

	Al-Zour Refinery Project Modification at MAA Refinery for Interim supply to ZOR Refinery	Company Job No.	Company Doc. No.						
		ZOR/EPC-0059	S-P4059ZOR-68-10-19-164						
	DOCUMENT TITLE	Contractor Job No.	Contractor Doc. No.						
		032192 / I-1006	68-ZA-E-04164-001-MAA						
		Subcontractor Job No.	Subcontractor Doc. No.						
	REQUEST FOR APPROVAL OF MATERIAL (RAM) CABLE PROTECTION TILES & ROUTE MARKER	1205932	HSCM-SA-ZOR-D-04164						
	Page 1 of 20	Rev.	<table border="1"> <tr> <td>O</td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> </tr> </table>	O					
O									

Al-Zour Refinery Project
Modification at MAA Refinery for Interim Supply to ZOR
Refinery

REQUEST FOR APPROVAL OF MATERIAL (RAM)
CABLE PROTECTION TILES
& ROUTE MARKER

(MS.MIDDLE EAST COMBINED CO)

SUBCONTRACTOR NAME: HEISCO

saipem spa		
DOCUMENT STATUS	SIGNED	DATE
<input checked="" type="checkbox"/> Approved.	<i>B. Magdy</i>	6 MAR 2019
<input type="checkbox"/> Approved with Comments - Incorporate and resubmit. (Vendor can proceed with fabrication.)		
<input type="checkbox"/> Not Approved/Rejected - revise and resubmit. (Vendor cannot proceed with fabrication.)		
<input type="checkbox"/> Received as information.		
THE ISSUE OF THE CERTIFIED FINAL DOCUMENT DOES NOT RELIEVE THE VENDOR OF HIS RESPONSIBILITY OR LIABILITY UNDER THE CONTRACT/PURCHASE ORDER.		

O	Issue for Approval	QCI (RG)	PM (RE)	OM (AH)
Rev.	Description	Prepared	Reviewed	Approved
		Date		

	Al-Zour Refinery Project Modification at MAA Refinery for Interim supply to ZOR Refinery	Company Job No.	Company Doc. No.		
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		032192 / I-1006	68-ZA-E-04164-001-MAA		
		Subcontractor Job No.	Subcontractor Doc. No.		
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HOLDS

Pos.	Sheet	Paragraph	Description

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1.0 REQUEST FOR APPROVAL OF MATERIAL (RAM)



**Al-Zour Refinery Project
Modification at MAA Refinery for Interim
supply to ZOR Refinery**



REQUEST FOR APPROVAL OF MATERIAL (RAM)

RAM Reference no: SPES-CIV-RAM-0018

Rev.: O

CONTRACTOR: SPES

Date submitted:

1/20/2019

Sub-Contractor: HEISCO

Contract N°: 1205932

Submitted by: HEISCO

Submitted to: SPES

We request approval to the following material

Material Description	Cable Protection Tiles & Route Marker		
Material Specification	DEP 34.13.20.31 - Gen Clause. 5 Page.No : 20		
Material to be used for	Under ground Cable Protection -		
Brand/Manufacturer	M/S Middle East Combined Gene. Trading Co.W.L.L		
Supplier	M/S Middle East Combined Gene. Trading Co.W.L.L		
Catalogue/Brochure	Attached Test Certificate		
Complies with specification	NA <input type="checkbox"/>	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>
Supplier in VEC list	YES <input type="checkbox"/>	Not Categorized in VEC list <input checked="" type="checkbox"/>	NO <input type="checkbox"/>
VEC product code:		Vendor code:	

After Approval

Enclosures	Yes	No	Remarks
Purchase Order *		√	Delivery Note / material test Certificate shall be produced and attached with Material inspection for each Delivery of material at site Sample shall be produced to client prior to start of work
Packing list /Delivery note *		√	
Material test certificates	√		
Sample		√	
Others (Manual, data sheet, etc.)		√	

Prepared by QA/QC Dept	Designation	Signature	Date
Raj Kumar	QCI		20-Jan-19

For CONTRACTOR

Approved <input type="checkbox"/>	Name		
Approved with Comments <input type="checkbox"/>	Date		
Rejected <input type="checkbox"/>	Signature		

Comments/ Remarks:

*** Supplier may change , * In bulk purchase only

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2.0 MATERIAL SPECIFICATIONS FOR CABLE TILES & ROUTE MARKER.



