



### BACKGROUND

One of today's greatest challenges is to manage and meet the "growing demand for secure, affordable energy while addressing climate change and other environmental and social issues" due to the rising population and increase in economic growth. Although the global energy demand is expected to increase by 41% between 2012 and 2035, the real challenge lies in how to minimize the level of carbon emissions, as it is expected to increase by 29% during this period. In December 2015, 195 countries worked together to set out the first-ever global action plan to limit the level of carbon emissions and put an agreement in place to limit global warming to well below 2°C. This event clearly highlights that the increasing carbon emissions have become a global threat and that every country needs to play its part in reducing the level of carbon emissions and other greenhouse gas emissions. Increasing the efficient use of energy in the built environment can help towards this goal because buildings account for 40 % of the global energy consumption and 36% of the total energy-related carbon emissions. A typical building mainly use energy to keep the interior environment comfortable, i.e., for heating, cooling, and ventilation. Currently, cooling of buildings account for 70 % of the peak electricity load in the Middle East. A vast amount of this percentage is due to the energy losses through the envelope as explained below and measures need to be taken to try reduce this loss.

### WHY BUILDING ENVELOPE

Building's envelope, especially walls, contributes to as much as 45% of the energy required in buildings. Good thermal insulation for the envelope is crucial to prevent heat from seeping in through the exterior of the building. In the Middle East particularly when a lot of energy is consumed for cooling of buildings, the use of good insulation can be very beneficial as it keeps the warm air sealed out and the cool air sealed within the buildings. Moreover, cooling energy needed for a building is always larger than the heating energy needed to warm it, because the efficiency of air conditioners is less than central heating systems. Also, objects and appliances within living spaces naturally emit heat.

## WHAT WE OFFER

Smart Insulation Finishing systems L.L.C (SIFS) was set up in 2011 to address the energy leak issues through building envelope. From Manufacturing Innovative Insulation products for the building envelope to offering sustainable and practical solutions to help save energy losses in your building. Our team at SIFS are a group of experienced industry professionals who are experts in the construction and insulation field for the past 30 years.

## OUR PRODUCTS

### SMART wall panel

Smart wall system includes energy efficient wall insulation solutions - **Smart Wall Masonry Panel System (SWMP)**, which is state-of-the-art EIFS which replaces the usual block-work substrate; and also, rigid foam insulation panels such as **Smart Wall Panels (SWP)** used as an insulation core for traditional EIFS systems. SWMP is used as insulation solution for exterior walls in new projects. Whereas SWP is primarily used as an insulation system for external walls, columns, and beams. It can be used in new construction projects or as a retrofit solution for existing buildings



### SMART therm

ARCHITECTURAL PROFILES

A stylish **range of profiles** to suit every facade. SIFS offers a wide range of architectural profiles of both residential and commercial applications. Its superior quality, durability flexibility creative and practical solutions to the designer - to give each building its distinctive style. The profiles are available in different sizes and shapes from straight lengths to arches and curves. The designs complement both the modern and the contemporary thus enabling the preservation of the style, aesthetics, and beauty of both classic and modern architecture. Smart Therm architectural profiles are manufactured under stringent quality control to ensure a product exclusive in its design, superior in its quality and resistant to UV radiation, rain or any harsh environment.



### SMART window vig

SMART WINDOW VIG (VACUUM INSULATED GLAZING)

This is the latest **vacuum insulated glazing** from SIFS. Vacuum insulated glazing is an emerging technology aimed at meeting the severe thermal performance requirements of net-zero energy windows. By creating a vacuum between panes of glass instead of standard gas sealing, thermal efficiency and sound insulation is maximized as no gas enters the space.

## SOLUTIONS



### SMART build™

SMART BUILD includes **energy auditing** and **retrofitting services** with a focus on the building envelope. SIFS use state-of-the-art thermography tools and in-situ U value monitoring devices to measure the condition of the existing envelope before recommending envelope retrofit solutions using the right thickness of insulation.

