTM C94/C94M-20 requirements and taking the measurement uncertainty into account.

Standard Used to Calibrate Instrument:

Description	ACS Number	Cal Due Date	Traceability
Test Weights	ACS-KH-MA004	11 March 2021	2009-198592 (METAS)
Digital Temperature and Humidity Meter	ACS-KH-TE024	08 April 2021	2004-198452 (NIST, USA)

Calibrated By: _____
Calibration Tech. (Stamp)

Approved By: _____
Quality Representative

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, providing a level of confidence of approximately 95%.

This certifies that the above listed instrument has been calibrated using standards whose accuracies are traceable to national or international standards and in accordance with the quality system conform to ISO/IEC 17025:2017.

This certificate applies only to the item described. Calibration certificate without signature and stamp is not valid. The readings presented are the results at the time of calibration and do not carry any implication regarding the long term stability of the item submitted.

BATCH PLANT # 1 CALIBRATION

AL-HOTY CALIBRATION SERVICES

Aggregate Scale	**Certificate Number:** 2009-222152
Serial Number: 0707160	**Page:** 2 of 2

Calibration Results

Test Description	Applied Load (kg)	UUT Reading (kg) As found	UUT Reading (kg) As left	Error (kg)	Tolerance (kg)	Uncertainty (kg)	Compliance (Pass/Fail)
Scale Accuracy Test	400	400	400	0	± 6	± 0.58	Pass
	800	799	799	-1	± 6	± 0.58	Pass
	1200	1199	1199	-1	± 6	± 0.58	Pass
	1600	1599	1599	-1	± 6	± 0.58	Pass
	2000	1998	1998	-2	± 6	± 0.58	Pass

End of Certificate

C.R: 2051015391
AL-KHOBAR
A BRANCH OF AL-HOTY CO. LTD.
AL-HOTY CALIBRATION SERVICES

BATCH PLANT # 1 CALIBRATION

AL-HOTY CALIBRATION SERVICES
A BRANCH OF AL-HOTY CO. LTD.

Calibration Laboratory
C.R. 2051015391
P.O. Box 31729, Al-Khobar 31952
Kingdom of Saudi Arabia
Tel. : (013) 864 4150 / 894 8020 / 894 5452
Fax : (013) 898 1644 / 894 3980
E-Mail : acs.kh@al-hoty.com
Website: www.alhotycalibration.com

ilac-MRA A2LA ACCREDITED
Calibration Cert #: 3467.01

Certificate of Calibration

Certificate No: 2009-222153

Customer Name : Precast Structures Factory (PRECON)
Address : P. O. Box 2447, Dammam 31451, Kingdom of Saudi Arabia

Product Identification and Specification

Item Submitted	: Cement Scale	Page No	: 1 of 2
Manufacturer	: Sewha	Received Date	: 17 September 2020
Model	: SI 4100	Calibration Date	: 17 September 2020
Serial Number	: 0707158	Calibration Due Date	: 17 March 2021
Asset Number	: N/A	Certificate Issue Date	: 17 September 2020
Customer P.O	: 01	Received Condition	: In tolerance
		Returned Condition	: In tolerance

Calibration Procedure : ICP-I-071

Summary of Procedure : The Unit Under Test (UUT), a cement scale was carried-out by build-up test method using known weights with material or other product used during production. The test weights were placed onto the hopper and reading was then taken from the scale / indicator.

Environmental Condition : 43.3 ± 0.5°C / 36.3 ± 0.6%RH

Calibration Results : *(see the next page)*

Calibration Notes:

Basis of Tolerance : ASTM C94/C94M-20
Location : Abu Hadriyah Highway, Dammam
Max. Capacity : 1,000 kg / Min. Division : 1 kg
The statement of compliance was based on the performance of the unit under test (UUT) against ASTM C94/C94M-20 requirements and taking the measurement uncertainty into account.

Standard Used to Calibrate Instrument:

Description	ACS Number	Cal Due Date	Traceability
Test Weights	ACS-KH-MA004	11 March 2021	2009-198592 (METAS)
Digital Temperature and Humidity Meter	ACS-KH-TE024	28 April 2021	2004-198452 (NIST, USA)

Calibrated By: _____
Calibration Tech. (Stamp)

Approved By: _____
Quality Representative

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, providing a level of confidence of approximately 95%.

This certifies that the above listed instrument has been calibrated using standards whose accuracies are traceable to national or international standards and in accordance with the quality system conform to ISO/IEC 17025:2017.

This certificate applies only to the item described. Calibration certificate without signature and stamp is not valid. The readings presented are the results at the time of calibration and do not carry any implication regarding the long term stability of the item submitted.

BATCH PLANT # 1 CALIBRATION

AL-HOTY CALIBRATION SERVICES

Cement Scale
Serial Number: 0707158

Certificate Number: 2009-222153
Page: 2 of 2

Calibration Results

Test Description	Applied Load (kg)	UUT Reading (kg) As found	UUT Reading (kg) As left	Error (kg)	Tolerance (kg)	Uncertainty (kg)	Compliance (Pass/Fail)
Scale Accuracy Test	100	100	100	0	± 2	± 0.58	Pass
	200	201	201	+1	± 2	± 0.58	Pass
	300	301	301	+1	± 2	± 0.58	Pass

End of Certificate

BATCH PLANT # 1 CALIBRATION

AL-HOTY CALIBRATION SERVICES
A BRANCH OF AL-HOTY CO. LTD.

Calibration Laboratory
C.R. 2051015391
P.O. Box 31729, Al-Khobar 31952
Kingdom of Saudi Arabia
Tel. : (013) 864 4150 / 894 8020 / 894 5452
Fax : (013) 898 1644 / 894 3980
E-Mail : acs.kh@al-hoty.com
Website: www.alhotycalibration.com

ilac-MRA A2LA ACCREDITED
Calibration Cert #: 3467.01

Certificate of Calibration

Certificate No: 2009-222154

Customer Name : Precast Structures Factory (PRECON)
Address : P. O. Box 2447, Dammam 31451, Kingdom of Saudi Arabia

Product Identification and Specification

Item Submitted	:	Water Meter	Page No	:	1 of 2
Manufacturer	:	DHC	Received Date	:	17 September 2020
Model	:	DHC2.L	Calibration Date	:	17 September 2020
Serial Number	:	17123000	Calibration Due Date	:	17 March 2021
Asset Number	:	N/A	Certificate Issue Date	:	17 September 2020
Customer P.O	:	01	Received Condition	:	In tolerance
			Returned Condition	:	In tolerance

Calibration Procedure : ICP-I-078

Summary of Procedure : The Unit Under Test (UUT), a water meter was calibrated by measuring the actual output water using a volumetric graduated container.

Environmental Condition : 42.9 ± 0.6°C / 35.9 ± 0.6%RH

Calibration Results : *(see the next page)*

Calibration Notes:

Location : Abu Hadriyah Highway, Dammam
Max. Capacity : 65,535 L / Min. Division : 1 L
Calibration report has been issued without the statement of compliance as agreed by the customer due to unavailability of the reference criteria or manufacturer specification.

Standard Used to Calibrate Instrument:

Description	ACS Number	Cal Due Date	Traceability
Volumetric Graduated Container	ACS-KH-FV008	18 June 2021	2006-198527 (METAS)
Digital Temperature and Humidity Meter	ACS-KH-TE024	28 April 2021	2004-198452 (NIST, USA)

Calibrated By: _____
Calibration Tech. (Stamp)

C.R: 2051015391 AL-KHOBAR
AL-HOTY CALIBRATION SERVICES

Approved By: _____
Quality Representative

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, providing a level of confidence of approximately 95%.

This certifies that the above listed instrument has been calibrated using standards whose accuracies are traceable to national or international standards and in accordance with the quality system conform to ISO/IEC 17025:2017.

This certificate applies only to the item described. Calibration certificate without signature and stamp is not valid. The readings presented are the results at the time of calibration and do not carry any implication regarding the long term stability of the item submitted.

ACS-CERT-COVER-Rev. 01

BATCH PLANT # 1 CALIBRATION

AL-HOTY CALIBRATION SERVICES

Water Meter	**Certificate Number:** 2009-222154
Serial Number: 17123000	**Page:** 2 of 2

Calibration Results

Test Description	Meter Setting (liters)	Measured Output (liters)	Error (liters)	Uncertainty (liters)
Meter Accuracy	200	180	-20	± 0.86

End of Certificate

AL-HOTY CALIBRATION SERVICES
A BRANCH OF AL-HOTY CO. LTD.
C.R: 2051015391
AL-KHOBAR

Standard Methods and Introduction Regarding Precast Concrete

PRODUCTION MECHANISM IN PRECON:

1-DESIGN & SHOP DRAWINGS

In Precon the Design and Planning Office consist of qualified Civil, Architect, and Planning engineers. They undertake all the design calculations related to construction of pre-cast concrete elements in accordance with the International codes and standards. They make the necessary implementations of the consultant & Client requirements in order to come up with final and precise drawings. Further more Precon is having cooperation with international precast engineering firms that allow PRECON to outsource some special pro-jects designs . In the early stage of any projects, material requirements, production and erection are carefully scheduled and monitored in order tomeet the requirements of the clients. Those information may include:

* Location of each element and its code No.
* Dimensions, Profiles and Sections.
* Reinforcement details.
* Connections, anchoring and erection insert's details.
* Lifting and Hoisting Mechanism, etc.

The engineering & planning management monitors the daily production and delivery; foresee any necessary action to be taken in to meet the agreed target dates. In general, production starts only after the final approval of the clientconsultant on our design analysis and shop drawings.

A centralized Engineering office and Design department under the control of the Engineering Manager whom responsible for all the approvals of all design coming from this department.
Production Shop Drawings : mainly, are prepared for each precast element,complete in as much detail as necessary for manufacture and erection .

Erection Drawings : Elevations and plans that show the location of each ele-ment in the project and its adjascent elements.Also it shall show details for Connections, special construction methods, other remarks.

and individual marks are given. Also, special arrangement for erection inserts anchoring details, cutouts, pipe sleeves, opening and other embedded items are indicated and sized. Once completed, the shop drawings will be forwarded to the contractors for approval.