CABLE TILES

The Non-Reinforced Cable protection Tiles are manufactured using SRC, with 3/8” aggregate. The minimum compressive strength of these tiles are 150 kg/cm² after 28 days of natural curing. These tiles are produced in different colours and with different markings in English and Arabic to identify the cable laid underground. 33KV Danger HV Cable – LV Cable Danger – FO (Fiber Optic) are few to name. The following sizes are commonly manufactured.



Following are the standard sizes

30x30x5cm - Grey, Red or any other Colours

30x25x5cm - Grey, Red or any other Colours

24x27x6.5cm – Grey, Red or any other colour

40x20x5cm – Grey, Red or any other Colours

Any other sizes and interlocking type cable tiles with different compressive strength can be manufactured as per the customer’s drawings and specification.



CABLE ROUTE MARKERS

The Reinforced/Non reinforced Cable Route Markers are manufactured using Sulphur Resistant Cement with 10mm Aggregate. These Cable Route Markers are produced in different sizes casted along with Stainless Steel plate of 1mm, 2mm or 3mm thick engraved with Directional Signs and different markings in English or Arabic to identify the cable laid underground. 33KV Danger Cable – LV Cable Danger – FO Cable as per the customers drawings.

Engraved Stainless Steel plates are fixed with anchor bolts or spot welded support and the paint applied is protected by coating as per the requirement.



The following are the standard cable route markers

300 x 200 x 300 with 200 x 100 x 3mm SS engraved plate fixed with anchor bolts . 150 x 150 x 350 with 150x150x3mm SS plate, 180x180x250with 150x150x3mm SS plate welded with J hook as per KNPC drawing

Cable Route Marker as per FIG 3 –of the KOC Standard Cable Route Marker Drawing . 1220mm height 130 mm Thick with marking inscribed as per the customer requirement

Cable Route Marker as per FIG 2 –of the KOC Standard Cable Route Marker Drawing . 1000mm height 75 mm Thick with marking inscribed in English on one side and Arabic on the other side. Stainless Steel Direction mark will be fixed on one side

300mm x 300mm x 200mm Non reinforced Cable Route Marker with 150mm x 150mm Stainless steel engraved plate on top as per fig.4 of KOC drawing

240mm x 220 mm x 440mm Non reinforced Cable Route Marker with 2 Nos 90mm x 90mm Stainless steel engraved plate on top

300mm x 750mm x 75 mm Reinforced Cable Route Markers with 100 x 75mm Stainless steel plate mounted on side

7" x 7" x 10" Non reinforced Cable Route Marker with 6"x6" Stainless steel engraved plate on top as per KNPC Drawing

Any other sizes of cable route markers can be manufactured as per the customer's drawings and specification.

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3.0 THIRD PARTY TEST RESULTS.

INCO - LABS (KSCC)

Paid up Capital K.D. 900,000 (C.R. No. 65947)



شركة مختبرات إنكو الصناعية (ش.م.ك.م.)

رأس المال المدفوع ٩٠٠,٠٠٠ دك (س.ت.رقم: ٦٥٩٤٧)

Accredited to ISO/IEC 17025 : 2005

حاصل على الأيزو ١٧٠٢٥:٢٠٠٥

فحوصات المواد * أبحاث التربة * المساحة * المعايرة * التقييم الإنشائي * فحوصات البيئة * فحوصات الجوارب
Material Testing * Soil Investigation * Surveying * Calibration * Structural Evaluation * Environmental Testing * Piles Testing

Date: June 27, 2013

Ref.: INCO/F/L-6033/226/13

Heavy Engineering Industries & Shipbuilding Co.

State of Kuwait.

Attention: Project Manager

Job Order No.: 6947

Subject: **Test Report**
Compressive Strength & Density of Cable Tiles
For NLTF Project at KNPC
Owner: KNPC

Dear Sir,

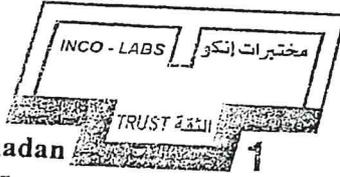
With reference to the above subject and as per your request; please find enclosed herewith two copies of the test reports.

We trust this meets with your requirements. Should you have any questions regarding this report, please do not hesitate to contact us.

