LETTER OF TRANSMITTAL

To	Houssam Eldine Jaamour Block Factory		
Attention	Mr.Mohieddine Kalo Mobile: 50445-04-16 /Email: kalomohieddine@gmail.com		
Reference	Test Reports		
Project: Shuaibah 3 water desalinaton plant - IWP		**Report Date**	02 July 2024
		Job No.	245090

Attached hereto are report as follows:

Copies	Lab No.	Description	No of Tests
1	0277	Determination of Dimension, Unit Weight, Water Absorption	01 Set
1	0277	Compressive Strength Determination	01 Set
1	0277	Fire Resistance Rating of Masonry Solid Block	01 Set

REMARKS:_____

SIGNED_____

For FUGRO-SUHAIMI LTD
Irfan Zaib Khan
Asst. Lab. Manager, Jeddah

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ACCREDITED
Certificate # 3512.13

COMPRESSIVE STRENGTH OF MASONRY SOLID BLOCK – TEST REPORT

Client	Houssam Eldine Jaamour Block Factory	**Report Date**	02 July 2024
Project	Shuaibah 3 Water Desalinaton Plant - IWP	**Job No.**	245090
Material	Load Bearing Concrete Masonry Solid Blocks	**Lab No.**	0277
Client Contact	Mr.Mohieddine Kalo Mobile: 50445-04-16 Email: kalomohieddine@gmail.com	**Sampling Date**	23 June 2024
Sampling plan/ Method	ASTM C 140	**Date Tested**	27 June 2024
Source	Job Site	**Sample By:**	Client

Fugro-Suhaimi Ltd. (FSL) has performed standard laboratory testing on six concrete masonry solid blocks delivered to FSL laboratory on 23 June 2024 with labeled identification by HEJBF. The testing was carried out in accordance with the procedure outlined in ASTM C 140 "Standard Methods of Sampling and Testing Concrete Masonry Units and Related Units". The test result and pertinent information are as follows:

A. Dimensions

Sample No.	1	2	3	ASTM C-90-14 Specification limit
Length (mm)	400	400	400	No dimension shall differ by more than ±3.2 mm from the nominal specified dimension
Width (mm)	200	200	200	
Height (mm)	200	200	200	

B. Water Absorption & Density

Sample No.	1	2	3	Average	ASTM C-90-14 Specification limit
Water Absorption (kg/m^3)	142	173	164	**160**	208
Density (kg/m^3)	2155	2088	2113	**2119**	2000 or more than 2000 (Normal Weight)

C. Compressive Strength

Sample No.	Weight, gram	Net Area (cm^2)	Maximum Load (kN)	Compressive Strength (Based on Net Area) Test Result	
				MPa	Psi
4	34005	774.1	1070.2	13.8	2000
5	33360	774.1	1252.6	16.2	2350
6	34084	774.1	1086.5	14.0	2040
Average Compressive Strength				**14.7**	**2130**
ASTM C-90-14 Requirement (Average of 3 Units)				**13.8**	**2000**

Remarks	1.The test results indicated that the concrete solid blocks **conform** to the density and Compressive strength requirements of ASTM C-90-14 specification for Load-Bearing Concrete Masonry Units. 2. The test result relate only to the items tested

Tested by: Dilawar

السحيمي - فيغرو
FUGRO - Suhaimi
Materials Division
Western Prov. Lab - 54

Reviewed by: Dilawar Khan, CTTA # 0998
Senior Lab Supervisor, Jeddah

Approved by: Irfan Zaib Khan, CTTA 0360
Asst. Lab. Manager, Jeddah

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FIRE RESISTANCE RATING OF SOLID BLOCK – TEST REPORT

Client	Houssam Eldine Jaamour Block Factory	**Report Date**	02 July 2024
Project	Shuaibah 3 Water Desalinaton Plant - IWP	**Job No.**	245090
Material	Load Bearing Concrete Masonry Solid Blocks	**Lab No.**	0277
Client Contact	Mr.Mohieddine Kalo Mobile: 50445-04-16 Email: kalomohieddine@gmail.com	**Sampling Date**	23 June 2024
Sampling plan/ Method	ASTM C 140	**Date Tested**	27 June 2024
Source	Job Site	**Sample By:**	Client

The fire resistance rating period of the concrete masonry units is determined by "Calculation Method" in compliance to the Standard given in the engineering bulletin from National Concrete Masonry Association (NCMA). This calculation method determines fire resistance rating based on the equivalent thickness of concrete masonry units and aggregate types used in their manufacture. This standard established a relationship between fire resistance rating and the equivalent thickness of concrete masonry units.

A. Dimensions

Specimen Nos.	1	2	3
Length (mm)	400	400	400
Width (mm)	200	200	200
Height (mm)	200	200	200

B. Fire Resistance Rating

Aggregate Type in the Concrete Masonry Unit : Siliceous Gravel		
Specimen Nos.	**Equivalent Thickness, mm**	**Fire Resistance Rating, hours**
1	192	**4.0 Hours**
2	195	
3	194	
Average:	**194**	

Remarks	The test result relate only to the items tested.

Tested by: Dilawar

Reviewed by: Dilawar Khan, CTTA # 0998
Senior Lab Supervisor, Jeddah

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