2-PLANNING

A fully staffed planning office under control of Operational Manager is responsible for operation. Emphasis is placed upon detailed planning for material requirements, production, delivery and erection. A close relationship with clients is formed in the very early stages of a project and detailed production ; erection and delivery schedules are produced to suit their requirements. Performance is constantly monitored by the planning office throughout design, manufacture and erection periods to ensure that projects are always on target and that any necessary action required to guarantee scheduled completion date is implemented without delay.

3. PRECAST MOULDS

Our factory is fully equipped with modern mould fabrication shop for the production of steel and timber moulds. The majority of the precast element production is cast on horizontal tilting tables and pallet type bases. There are large number of universal type adjustable moulds for columns, beams and special unit. Pre-stressed Double and single tee moulds are also present with their Abutments.

All moulds fabrication is done "in house" and our carpenters and fitters are capable of manufacturing the most complex formwork that will produce an extremely high quality product.

4. STEEL REINFORCEMENT

Reinforcement supplied are stored properly in constructed racks where it is protected from contamination and damage. Reinforcement bar and mesh is cut and bent by semi-automatic machinery and will comply with BS, DIN, ASTM standards depending upon clients requirements.

5. CONCRETE DISTRIBUTION

Our concrete is made in a central batching plant. Aggregate and sand are trans-ported to the batching plant by means of conveyor belts, . Concrete is distrib-uted throughout the production areas by means of conveyour belts. concreteingreidents are accuretly measured by sensores and controlled by PLC control panel to assure quality mix. after that the concrete is lifted by over-head crane to the casting area and poured in accordance with approved technical practice.

6. LABORATORY

Experienced and fully trained personnel maintain an extensively equipped test-ing laboratory. Every effort is made to produce and maintain concrete of the highestquality and to ensure that all precast elements are manufactured to a consistently high standards.

Special attention is given to the selection of the basic raw materials and test areconducted regularly to ensure compliance with the relevant standards or to any particular contractor's requirement. Samples of concrete are taken on a daily basis from each type of mix manufactured. Cylinders or cubes are cast and tested for compressive strength at 1, 3, 7 and 28 days. All results are recorded; graphical and statistical analysis is made on a continuous basis.

When necessary, test are conducted by an independent Testing firm, approved by the client. This is particularly relevant with regard to the testing of aggregate for the chloride and sulfate content. We welcome for an inspection of the laboratory equipment and testing procedures and we offer the facilities to conduct trial mixes at any time .

7. CURING PRACTICE

Protection and Curing of fresh concrete will start immediately after final casting. Curing protects the concrete from premature drying, temperature extremes and mechanical injury, thus, allowing proper hydration of the Portland cement and hardening of the concrete.

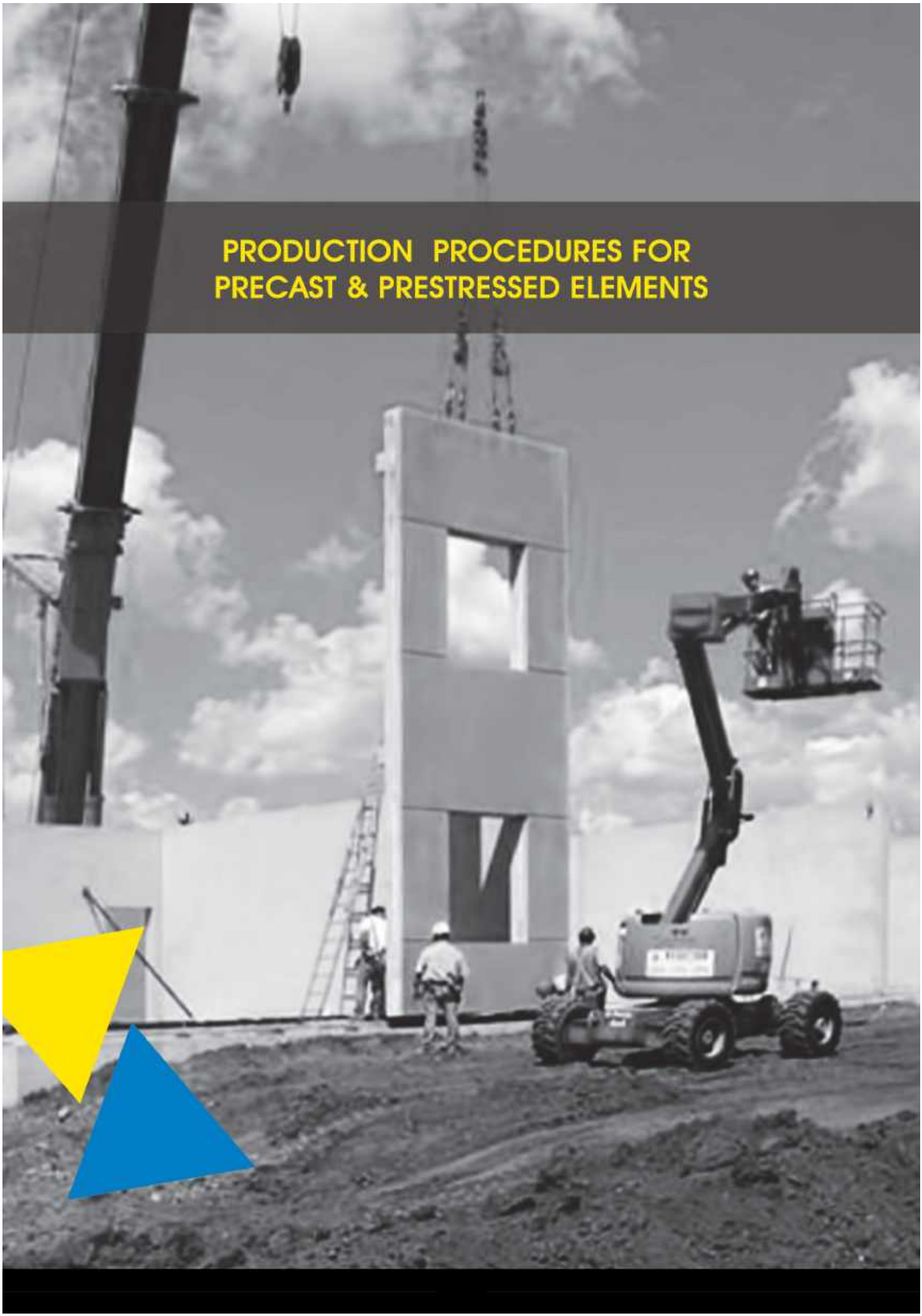
The following methods of curing are used and are subject to the type and shape of the element, their surfaces requirements and the climatic conditions during the manufacturing period :

A-Curing Agents
This method is mainly used for all of our products, this method provide fastand constent curing of Precast element .

B-Water Curing
By covering of wet mats and spraying of potable water from centralized system. Water is continuously applied for three days.

C-Steam Chambers
For standard product and some pre-stressed element which requires fast curing. Specially in winter season.

PRODUCTION PROCEDURES FOR PRECAST & PRESTRESSED ELEMENTS



NORMAL PANELS

Panels require exposed aggregate finish, have complicated features or require insulation are cast on horizontal tilting tables. Solid panels that are relatively simple in section are more likely to be cast in vertical battery moulds.

A non-standing chemical release agent is applied to all moulds surface in contact with concrete. This is applied sparingly and any excess is removed. Prefabricated reinforcement is placed in the moulds prior to casting and be supported on plastic bar spacers to ensure that the correct cover and location is achieved.
Prior to casting, all moulds are checked for dimensional accuracy, tightness, correct location of reinforcement embeds and general cleanliness.
Generally, most products are manufactured using concrete with a slump of 50 – 150mm and a water/ cement ratio of 0.30 - 0.45.
Concrete is accurately placed in the moulds to avoid disturbing the position of reinforcement and embeds.

In the case of table production, concrete is spread out manually prior to vibration and not allowed to run thereby preventing segregation. Vibration is carried out by means of electric or pneumatic external vibrating motors bolted to the main frame of the moulds. Occasionally where complicated section occur immersion vibrator are used. Concrete is poured generally in layers approximately 100mm at a time and vibrated until entrapped air has been removed.

In the case of battery moulds, vibration is continuous during the filling operation. Immediately after filling and vibration is completed, the top surface of the element is manually trowelled to the line and level. After the initial set has taken place and the concrete is in a plastic condition (between 1 and 3hours, depending on ambient temperature + humidity) final trowelling takes place. Upon completion of the trowel ling, the elements and moulds are covered with polythene sheet to avoid moisture loss from the concrete and to complete hydration of cement.

As each batch of element is cast, test cubes are taken. These cubes are stored alongside the freshly cast units for curing. The following day prior to the de-molding of the elements, the cylinders / cubes will be compression tested by the laboratory who will then authorize the de-molding provided that the strength result are satisfactory. Prior to de-molding, each element is marked it'sappropriate number and the date of casting.

1. PROCEDURE FOR TWO-LAYER CASTING

Two layer casting is normally used in the company where special aggregates or cements are specified for architectural finishes. To obtain maximum costeffectiveness, a thin layer of architectural concrete is cast with a normalstructure concrete backing mix to form an integral concrete section.

2. PRODUCTION METHOD

The face down casting technique is used which means that a thin layer (usually 50-60 mm) of architectural concrete is placed in the form and vibrated. Then the steel reinforcement is fixed and the normal concrete mix is placed in the form and vibrated. Then the steel reinforcement is fixed and the normal concrete mix is placed on the top of the architectural concrete and the two layers are vibrated together. Special attention to be made not to contaminate the backing concrete with the faxing mix and that casting to be completed within the initial setting time of the first layer.

3. INSPECTION

All quality control inspections are descriped below :-
1- Concrete Mix inspection with relative tests (Temperature, Slump,Compressive Test).
2- Mould dimensions inspections.
3- Steel reinforcment inspection.
4- Concrete pouring supervision.
5- Concrete Vibration.
6- Fare Face finishing and after cast curing.
7- Curing for three days to obtain the initial strength.

HOLLOW CORE SLAB

1. MANUFACTURING

Hollow-core slabs are cast in long casting beds using a nearly fully automatic production process based on shear compaction and extrusion or slipforming technique. The finished slabs are cut to the desired length with diamond-tipped-automatic saws once the concrete has gained sufficient strength.