Best Regards,
INCO - LABS

5

Dr. Jamal I. Ramadan
Technical Manager



Encl: Plate 1 & 2: test Results

NOTE: Sample Test Report

P.O.Box 21073
Safat 13071, Kuwait
Tel.: +965 2471 0780
2475 2320
2475 2330
2471 6520
Fax: +965 2471 6526



Organizational
Member



ص.ب. ٢١٠٧٣ الصفاة
١٣٠٧١ - الكويت
تليفون: +٩٦٥ ٢٤٧١-٠٧٨٠
٢٤٧٥٢٢٢
٢٤٧٥٢٣٢
٢٤٧١٦٥٢
فاكس: +٩٦٥ ٢٤٧١٦٥٢٦

ISO/IEC 17025:2005
TESTING CERT#2487.01 & 2487.02
CALIBRATION CERT # 2487.03

info@inco-lab.com www.inco-lab.com

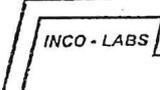
**TEST RESULT OF COMPRESSIVE STRENGTH FOR
CABLE TILES**

Sample No.	Measured Dimension (cm)			Net Area (cm ²)	Weight (gm)	Max. Load (KN)	Compressive Strength		
	L	W	H				Kg/cm ²	N/mm ²	
1	5.0	5.0	5.0	25.0	289.7	36.2	147.7	14.5	
2	5.0	5.0	5.0	25.0	282.0	47.8	195.0	19.1	
3	5.0	5.0	5.0	25.0	305.2	33.6	137.1	13.4	
AVERAGE								159.9	15.7

Notes:-
 *In preparation of this report, INCO-LAB states that the results of the laboratory testing provided herein is subject to the precision and bias provided by the standard used in performing this test. Uncertainty calculations and values can be provided upon client request
 *The results of this test represent only the samples submitted by the client.
 *N.A. = Not available

Date Tested : 24.06.2013
 Job Order : 6947

Senior Lab. Technician: S
 NLTF Project at KNPC


 INCO - LABS
 مخابرات انكو
 Material Engineer: [Signature]
 TRUST

Project	NLTF Project at KNPC
Owner	KNPC
Contractor	Heavy Engineering Industries & Shipbuilding Co.

**TEST METHOD
FOR
CONCRETE BLOCKS
(ASTM-C 140)**


INCO - LABS
 For Testing: Materials, Soil, Surveying, Calibration, Structural Evaluation & Environmental Testing
 P.O.Box: 21073, Safat 13071, Kuwait. Tel (965) 24710780. Fax (965) 24716526

**TEST RESULT OF DENSITY
CABLE TILES**

Sample No.	Measured Dimension (cm)			Net Area (cm ²)	Weight (gm)	Volume	Density
	L	W	H				
1	30.2	25.2	5.1	761.0	8340.0	3881.3	2.149

Notes:-

*In preparation of this report, INCO-LAB states that the results of the laboratory testing provided herein is subject to the precision and bias provided by the standard used in performing this test. Uncertainty calculations and values can be provided upon client request

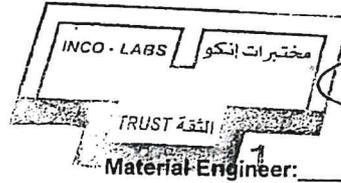
*The results of this test represent only the samples submitted by the client.

*N.A. = Not available

Date Tested : 24.06.2013

Job Order : 6947

Senior Lab. Technician: 



Project	NLTF Project at KNPC	TEST METHOD FOR CONCRETE BLOCKS (ASTM-C 140)
Owner	KNPC	
Contractor	Heavy Engineering Industries & Shipbuilding Co.	
 INCO - LABS For Testing: Materials, Soil, Surveying, Calibration, Structural Evaluation & Environmental Testing P.O.Box: 21073, Safat 13071, Kuwait. Tel (965) 24710780. Fax (965) 24716526		Plate : 2

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4.0 PREVIOUS KNPC APPROVALS.

شركة البترول الوطنية الكويتية

إحدى شركات مؤسسة البترول الكويتية
A Subsidiary of Kuwait Petroleum Corporation

KNPC



GS Engineering & Construction

108 JUL 2013

RECEIVED

PROJECT: NLTF-MAA

DATE: 08 JUL 2013

TR. NO.: KNPC-GSEC-NLTF-X-5878

DOCUMENT TRANSMITTAL

M/s GS Engineering & Construction
13F Gangnam Finance Center,
737 Yeoksam-dong, Gangnam-Gu,
Seoul, Korea

Contract No. CA/CSPD/0013

Attn: **Mr. D.J.Kim, Project Manager**

KNPC comments on the following document(s) as listed below are hereby transmitted for your information/ action:

Total number of pages including this cover sheet : (2)