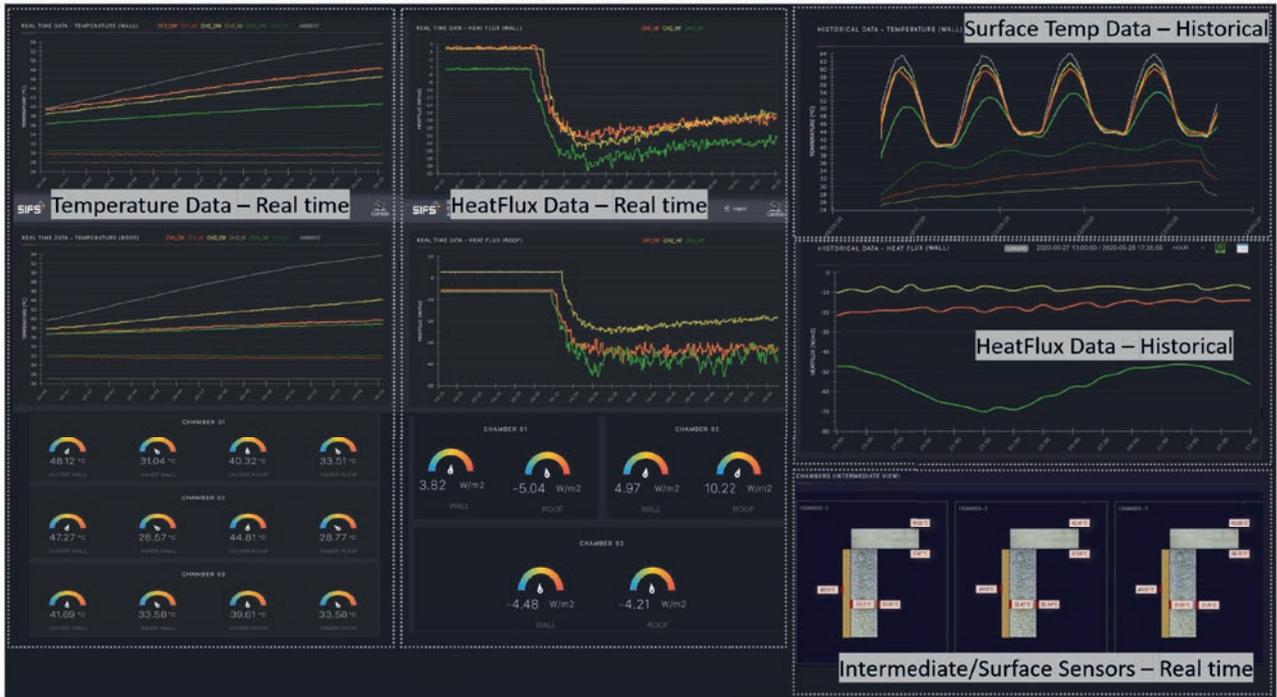
## RESEARCH & DEVELOPMENT

### BUILDING ENVELOPE ANALYZER

As a part of the product development, SIFS needed to study the performance of building envelope insulation materials in detail under realistic boundary conditions and understand the impact it can have on energy demand. SIFS R & D programme, therefore, developed on-site testing capacity, which is also complemented with a singular permanent facility. The “SIFS Building Envelope Analyzer” (SIFS BEA) is a novel test facility used for full scale testing of building envelope systems under realistic boundary conditions.



The facility is envisioned as the cornerstone of its in-house product development & testing capacities. SIFS also plan to be able to demonstrate the research and its impact on energy savings to the engineering community, clients, local authorities, stakeholders, and academics. To do this it was important to design the facility with state-of-the-art IT infrastructure for data handling and visualisation. These tools also help raise awareness on the importance of using green building materials in the envelope and the energy savings associated with it. SIFS BEA is equipped with state-of-the art Building Management Systems (BMS) which allows for continuous-real time monitoring and data visualisation through its customised graphical user interfaces developed.



*State-of-the-art BMS systems implemented for control of the facility and monitoring of the data*

This facility was designed and built by SIFS R & D team in close collaboration with Tecnia (https://www.tecnia.com/en/) pioneers in testing/analysis of the thermal performance of building envelope products when exposed to real-world boundary conditions.