2. MATERIALS

The slabs are made from concrete with compressive strength of 50 to 60 Mpa. (500-600 kg/cm2). The pre-stressing strands are conforming to ASTM A416 grade 270 (fpu=1860 Mpa) and diameter of 12.7mm or 9.5mm.

3. DESIGN

A floor consisting of hollow core slab provides a homogenous and rigid structure. Detailed information about slabs support and additional reinforcement to be grouted in slab interfaces to achieve adequate structural stiffness is given in individual work specifications. More detailed information can be obtained from Design Department of Quick Concrete Precast Factory (Precon).

4. CASTING

The HCS foreman supervises the casting of the slabs and checks that the concrete being used is acceptable as per the following criteria:
"Neither too dry which will cause drag marks nor too wet, which will cause excessive sagging, it shall conform to labartory approved mix designe for hollow core production".
The casted concrete is then covered with insulation sheets for effective curing from the time of casting.

In the event of non-conformance, the HCS foreman stops the production and contacts the Production manager for further action.

5. FINISHES

The bottom surface of a hollow-core slab is cast with steel mould or flat concrete surface. The upper surface is brushed finishe.

6. HOLES OF THE HOLLOWCORE

Holes can be made at any point at the hollow core. Maximum hole sizes are given on the diagram. There maybe no more than three holes in any one cross section. It is advisable to make any small holes on site.

The size of the holes made in the slabs depends on the span of the slab and it's load. Holes in the center of the slab require additional reinforcement.
If the width of the hole in the floor exceed 800mm, it must be fitted with stiffening beam which may consist of concrete or steel.

7. CUTTING IN THE SLAB

The HCS foreman ensures that cutouts are made in accordance with the production drawings by checking of the location and size of the cutouts.

The HCS foreman ensures that the slabs are left on the bed until the concrete has developed sufficient strength for transferring the pre-stressing forces. Strength of the concrete is checked by the cube tests.

Strength check by Cube Test

Cube test will be conducted in the laboratory and if it proves that strength developed at that time is more than specified, then hollow core slabs can be cut and removed from the bed for further processing.

8. SLABS WITH HOLE

If the slabs contain large holes that make it impossible to lift them normally, support pieces of hoops iron should be used to reinforced the slab end. A hoop iron that serves as additional reinforcement for an extension can be removed on site if necessary.

9. INSTALLATION

Hollow-core slabs are designed for quick and easy installation. However, make sure that the building site and roads provide free access for the mobile crane and delivery truck to the place of erection. Also, ensure that erection can be completed without interruption. Hollow-core slabs are easy to install using lifting booms and clamps.

THE DOUBLE TEE (TT) SLAB SYSTEM

1. GENERAL

The Double Tee slab idea is simply two symmetrically placed beams interacting with a slab and forming one section.
Each double Tee slab is normally 1800mm or 2400 or 2700mm wide and the span is varying from 4m to 22m for medium load purpose. Moreover longer span can be achieved with special design.
The slabs are manufactured in steel moulds usually using ½ " (ASTM A16) pre-stressing strands and a G60 concrete .

2. SECTION PROPERTIES

The Slab is in the name of two tee, therefore its name.
The dead load for the slab is relatively low compared to the load bearing capacity.
The section width, height and slab thickness can be varied to provide the economic section for each project.
Slab thickness is 50mm. The slab is normally combined with a structural topping, which can be considered as interacting with slab under certain circumstances.
The Double Tee slab spans over 20m for moderate loads.

3. JOINT AND SHEAR FORCES

The shear force capacity of Double Tee planks can be increased by using shear reinforcement.
D. Screed / Toppings
The thin slab section shall have a topping layer if used for floor slab. The screed can be considered interacting when designing for service Loads.
E. Suspensions, Hole Provision & Support
An object which shall be suspended from the double tee slab can be fixed by cast in sockets.
After erection light fixing can be made with expander bolts.
Hole provision with a maximum size of 400 x 400mm can be made without extra calculation. It can preferably be executed at the site.
Large holes provision has to be calculated and prepared in the pre-cast factory.
The double tee slabs can be supported in different ways.
The double tee is sometime used for architectural features.

STOCKING & DELIVERY

1. CURING COSMETIC & STOCKING AREA

Curing and production of fresh concrete will start immediately after the final finishing operation. Curing protects the concrete from premature drying, temperature extremes and mechanical injury, thus allowing proper hydration of the Portland cement and hardening of the concrete.

The following approved methods of curing are used and are subject to the type and shape of the elements, the surface finish requirements (e.g. painted or not) and the climatically conditions during the manufacturing period.

- Application of chemical agents.
- Covering with wet mats and or covering with PVS sheets.
- Spraying water.
- Heat is applied in the winter seasons when required.
- Stream curing for Hollow core slabs Pre-Stressed Concrete.

After de-molding, the pre-cast concrete elements are hauled to the stockyard by means of wagon carts where curing and finishing (Sandblast, washed exposed aggregated etc.,) are performed.

Elements are then moved by means of gantry cranes to the stocking area ready for delivery.

The stockyard area is approximately 2500 m2 out of which 10000 m2 are service by gantry cranes.

The stockyard is provided with storage racks in order to permit a free standing for the panels, care is taken that exposed surfaces are wedged with timber and

polystyrene packs between concrete.

When elements are stored horizontally, section of 10 x 10 cms timber are used covered with polystyrene pads.

TRANSPORTATIONS

1. GENERAL

The large fleet of modern vehicles owned by us, permit a fast and efficient delivery service for our products throughout the kingdom.

Pre-cast concrete elements are delivered to site using either flat bed or "A" frame type trailers. "A" frames are used primarily for wall panels and cladding units that must be transported in the upright position, and flat bed trailers for columns, beams, slabs, small products and paving.

Care is always taken that strain on concrete is avoided whether the element is transport in vertical or in a horizontal position by using timber backing.

2. HANDLING OF TRANSPORT SYSTEM

All anchors provide for lifting, transportation and erection are designed to the necessary dimensions, according to the actual strength on concrete when they are used, the structural conditions and the specifications.

The pre-cast panels used are normally designed to withstand all handling procedures in an upright position only. Very long panels which must be transported in a lying position have to be turned in their final position an extra turning device.


QUALITY
Quality Control Manual

The following quality control guidelines are dictated by the management anxiety and concern that all elements produced at our factory shall comply with the required specification, standards and code of practice.

In this context, the following information are explicitly expounding the criteria for acceptance of the raw materials, of finished products and of manufacturing procedure. Unless specified by the client or his consultants, American standards shall prevail.

In order not to have any conflict of priorities, the quality assurance department is directly reporting to the highest management independently of production personnel. Quality of the production is strictly controlled at the two stages :-

Raw materials – by material testing laboratory.
Fabrication and finish products – by the QA/QC Engineer / Inspectors.

STANDARD TESTING PROCEDURES

1. TEST ON BASIC & RAW MATERIALS

Special attention is given to the selection of the basic materials. Test are conducted regularly thus ensuring compliance with the relevant standards (ASTM, DIN, BS or any particular requirement of the client). When necessary, tests are conducted by an Independent

Testing Laboratory, on the special request by the client. Each delivery of basic material is checked visually. All materials are stored to avoid contamination and maintain cleanliness.

1.1. CEMENT

Cement is received with test certificates and delivery order. This certificate is sentto the Quality Control Engineer for scrutinizing. This may normally reviewed after the material is used. If any problem is noticed, Production Manager will be informed who will arrange to locate concrete elements produced with this cement.
Cement will be visually inspected for color and quantity. In the event of nonconformance, foreman contacts the Production Manager for further action. After inspection, Mixer Foremen signs the delivery note. Original DV is sent to the store keeper.
Once in six months, the cement will be tested in an independent laboratory for physical and chemical analysis. Result will be scrutinized and filed by the Quality Control Engineer for at least 3 years.

1.2. AGGREGATE

Laboratory foremen will receive the material and sign the Delivery note aftersatisfying himself that right material of right size .

Laboratory tests will be done on aggregates as follows.

Grading Test : once a week on the aggregates available in the aggregate storage area.

Quality Control Manager will verify the test results thereafter, the values will be enter in computer.

Other test like acid soluble Chlorides and sulfates, Specific g ravity, flakiness and water absorption will be done once every month.

1.4. BEACH SAND & DUNE SAND

Laboratory foremen receives the material and signs the delivery note after satisfying himself that material is of right size and quantity to an extent possible as per DV.

Laboratory tests will be done on aggregates as follows:
Grading Test :once a week on the aggregate available in the aggregate storage area.

Quality Control Manager will verify the test results there-after, the values will be enter in computer.

Quality Control Engineer will scrutinize test results and filed for at least 3 years and laboratory Foremen will file a copy of the same in the laboratory.

Mixer foremen shall insure that this information is passed to mixer plant operator. Mixer operator will use the sand in recommended proportions.

1.5 PLASTISIZERS & ADMIXTURES

Mixer foreman receives the test Certificate and Delivery Voucher . Test certificate is sent to the Quality Control Engineer for Verification.

Incase test report from the supplier shows a nonconformance, Production Manager will be notified and the consignment will be kept aside until further investigation is done and decision is taken in this regard.

1.6. WATER

Potable water supplied by private supplier will be used for concrete and will be checked for chemical analysis in an independent laboratory once in three months.

1.7. MICRO SILICA

Densified or intensified micro-silica are used for the production of concrete.
Production Manager is responsible for conducting the receiving inspection for micro-silica. Quantity and grade of the material mentioned on the bag will be inspected. Associated test certificates will be forwarded to the Quality Control Engineer for verification and filing.

1.8. REINFORCEMENT, EMBEDS & INSERTS etc.

Detailed inspection of incoming materials to be carried out against specifications. Tensile strength (by independent laboratory), if required.

2. TEST ON CONCRETE

2.1. TEST ON FRESH CONCRETE

- Slump test (Delivery/ Mix).
- Density test (Daily/ Mix)
- Fresh concrete temperature (Daily/ Mix)

2.2. TEST ON HARDENED CONCRETE

2.2.1. Compressive Strength

Samples of concrete are taken on a daily basis from each type of mix manufactured. Cylinder or cubes are cast and tested for compressive strength at the demoulding time and 3, 7, & 28 days. All results are recorded and graphical & statistical analysis made on a continuous basis .