Ref. : GSEC-KNPC-NLTF-X-6192 received on 2nd July 2013

GSEC-KNPC-NLTF-X-6192 Rev 1 received on 4th July 2013

Document ID	Rev. No.	Description / Title	Appr. Stat.(*)
RAM/ELE/022	-	Request for Approval of Material (RAM) for Electrical Cable Protection tiles (HV,LV,FO,FA,COMMN and CONTROL) and cable route Marker from M/s. HEISCO	A1

Approval category (*) A1: Approved, A2-Approved with comments, A3-Not approved

Review category (*) R1: Reviewed, R2-Reviewed with comments, R3-Not Reviewed

Remarks:

MAA Review

Yes

No

X

Note: Any review, comments, agreement or approval by the Company shall in no way relieve the Contractor from its Obligations to fulfill all the requirements of the Contract or affect the Company's guarantee rights. If in the opinion of the Contractor any comment submitted with this transmittal would involve any change to the scope of work or claim, for an amount that exceeds the Contract Price and/or extension to the Scheduled Provisional Turnover Date, Contractor to proceed in accordance with Clause 11 of General Conditions of Contract (GCC).

[Signature]
SYQ/VBV/ADS/SAF

Cc:MMO,SCS,KR,Archives

SENT BY:

[Signature]

Waleed Al-Hauli

NLTF Project Manager

X-5878



KUWAIT NATIONAL PETROLEUM COMPANY (K.S.C.)

PROJECTS DEPARTMENT
CONSTRUCTION GROUP "1", PD-1

REQUEST FOR APPROVAL OF MATERIAL (Electrical)

Contract No.: : CA/CSPD/0013		REF. NO. : RAM/ELE/022 Date: 01 July 2013	
Contractor's Name : GS Engineering & Construction			
CONTRACT TITLE : North LPG Tank Farm Project (NLTF) At MAA Refinery			
1. Area :	All Area (Electrical Cable Trench)		
2. Relevant Section & Page of Contract Document	S-035,033-208-2.80-7001 & 7106 / 5.5.3 & 2.8 KNPC ENG STD - 71B23,3&4		
3. Item of Work :	Electrical Cable Trench Work		
4. Material item to be approved :	Cable Protection Tiles (H.V.L.V.F.O.F.A.COMMN. & CONTROL) & Cable Route Marker.		
5. Brand & Model Name proposed for approval	M/s. Heavy Engineering Industries & Shipbuilding Co. KSC		
6. Deviation to Specification :	No		
Attachment 1 : Manufacturers Data Sheet :	<input checked="" type="checkbox"/>	Catalogue / Company Profile	
Attachment 2 : Material Specification	<input type="checkbox"/>		
Attachment 3 : Sample	<input checked="" type="checkbox"/>	Submitted by hand	
Attachment 4 : Test Certificate	<input type="checkbox"/>		
Attachment 5 : Manufacturrers Catalogue	<input checked="" type="checkbox"/>	Catalogue / Company Profile	
Compliance with Specification Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Supplier VEC Approved Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not categorized in VEC List <input checked="" type="checkbox"/>	
		VEC Product Code : Vendor Code :	
Prepared by : <i>I/S</i> Mr. S.C.KIM Date : 01 July 2013		Contractor Representative : Mr. Y. J. LEE Date : 01 July 2013	
KNPC ACTION :			
Approved <input checked="" type="checkbox"/>		Rejected <input type="checkbox"/>	
By : <i>Waleed Alhawi</i>			
Date: 02/07/2013			
Distribution:			
KNPC	Contractor	Others	

Kuwait National Petroleum Company

CEC - Category Wise Contractor's List



Category: 5 Above KD 1 Million upto KD 10 Million
 Type: 01 CIVIL WORKS
 Sub-Type: AIL EARTH & SOIL MOVING WORKS INCLUDING GRADING, LEVELING, COMPACTION, SOIL REPLACEMENT AND EXCAVATION

Company Name	Telephone	Fax	Local Agent	Telephone	Fax
0023 CONSOLIDATED CONTRACTORS CO. (KUWAIT) W.L.L.	23980355	961 1 856857			
0037 UNITED GULF CONSTRUCTION CO.	22054250	22054299			
0134 HEAVY ENGINEERING INDUSTRIES & SHIPBUILDING CO.	23253000/24624000	23262142/24830291			
0171 AHMADIAH CONTRACTING & TRADING CO.	22266222	22266333			
0186 COMBINED GROUP CONTRACTING CO. (K.S.C.), KUWAIT	+96522254545	+96524344610			
0222 GULF DREDGING & GEN. CONT. CO.	24815080 / 2462440	24817272			
0333 NASER M.AL BADDAH & PART. G.T.&CONT.CO.	1867777 (30 LINES)	22284444			
0468 Galfar Engineering & Contracting CO., KUWAIT	24343520	24343019			
1665 AL-HANA UNITED GEN. TRAD. & CONT. CO., KUWAIT	98842287	22467260			

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5.0 COMPANY PROFILE.