The Production Manager will verify the cube test results on a daily basis. If the results are not as per requirement, then the precast components made with that concrete will be dealt as non conforming product. Engineering Manager or Structural Engineer will be informed and they will propose the corrective action or rejection of the element.

2.3. BATCHING PLANT CHECKING

In addition to the close control on the consistency of the concrete mixtures, the batch plant is visually inspected daily and scales calibration is performed by our staff on a monthly basis and by an independent firm on a bi-annum basis.

The following codes and standards are applicable:

ASTM	*C94*	*Method of test water for making concrete.*
BS 4443 steel	*ASTM A496*	*Specification for deformed wire for concrete reinforcement.*
BS4483	*ASTM A497*	*Specification for welded steel Wire-mesh.*

BS4461 and	*ASTM A615*	*Specification for deformed plain steel bars.*
BS882 aggregate	*ASTM C33*	*Specification for*
ASTM concrete.	*C40*	*Test method for organic Impurities in sand for*
ASTM	*C88*	*Test for soundness of aggregates.*
ASTM finer	*C117*	*Test method for materials Than 75 microns sieve in mineral aggregates.*
ASTM	*C128*	*Test for specific Gravity and absorption of fine aggregates.*
ASTM	*C131*	*Test for resistance to absorption of small size coarse aggregate by use of Los Angeles machine.*

3. INSPECTION

3.1 Prior To Casting

The following details will be checked before casting to ensure conformance to

shop drawings and specification:

- Dimensional accuracy of the moulds.
- Mould surfaces.
- Cleanliness of moulds,
- Proper application of release agents and surface retarder etc., if required.
- Correct location and quantity of reinforcement, spacers, Embeds and hardware and handling anchors.

3.2. After De-molding

The following checks will be performed on the elements before they are transported to the curing and finishing area.

- Dimensions (length / width / thickness / twist or bow)

General recommended production tolerances are as follows:

For Panels:

• Length	up to	3.00 meter	plus/minus	6mm
	3.5meter	4.50 meter	plus/minus	6mm
	4.5meter	6.00 meter	plus/minus	6mm

- Width (Height) plus/minus 6mm

- Thickness plus/minus 2mm

- Bowing Length of bow

up to	3.00 meter	max	6mm
3.00 meter	6.00 meter	max	6mm
6.00 meter	12.00meter	max	6mm

- Warpage — Maximum permissible warpage of one cornet out of the plane of the other three shall 6mm per meter distance from the nearest adjacent corner.

- Squareness — If the longer side is taken as base line the shorter side should not vary in its distance from a perpendicular as follow:

Length of shorter side:			
up to	1.2m	6mm	
1.2m	1.8m	6mm	
1.8m	over	6mm	

- Flatness — The maximum deviation from 1.50m straight edge should not exceed 4mm.

4. LOCATION OF EMBEDS AND INSERTS etc.

General recommended production tolerance are as follows:

- Bolts and Dowels — plus/minus 8mm from intended position
- Welding plates — plus/minus 15mm " " "
- Transport and erection — plus/minus 20mm " " "
- Electrical outlets — plus/minus 10mm " " "

- Surface finishes such as rough, trowlled as struck from mould, exposed aggregates water washed, sand blast etc.

- Structural integrity.

- Correct element identification (Project no. / element no./ casting date)

5. FINAL INSPECTION

After the completion of any finishing or remedial works, the Quality Control Man-ager carries out a final inspection upon acceptance. A stamp of approval is placed on the element. Products will not be loaded or released for delivery, without stamp approval.

LIST OF SOME EXECUTED PROJECTS

#	Project name	Location	Value
1	Precast Boundary Wall Plan # 5/125	Dammam	750,000 (SAR)
2	Precast Boundary Wall (Dammam Municipality)	Dammam	2,090,000 (SAR)
3	Solid Claddings in Al-Sulaimanyah	Dammam	150,000 (SAR)
4	Boundary Walls for Ministry of Water & Electricity	Abha	8,000,000 (SAR)
5	Al-Moteri Commercial Buildings(Precast Full Structure & Claddings)	Dammam	227,000 (SAR)
6	Precast Boundary Wall for King Fahad Hospital (Demolition & Construction)	Hofuf	3,286,055 (SAR)
7	Ambulance & Emergency Building (Precast Hollow Core Units & TT Slabs & Claddings)	Hofuf	4,377,000 (SAR)
8	Precast Bridge Girders for Saudi Railways Organization	Dammam-Riyadh	7,851,000 (SAR)
9	Houses & Villas (different owners) Complete Precast Structures	Qatif	2,835,000 (SAR)
10	Al-Dahia Schools (Khoetem Al-Malki)	Dammam	291,960 (SAR)
11	Precast Boundary Walls (Saudi Prefab Houses)	Dammam	650,000 (SAR)
12	Private Villas (Qatif Housing)	Qatif	450,000 (SAR)

#	Project name	Location	Value
13	Precast Boundary Wall (Ministry of Health)	Hofuf	1,250,000 (SAR)
14	Precast Boundary Wall (Psychiatric Hospital)	Al-Ahsa	750,000 (SAR)
15	Boundary Walls for Ministry of Health (Pediatric Hospital)	Tabuk	2,110,530 (SAR)
16	Boundary Walls for Ministry of Health (Pediatric Hospital)	Hail	2,018,802 (SAR)
17	Precast Boundary Wall (Old Cemetery)	Saihat	1,000,000 (SAR)
18	1 Units of 3-Storey Precast Labor Camp CWC Compound	Nabia	2,040,000 (SAR)
19	2 Units of 2-Storey Precast Labor Camp Al-Hossan Compound	Dammam	5,250,000 (SAR)
20	Security Forces Hospital	Dammam	3,286,000 (SAR)
21	Precast Boundary Wall (King Fahad University)	Dahran	31,608,098 (SAR)
22	Precast Boundary Wall For King Abd-Allah City Of Dates	Al-Ahsa	6,600,000 (SAR)
23	Precast Boundary Wall For Al-Ahsa Secretariat	Al-Ahsa	1,296,500 (SAR)
24	Mosqe and Facilities (Pan Gulf)	Dammam	2,500,000 (SAR)
25	SPH office building	2nd industrial Area	850.217(SAR)
26	Extension of precast villas at katif housing	Katif	273.469(SAR)
27	AL-Malky school precast Cladding	Dammam	445.317(SAR)
28	PRECAST BOUNDARY WALL FOR YANBU CEMENT COMPANY	YANBU	43,000,000 (SAR)

#	Project name	Location	Value
29	Precast Bridge girders for dana bay resort	Dammam	11,851,000 (SAR)
30	Saite Fencing for city Ofpilgrims	Al-Hasa	1,692,500 (SAR)
31	Saite Fencing for Community College (KFUPM)	Al-Hasa	18,725,175 (SAR)
32	Ministry of Water and Electricity (Sites Fencing)	Dammam	2,892,570 (SAR)
33	Precast Boundary Wall for Nestle Waters Factory	Dammam	1,025,850 (SAR)
34	Precast Security Room for ARAMCO	Abqaiq	4,740,000 (SAR)
35	Precast Cladding for Al-sharqia Chamber in khafji	Khafji	1,350,710 (SAR)


SECURITY FORCES HOSPITAL
(Precast Cladding)

Factory Office

AL-DAHIA SCHOOL FOR BOYS (Precast Cladding)

Photos of some executed projects`

Al-Osais

SHOWROOM &
OFFICE BUILDING

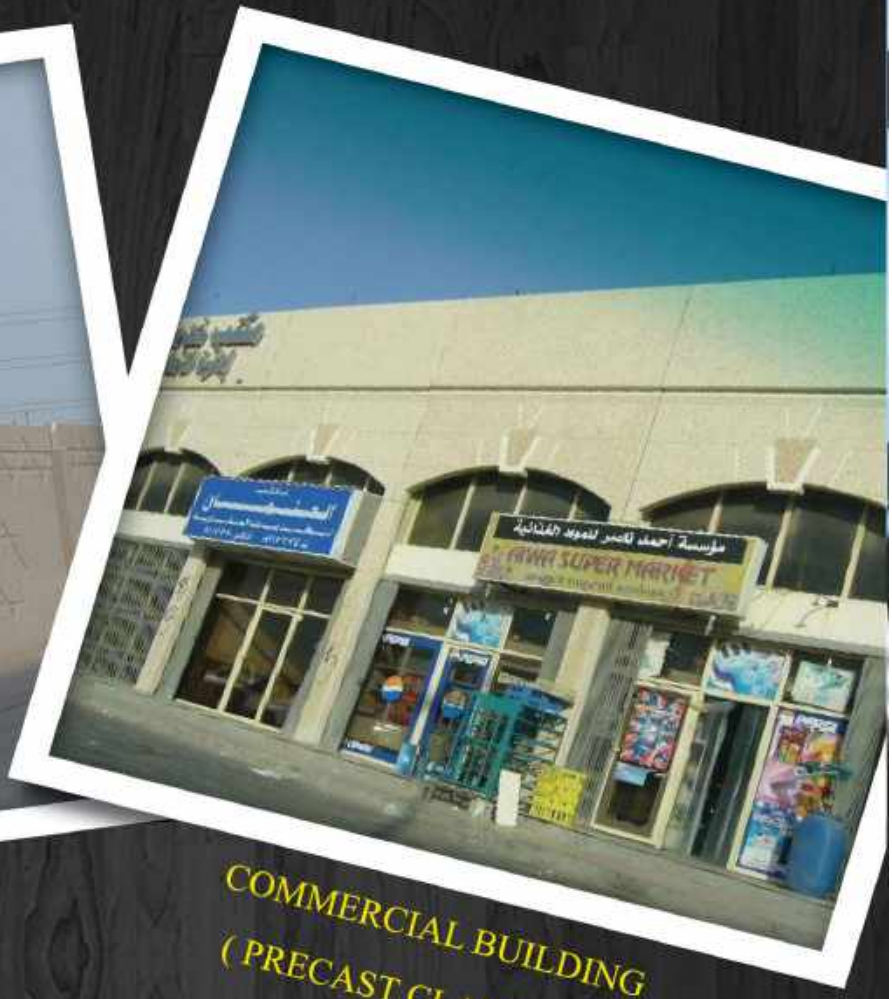
LABOR CAMP
AL-HOSSAN COMPOUND

AL-OSAIS COMPOUND
(BOUNDARY WALL)

PRECAST CLADDING PROGECT (KHOBAR)

FRAME SYSTEM WITH CLADDING

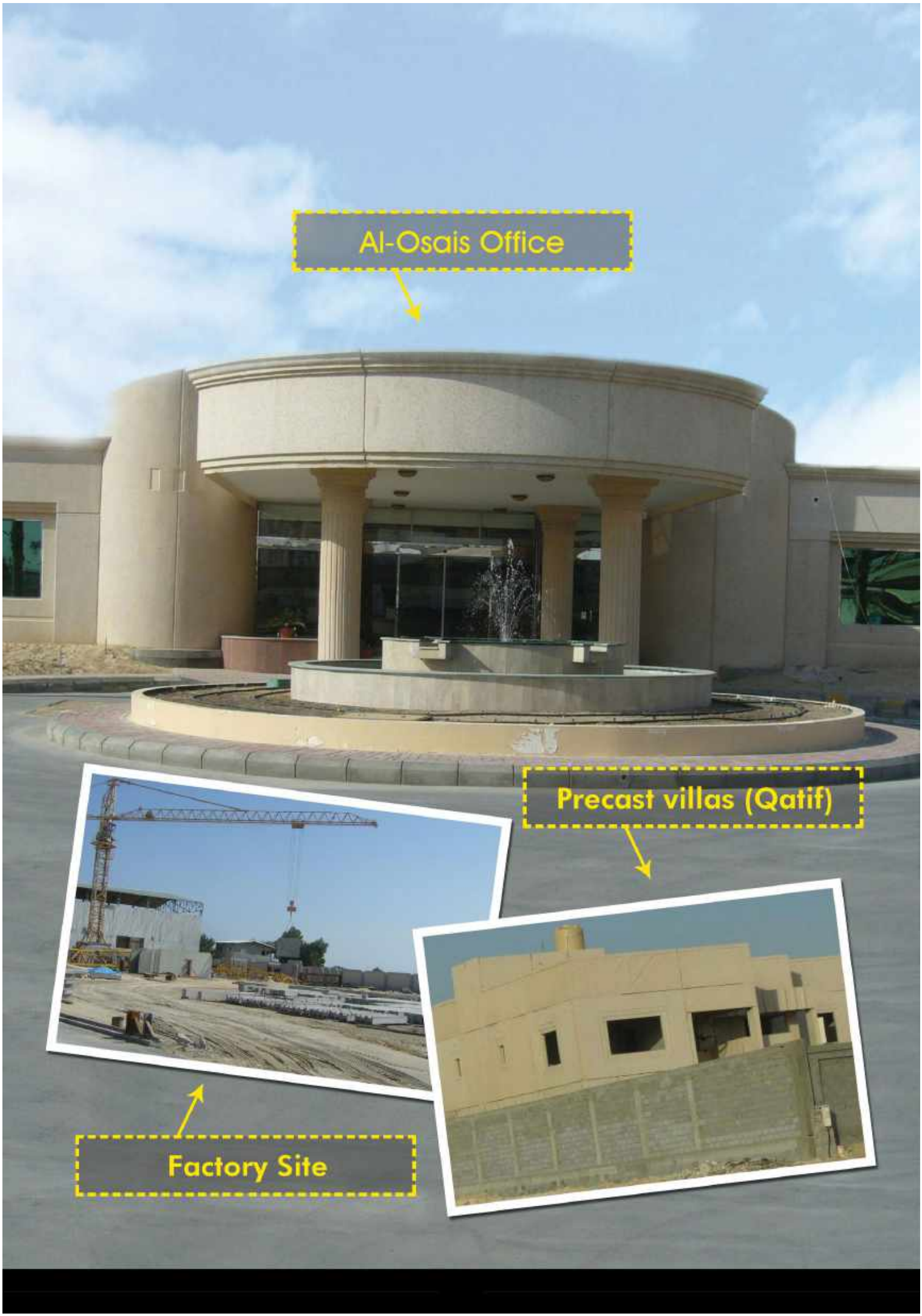
OLD CEMETERY
(BOUNDARY WALL)



COMMERCIAL BUILDING
(PRECAST CLADDING)

SAUDI PREFAB HOUSES
(BOUNDARY WALL & STAFF ACCOMMODATION)

MAIN MEDICAL STORE IN HOFUF
(BOUNDARY WALL & GUARD HOUSES)


Al-Osais Office
Precast villas (Qatif)
Factory Site

MOH Alhasa

KFUPM

KFUPM Project

Transportation system

Precast Girder for SRO

Precast Bridge Girder for SRO

(MOSUQE AND FACILITIES)

SAUDI PREFAB HOUSES


Precast Works
بريكون


15/09/2012


Factory Enterance
مؤسسة علي الحصان للمقاولات
ALI ALHOSSAN CONTRACTING EST.
مصنع الإنشاءات المسبقة الصنع
PRECAST STRUCTURES FACTORY
PRECON
KFUPM Type "A"
OMNI SLABS

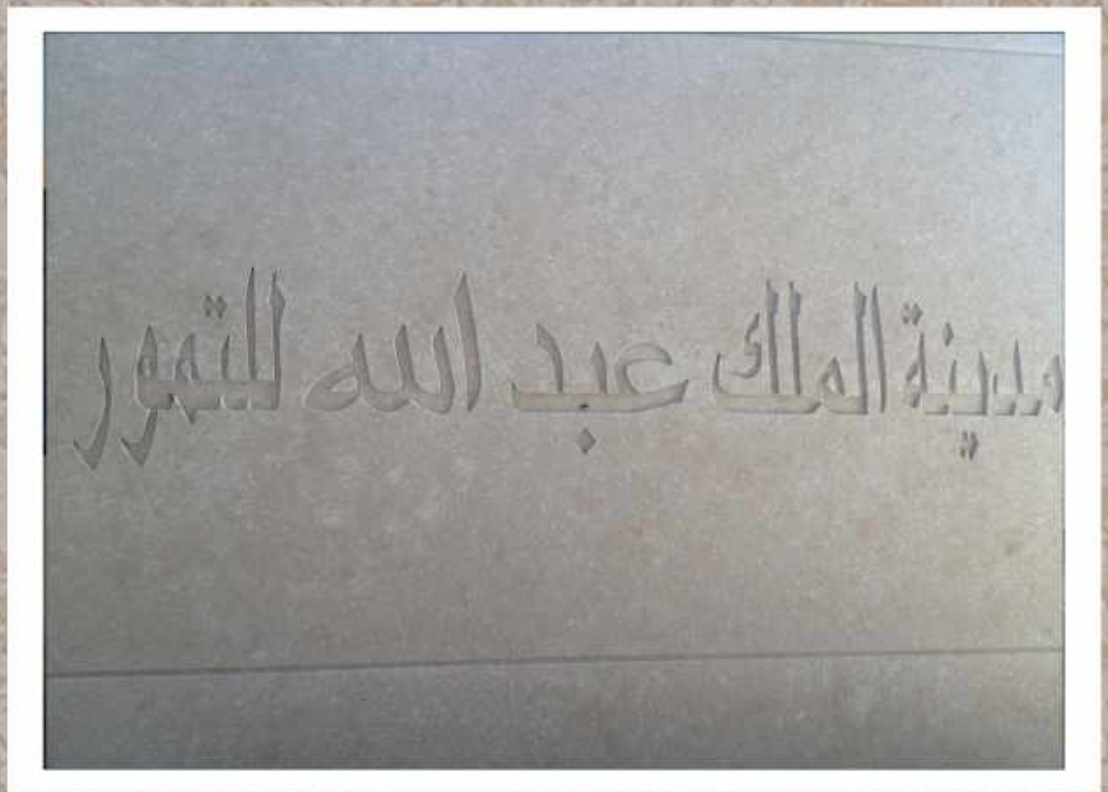

بلدية المنطقة الشرقية


21/01/2013

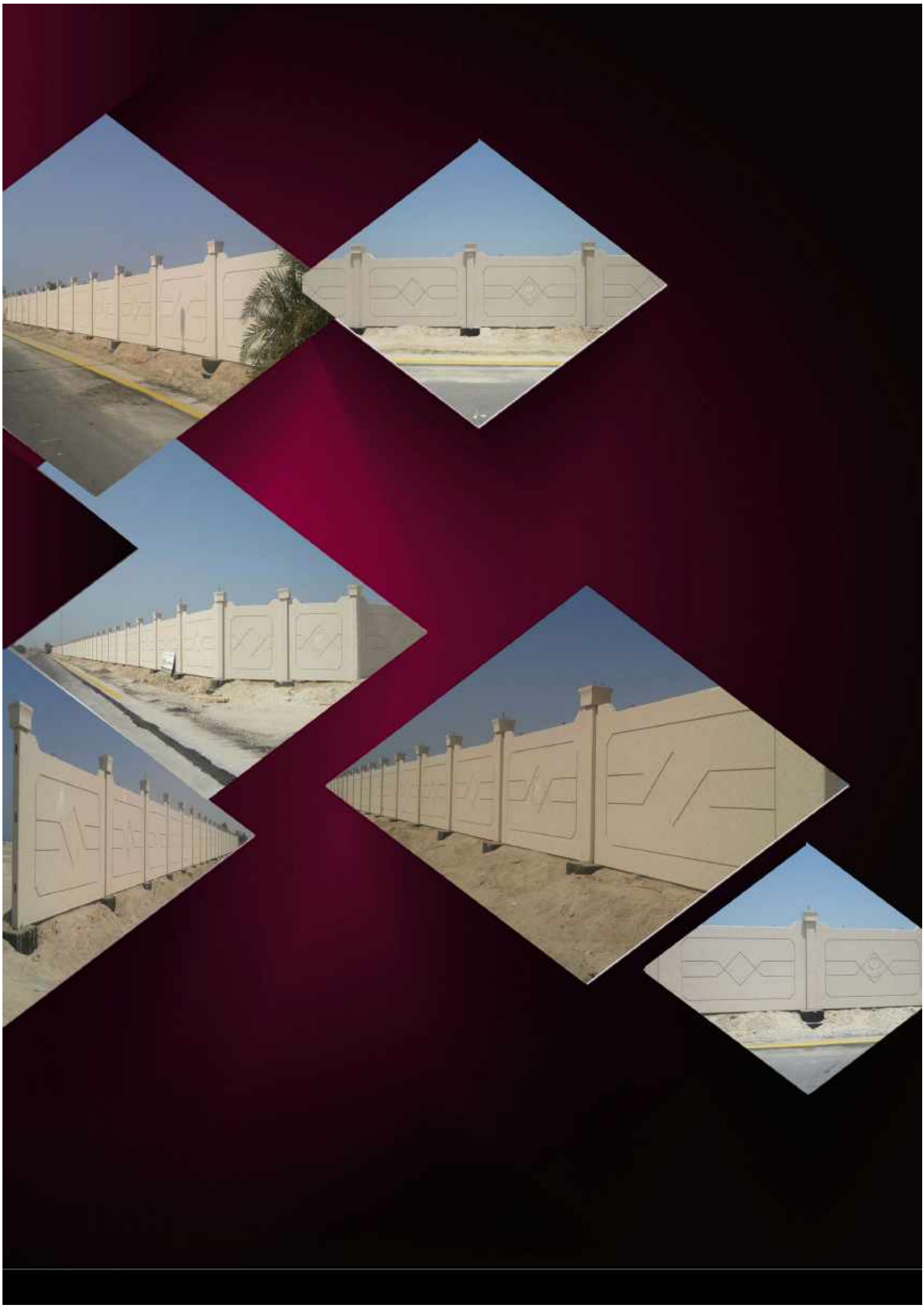
وزارة المياه والكهرباء
MINISTRY OF WATER & ELECTRICITY