الشرق الأوسط للتجارة العامة
MIDDLE EAST COMBINED GEN. TRADING CO.®

MIDDLE EAST COMBINED CO

Email: meckw@gmail.com mecc@warqa.com

www.warqa.com

P.O. Box 7569, 64006-Ahmadi, Kuwait. Tel : (00965) 66552016 Fax : (00965) 23261234

Company Profile

MECC was established in the year 2001 to serve the Oil, Power and Water industries with a capability to supply materials to Electrical, Civil, Mechanical & Instrumentation works

MECC has its separate division for engraving services equipped with CNC & Laser machines. Our main products are Concrete Cable Protection Tiles, Cable Route Markers, Earth pits, Stainless Steel Cable tags, Lead tags, Underground Pipe Markers etc. We also supply Warning mesh and tapes for underground cables as per the specification

MECC has its associated office in USA, UK, Japan, UAE to provide our customers in Kuwait with direct access to American, European & Asian markets for sourcing their requirement. These offices operate and cater to the local Kuwait market independently of their association with MECC.

Our office for the Oil & Gas division is located in Shuaiba Industrial area Block 5, close to the major clients. For the past few years the company has established itself as a supplier for various projects.

MECC had been able to source and supply from USA and Europe, Industrial Electrical items, Ex-proof fittings, Cables, Cable tray, Unistrut channels, various metal alloys and fittings other than our normal product ranges, and also MECC had been very successful with the various popular brands of welding machines and electrodes, capital equipments such as shearing machine, press brakes lathes, radial drilling machines & other workshop equipments from reputed American and European manufacturers.

Contact Person : Shiva Shanker
Middle East Combined Co.
Mobile 66552016

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6.0 REFERENCE DOCUMENTS.

5.

CABLE TRENCHES

Note: This section is limited to general civil engineering minimum requirements only.

DEP 33.64.10.33-Gen., DEP 32.37.20.10-Gen. and DEP 33.64.10.10-Gen. describe electrical and instrumentation requirements for cable trenches.

Cables laid in cable trenches shall be at least 600 mm (24 in) below ground level. The depth of the trench may be increased in order to accommodate up to 3 layers of cables. Trenches shall be filled with graded, non-angular, well draining, compacted sand free of sharp particles, e.g. sieved. The design depth of and backfill materials for cable trenches shall take into consideration the detrimental effects of frost in geographical regions, or locations at the plant where sub-zero temperatures can be expected. Salty sand shall not be used unless specifically approved by the Principal.

In paved and unpaved areas, cables shall be shielded by cable tiles at a depth of at least 350 mm (14 in) below final grade. Under concrete paving no cable tiles are required. The location of trenches shall be clearly indicated on the surface, by colour code in paved areas and by signs in unpaved areas.

In paved areas, trenches that need to remain accessible shall be covered with removable concrete panels. Panels shall be designed to the same standard as the surrounding paving.

If access to trenches in paved areas is not required, the permanent paving should be continuous.

Instrument trenches shall always cross at an angle of 90 degrees with power and lighting cables. For the upper trench, a bridge comprising a concrete bottom slab supported on the walls of the lower trench shall be constructed to facilitate excavation of the lower cable trench.

Separation distances between instrument and power and lighting cables shall be as per DEP 33.64.10.33-Gen., DEP 32.37.20.10-Gen. as per DEP.

The bottom of trenches should be above the permanent ground water table. In designing the layout and depths of cable trenches, consideration shall be given to the design requirements of the drainage system

The cables shall have a minimum distance of 0.3 m (1 ft) to any buried pipelines. In hot lines the pipe shall be insulated to limit the temperature at the outside to 60 °C (140°F) maximum, reference is made to DEP 33.64.10.10-Gen.

To allow efficient design and installation of underground utilities, at the beginning of the works an underground elevation protocol specifying depth and installation sequence of underground utilities, including cables, shall be specified. Cables should cross underneath buried pipelines.

Details of electrical and instrument cable trenches and routes are presented in Standard Drawings S19.001 and S19.002.