13/01/2013 15:14

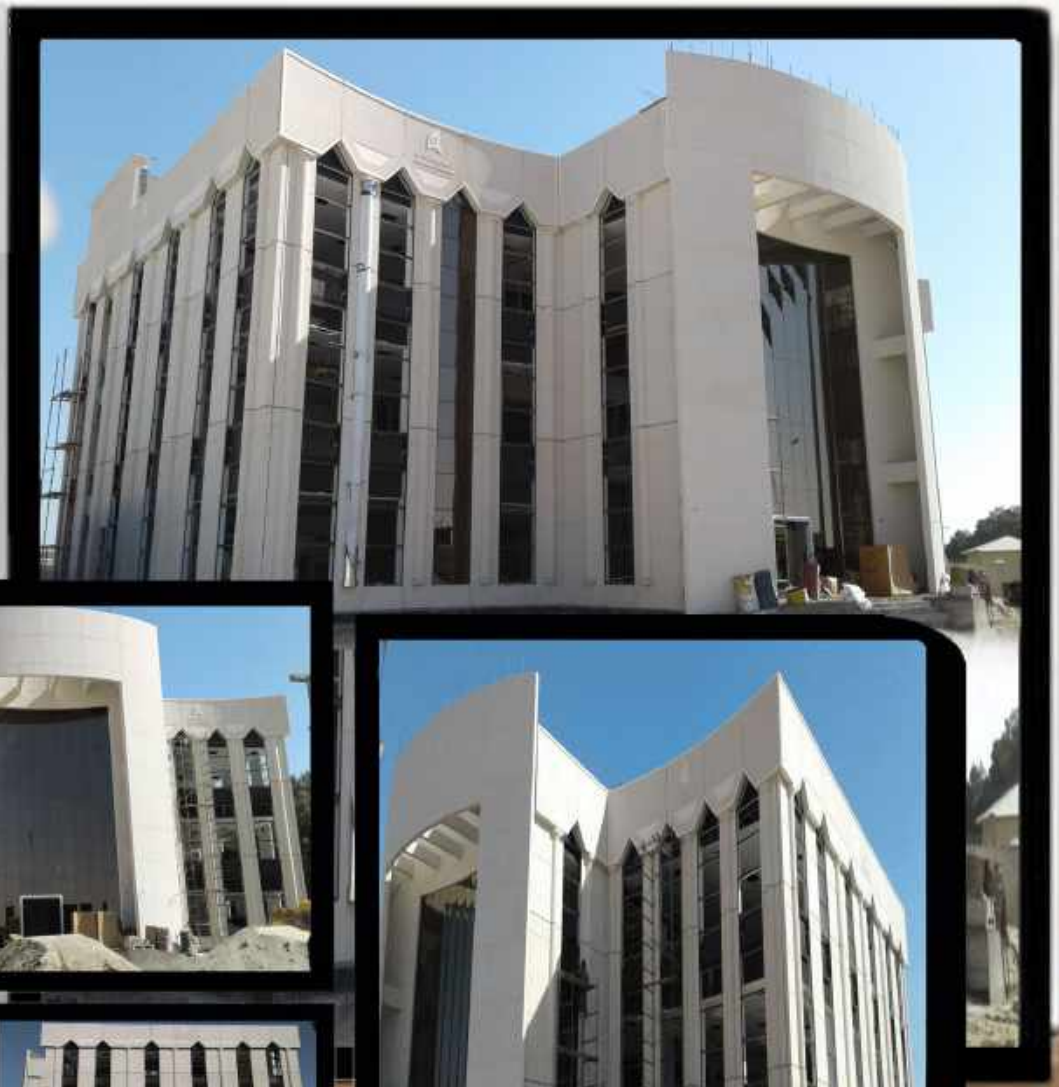

HOLDING CO.
13/01/2013 15:12


مدينة الملك عبد الله للتمور

PRECAST BOUNDARY WALL FOR YANBU CEMENT COMPANY YANBBU



PRECAST CLADDING FOR AL-SHARQIA CHAMBER IN KHAFJI

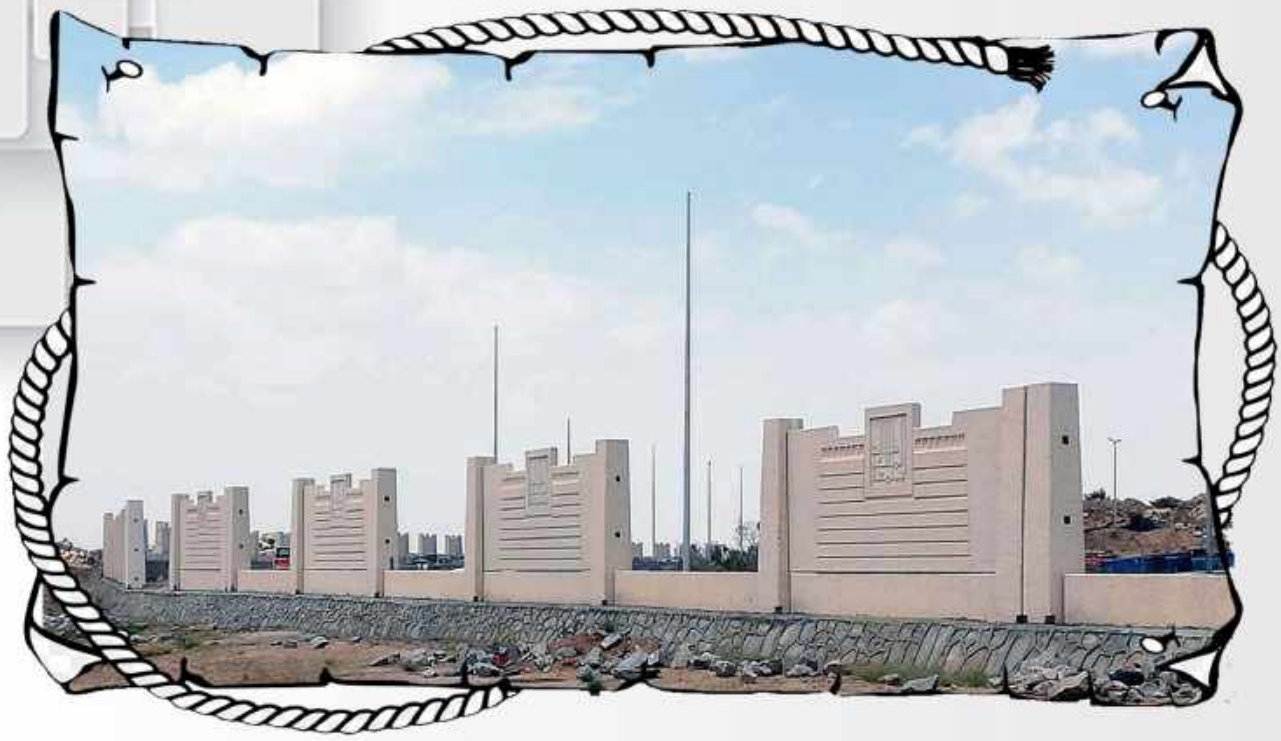


PRECAST BRIDGE GIRDERS FOR DANA BAY RESORT

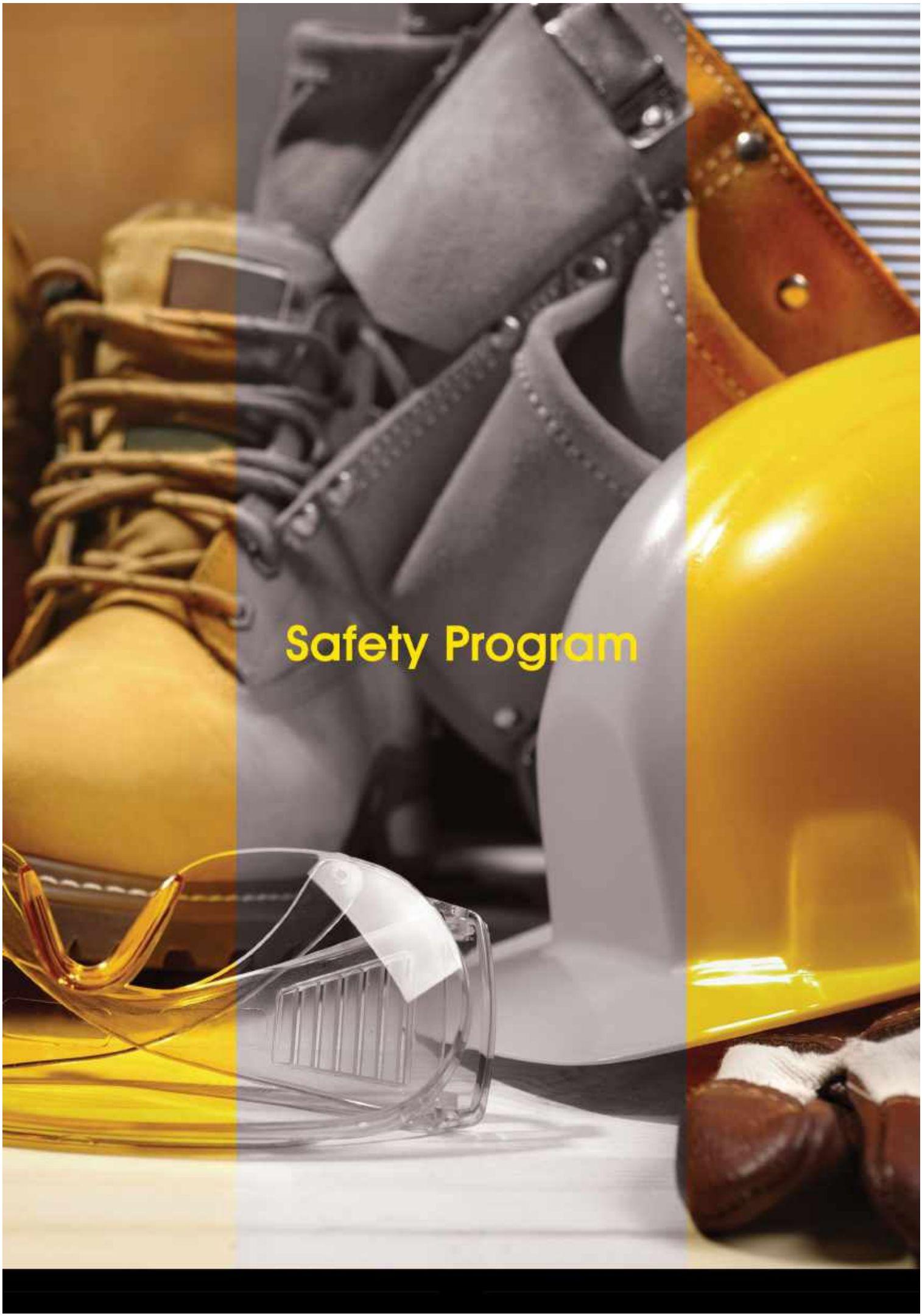
1 UNITS OF 3-STOREY PRECAST LABOR CAMP AL- HOSSAN COMPOUND

RIC LANDSCAPE AND LRRIGATION

KING KHALID UNIVERSITY



EXTENSION OF PRECAST VILLAS AT KATIF HOUSING


Safety Program

1. PROTECTION OF WORKERS

Appropriate "protective" clothing is available and is to be used when necessary in particular :

- Safety helmets are to be worn at all times.
- Safety boot / shoes are to be worn at all time.
- Safety harnesses are to be used as directed.
- Personal engaged in special tasks, such as welding, are to use appropriate protective equipment.
- Edge protection is to be erected as necessary to ensure that workmen are not exposed to an unacceptable level of risk.
- All ladders and scaffold towers are to be inspected prior to use. No-damaged items are to be used. Mobile scaffold towers are only to beused on a firm level base in accordance with the manufactures instruction. Ladders are always to be secured near the top or "footed" by a man at the bottom.

Exceptionally adverse weather conditions

The interpretation of what is exceptionally adverse weather and whether work-should be suspended due to there being an unacceptable level of risk either to the workmen or of doing damage to equipment or the structure resets with the senior person on site. The following must be considered.

- The effect of high winds on the safe handling of elements.
- The effect of bad visibility (i.e. fog or sandstorm) on the ability of crane operators to see the load or the banks – man.
- The effect of rain on working surface, ladders, scaffolds and the like.
- The danger of a lightning strike. Normally work should be stopped above ground level when lightning is in the vicinity

Protection of third parties.

- The area where pre-cast erection is in progress should be designated as a prohibited area to all persons other than those involved in the erection.
- Loads should not be hoisted over areas where other persons are working.
- On the occasions that it is necessary to unload elements from vehicles parked on the public rod arrangement must to keep the public outside the potential danger area.
- Any visitors to the site are to be forced to take the same safety precautions as those persons working there.

FIRE PROTECTION AND PREVENTION PROGRAM

A. INTRODUCTION

1. an cause serious damage to plant and property and serious injury or loss of life to personnel. Good housekeeping plays an important role in Fire Prevention Program.

2. To help prevent the outbreak or continued combustion of fire, the following rules at the Work site will be observed:

a) All Hot work shall be under strictly controlled conditions.
b) Electrical outlets shall not be overloaded.
c) All smoking operatives will smoke in designated areas only.
d) Non-sparking tools and equipment will be used in areas of high risk.
e) Good housekeeping practices will be followed.
f) Flammable gas cylinders will be stored in an upright position and segregated cylinders. from oxygen.
g) Flammable substances will be stored in a segregated area.
h) Faulty oxygen or acetylene hoses and gauges will be discarded.
i) hot work is completed or during any period of meal breaks, oxygen and acetylene will be turned off at the gauges.

j) Clothes or rags will not be hung to dry in the vicinity of heaters.
k) Oily rags will not be discarded in containers with other materials.
l) After welding and burning operations, the surrounding areas will be inspected for smoldering materials.

B. FIRE PROTECTION EQUIPMENT

• temporary buildings, yards, storage areas and the workplace will have strategically located fire extinguishers.
• Designated fire wardens will inspect the extinguishers monthly and record the findings.
• Empty or damaged extinguishers will be placed.
• The correct type of extinguishers will be placed to the adjacent materials or substances.
• Types of extinguishers are:

• Water – used for solid organic materials, wood, paper, cloth, etc.
• Dry Powder – used for solid materials or liquids, oils, electrical equipment.
• Carbon Dioxide can be used on all kinds of fires.

NOTE: Do not use water spray on electrical equipment.

C. FIRE PRIVENTION RULES

1. Combustible materials will not be placed near sources of ignition.
2. All employees will have familiarization courses on the use of extinguishers, fire prevention and protection techniques.
3. Emergency telephone numbers will be conspicuously posted at worksite and all employees will be familiar with these numbers and Alarm procedure.
4. Sufficient extinguishers of correct type will be conspicuously posted at worksite and all employees will be available for use.

5. Emergency Exits will be sign posted and well visible without any obstructions.
6. All plants and equipment will carry fire extinguishers.
7. Extinguishers will be placed in close proximity to "Hot Work" operation.
8. Housekeeping will be undertaken on regular basis.

D. EMERGENCY PROCEDURES IN CASE OF FIRE

1. If any operative discovers a fire, he should:

- Raise the alarm.
- Attempt to extinguish the fire using local extinguishers.
- Be sure that the Exit is at your rear and escape is always possible.
- If the fire escalates, vacate the area.
- Await Emergency Services and direct them to the location of the fire.
- Never attempt to be a "Hero". This can possibly put other personnel at risk in attempting your rescue.

2. To help prevent the outbreak or continued combustion of fire, the following rules at the Work site will be observed:

a) All Hot work shall be under strictly controlled conditions.
b) Electrical outlets shall not be overloaded.
c) All smoking operatives will smoke in designated areas only.
d) Non-sparking tools and equipment will be used in areas of high risk.
e) Good housekeeping practices will be followed.
f) Flammable gas cylinders will be stored in an upright position and segregated cylinders. from oxygen.
g) Flammable substances will be stored in a segregated area.
h) Faulty oxygen or acetylene hoses and gauges will be discarded.
i) hot work is completed or during any period of meal breaks, oxygen and acetylene will be turned off at the gauges.

2. Upon hearing the alarm or being informed by word of mouth, all personnel will:

- Shut down all equipment.
- Vacate their place of work.
- Proceed immediately to their Allocated AssemblyPoints .
- A roll call is affected and each person is accountedfor .
- No person returns to work until "All clear" is given .

E. LEU PERSONNEL IN EMERGENCY FIRE RESPONS

1. Incident Liaison Officer – Project Manager. Incident Liaison
2. Assistant – SafetyOfficer. Liaison Officer Site /Gen. Office –
3. ConstructionSupervisor. EmergencyMarshals – Construction
4. Supervisors.
5. Wardens Foreman.

F. DUTIES

1. INCIDENT LIAISON OFFICER

- Report to AL-HOSAN Control Center (Project Manager's Office / Reception).
- Liaise with Client Emergency Controller.
- Amalgamate accountability of all personnel.

2. INCIDENT LIAISON ASSISTANCE

- COLLECT DAILY TIME SHEET (ALL PERSONNEL).
- Report to AL-HOSAN Control Center.
- Standby for further duties.

3. SITE LIAISON OFFICER –SITE/GENERAL OFFICE

- Report to Incident Control Center.
- Monitor Events – Liaise with AL-HOSAN Central Office as required.
- Ensure two-way radio is operational.

4. SWITCHBOARD OPERATOR

- Standby switchboard for duties as required.

5. NURSE

- Standby switchboard for duties as required.

6. EMERGENCY MARSHALS

- Report to Assembly Point (after obtaining copies of daily time sheets)
- Register all attendees. Report AL-HOSAN Control Center when headcount is completed.
- Standby – Await further instructions.

NOTE: A two-way operational radio should be carried.

7. DESIGNATED WARDENS

- Tour site-ensure that all operatives leave their place of work (after switching off all engines).
  Confirm that site is clear – report to Emergency Marshals.
- Standby for further instructions.
- Maintain orderly control of workforce at assembly point.

8. SUB-CONTRACTOR SUPERVISOR

- Ensure all operatives leave site (after switching all engines).
- Report with them to assembly point.
- Standby for further instructions.

EMERGENCY LOCATIONS, TELEPHONE NUMBERS & RADIO CHANNELS:

- AL-HOSAN Emergency Control: Main Site Office –Radio
- AL-HOSAN Main Office (Off Site) – 341 2561
- Assembly Points: To be determined dependent upon site layout and pro cedures. The Assembly Points will be indicated by signs and explained to the employees.

FIRST –AID AND MEDICAL SERVICES PLAN

A. POLICY

1. It is the Company Policy to provide first-aid facilities, medical, and emergency services for employees who incur occupational injuries or illnesses.

2. The first-aid facilities on this project will be provided in accordance with Saudi Labor and Workmen Law Chapter-7, (Protection of S0cial Services, Labor & Workmen Law-Articles 134, 135 & 136)

B. RESPONSIBILITIES

1. The responsibility for evaluation the scope of first-aid medical services required to meet the safety and health needs of the project is shared by the company's Safety Department, Project Manager and the company's Chief of Client.

2. The determination of First Aid and Medical Services ements shall be completed no later than the pre-job conference .

1. The above listed items will be furnished in proportion to the number of workmen.

2. Signs will be posted in conspicuous places in the work sites to indicate the location of

3. The first-aid cabinet and the name of the workman in charge of first-aid facility.

4. The first-aid cabinet will be placed under the supervision of an attendant, who shall ensure that the cabinet is well stocked at all times.

5. The first-aid cabinet shall contain the first-aid supplies only.

G. FIRST – AID POSTING

1. Contractor shall post notices indicating the following:
a. The name of the person who is in charge of the first-aid cabinet.
b. The hospital to which any injured person, that requires hospital treatment is to be sent.
c. The telephone number of the doctor or the first-aid attendant employed by the company.
d. The emergency telephone number to be called for assistance.

H. EMERGENCY TRANSPORTATION

1. A jobsite dedicated emergency vehicle (ambulance) will be provided since in the near vicinity there is no immediate means of communication to take the injured or seriously ill person to the nearest designated hospital or clinic. The ambulance will be properly marked and adequately supplied.

2. The ambulance will be equipped, as a minimum, with the following supplies:
A suitable type of stretcher Portable oxygen Splint for bone fractures Bandages/rubber tourniquet Sterile washbasin .

3. The Project Manager will appoint drivers for emergency duties and their names will appear on the designated competent person list.

I. FIRST-AID RECORDS

A Site Register is maintained to keep the medical records of all injuries treated.


PRECON
TEST REPORTS

C. FIRST-AID STATIONS

1. The project that require an effort of personnel in excess of 50 persons at a time, therefore the first –aid stations shall be established.
2. first did stations shall be in care oftrained attendants, who will be third party.employee and who will be trained in the first –aid procedures.
3. During the course of the project when there are less than 50 employees at worksite, the Safety Officer shall be given additional first-aid duties.

D. FIRST-AID FACILITIES

1. The company shall provide and maintain an adequate size first-aid facil-ity, complete with standard equipment and supplies. Such facilities shall be readily accessible to the majority of employees and to transportation. The first-aid facilities shall be kept in a sanitary condition at all times.
2. The first-aid kits, supplies, and facilities will be furnished according to doctors or nurses ctions .
3. Minimum requirements shall include the following: a telephone; desk; hot and cold water; wash basin; examination table; air conditioning unit; adequate lighting; and dust tight medical cabinet.

E. FIRST-AID AND MEDICAL PERSONNEL

Company shall secure services of a licensed Nurse during working hours, which

- will manage the first-aid facility under the direction of a licensed Physician.

- Nurse shall be familiar with first-aid cardiopulmonary resuscitation (CPR) requirements and exclusively assigned to medical duties.

- Nurse shall keep medical records, first-aid log and the medical files on current basis.

- Nurse with coordination with PRECON shall determine the nearest hospital for emergency cases or intensive care needs.

- Medical personnel will render a follow-up treatment if required.

F. FIRST-AID AND MEDICAL PERSONNEL

At project site office, the large first-aid box (cabinet) will be provided. The first-aid Cabinet shall contain bandages, medicines, and disinfectants as follows:

a. A sufficient number of not less than 12 sterile, small size finger dressings.

b. A sufficient number of not less than 12 sterile, medium size hand dressings.

c. A sufficient number of not less than 12 sterile, large size hand dressings.

d. A sufficient supply of absorbent cotton wool for packing and firming up splints. Such supply will not be less than 200 grams of cotton wool in small 25-gram packages and two 500-grams packages.

e. A sufficient number of not less than 12 gauze bandages seven cm. In width.

f. A sufficient number of not less than 12 gauze bandages 11 cm. In width.

g. Not lees than four meters of adhesive tape in rolls, one cm. In width.

h. Not lees than 100 gram of Mercurochrome in aqueous solution.

i. Two 10-gram shakers of sulfa powder for sterilization of wounds.

j. 100-gram of aromatic ammonia solution in a glass bottle with a glass stopper.

k. A medium-sized Thomas' thigh splint, a wooden posterior leg splint, a wooden elbow splint, a wooden Carr splint for the forearm, a wooden palm splint, and other types of ready-to-use splints.

l. A minimum of six triangle bandages.

m. A minimum of safety pins.

n. Ointment for burns containing a disinfectant and an analgesic.

o. A minimum of ten 70 X 70 bandages for burns.

p. A pair of scissors with blunts ends.

q. A sufficient number of stretchers for moving injured persons.

APPROVED Mix Design Report

PRECON PRECAST FACTORY

QUANTITY CONTROL UNIT

SIEVE ANALYSIS OF FINE AGGREGATE (ASTM C-33&136)

NET WEIGHT(gms)	1020	MOISTURE CONTENT	0.50%
DRY WEIGHT(gms)	1015	DUST CONTENT	0.80%
WASH WEIGHT(gms)	1007	TESTING DATE	4/10/2018

SIEVE SIZE		PER SIEVE RETAIND WEIGHT(gm)	SIEVE RETAIND%	PASSING %	SPECIFICATION
INCH	MM				
3/8	9.5	0	0	100	100
# 4	4.75	0	0	100	95-100
# 8	2.36	0	0	100	80-100
# 16	1.18	170	16.8	83.2	50-85
# 30	0.6	730	72.4	28.6	25-60
# 50	0.3	935	92.2	7.8	10-30
# 100	0.15	1003	98.9	1.1	2-10
# 200	0.075	1008	99.3	0.7	0-5
FINE MODULUS			2.8		

SAND READING: 3.6 CLAY READING: 5 4.1 SAND EQUAVALENT %: 87.8

REMARKS:

TESTED BY:
MOHD HASEEN

CHECKED BY:
ENGR.AHMED SOWEITY

Compression Test Report

PRECON PRECAST FACTORY

QUANTITY CONTROL UNIT

SAND EQUAVALENT TEST(ASTM-D2419)

MATERIAL: WHITE SAND		SOURCE OF MATERIAL: STOCK PILE	
SAMPLE NO.	1	2	3
SAND READING:	3.4	3.5	3.6
CLAY READING:	3.8	3.9	4
SAND EQUAVALENT%:	89.5	89.8	90
SAND EQUAVALENT AVERAGE%:			89.8
TESTED DATE:			30/9/2018

REMARKS:

TESTED BY:
MOHD HASEEN

CHECKED BY:
ENGR. AHMED SOWEITY

Gradation Test Report (Coarse Aggregate)

PRECON
PRECAST STRUCTURES FACTORY

PRECON PRECAST FACTORY
QUANTITY CONTROL UNIT
SIEVE ANALYSIS OF COURSE AGGREGATES
(ASTM C-33&136)

NET WIEGHT(gms)	1939	TYPES OF AGG.	3/4,	TESTED DATE	9/10/2018

SIEVE SIZE INCH	SIEVE RETAIND WEIGHT(gms)	SIEVE RETAIND %	PASSING %	SPECIFICATION
# 1	0	0	100	100
# 3/4	70	3.7	96.3	90-100
# 1/2	1425	73.4	26.6	20-55
# 3/8	1890	97.5	2.5	0-15
# 4	1933	99.7	0.3	0-5
# 200	1935	99.8	0.2	0-1

REMARKS:

TESTED BY:
MOHD HASEEN

CHECKED BY:
ENGR. AHMED SOWEITY

Gradation Test Report (Fine Aggregate)

PRECON- PRECAST FACTORY
QUANTITY CONTROL UNIT
SIEVE ANALYSIS OF COURSE AGGREGATES

(ASTM C-33&136)

NET WIEGHT(gms)	1500	TYPES OF AGG.	3/8,	TESTED DATE	24/1/2018

SIEVESIZE	SIEVE RETAIND WEIGHT(gms)	SIEVE RETAIND %	PASSING %	SPECIFICATION
# 1	0	0	100	100
# 3/4	0	0	0	100
# 1/2	0	0	0	100
# 3/8	158	10.54	89.46	85-100
# 4	1329	86.6	11.4	10-30,
# 8	1414.7	94.3	5.7	0-10
# 200	1482.8	98.9	1.1	0-1

REMARKS:

TESTED BY:
MOHD HASEEN

CHECKED BY:
ENGR. AHMED SOWEITY

PRECON

PRECAST STRUCTURES FACTORY

COMPRESSIVE STRENGTH OF CONCRETE

CONTRACTOR	SAUDI AIRBASE		
PROJECT	DAHRAN	DESCRIPTION	CONCRETE MIX DESIGN C-30
TYPE OF SAMPLE	CUBE	CEMENT CONTENT KG/M3	400 KG
TYPE OF PROJECT	BOUNDARY WALL	TESTING DATE 7 DAYS	13/8/2018
TESTED BY:	MOHD HASEEN	TESTING DATE 28 DAYS	3/9/2018

SL NO :	DATE SAMPLED	AGE AT TIME OF TEST	AREA OF CUBE cm^2	VOLUME OF CUME cm^3	WT. OF CUBE gm	UNIT WT. g/cm3	LOAD IN KN	STRENGTH IN Mpa	AVG. STRENGTH IN Psi	REMARKS
1	6/8/2018	7 DAYS	225	3375	8205	2.43	627	27.9	4016.5	ACHIEVED STRENGTH IS MORE THAN REQUIRED
2	6/8/2018		225	3375	8207	2.43	618	27.5		
3	6/8/2018	28 DAYS	225	3375	8190	2.43	811	36.1	5278	ACHIEVED STRENGTH IS MORE THAN REQUIRED
4	6/8/2018		225	3375	8198	2.43	824	36.7		

PREPARED BY:

MOHD HASEEN

CHECKED BY :

ENGR. AHMED SOWEITY
PRODUCTION MANAGER

Moisure Content Test Report

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