**CONCEPT**

The facility comprises 3 calorimetric chambers placed in a large hall. All chambers have two surfaces (one wall and one roof) exposed to the large hall where the test specimens will be installed. The large hall will be conditioned to simulate the effect of external weather, while the small chambers will be kept at comfort conditions. The purpose of the test facility is the comparative assessment of building envelope insulation systems which will be installed as test specimens in these 3 chambers.

**2020 MENA Green Building AWARDS WINNER**

**MENA GREEN BUILDING RESEARCH AWARD 2020**



**PROJECTS COMPLETED**

UNITED ARAB EMIRATES

SL No.	PROJECT	LOCATION	CLIENT/CONTRACTOR	CONSULTANT
1	PALM JUMEIRAH VILLA	PALM JUMEIRAH FOND 1, Dubai	SMART COOKIES TECHNICAL SERVICES	BW INTERIORS
				
2	SIFS HEADQUARTERS	UMM AL QUWAIN	CITYGATE CONTRACTING	CAPITAL ENGINEERING
				

3	MOSQUE UMM AL THOUB	UMM AL QUWAIN	AL KHAYAM CONTRACTING, UAQ	-
				
4	BEACH HOUSE (PRIVATE CLIENT)	UMM AL QUWAIN	SHELTER CARE TECHNICAL SERVICES	-
5	SOCIALIZING CENTER (NEAR CAMEL RACE-TRACK)	AL MARMOOM, DUBAI	SHELTER CARE TECHNICAL SERVICES	-

KINGDOM OF BAHRAIN

SL No.	PROJECT	LOCATION	CLIENT/CONTRACTOR	CONSULTANT
6	BADER HEADQUARTERS	SEEF	BADER	GLOBAL ENGINEERING COMPANY
				
7	5 STOREY RESIDENTIAL BUILDING	KARBABAD	ISTANBUL CONTRACTING	ALTAWEEL ENG
				

8	MAJLAN JK VILLA	A'ALI	MAJLAN CONTRACTING	JAMEEL KHALFAN ARCHITECTS
				

9	KHOOEJI ELECTRICALS	ADLYIA	KHOOEHI ELECTRICALS	URBAN VISION ARCHITECTS
---	---------------------	--------	---------------------	-------------------------



10	AMERICAN UNIVERSITY OF BAHRAIN	RIFFA	NASS CONTRACTING	GULF HOUSE ENGINEERING
				
11	ELEGANT HOMES	JUFAIR	ELEGANT HOMES	GHARIB ENGINEERING
				

<b>12</b>	PRIVATE VILLA	AMWAJ	DUNDEE CONSTRUCTION	AKBARI ARCHITECTURE
<b>13</b>	MISTER MACHINE MULTI- PURPOSE BUILDING	RAS ZUWAYED	SHADEED CONTRACTING	MAZEN ALUMRAN CONSULTING ENGINEERS



<b>14</b>	SHURA COUNCIL EAST GATE BUILDING MINISTRY	HOORA	ALMOAYYED CONTRACTING	AKBARI ARCHITECTURE
<b>15</b>	PRIVATE VILLA	-	-	-



KUWAIT

SL No.	PROJECT	LOCATION	CLIENT/CONTRACTOR	CONSULTANT
16	DEWANIYA YARMOUK (RETROFIT PROJECT)	YARMOUK	-	-
				



# CERTIFICATE OF REGISTRATION

This is to certify that the management system of:

## Smart Insulation Finishing Systems LLC

Main Site: Plot no. 890, Area no. 1, New industrial Area, P. O. Box 3350,  
Umm Al Quwain, United Arab Emirates

has been registered by Intertek as conforming to the requirements of:

## ISO 9001:2015

The management system is applicable to:

Design, Development and Manufacturing of Insulation and Protective  
Coating Products.

Certificate Number:  
0103259

Initial Certification Date:  
07 July 2020

Date of Certification Decision:  
07 July 2020

Issuing Date:  
07 July 2020

Valid Until:  
06 July 2023



**Intertek**

014

**Calin Moldovean**  
President, Business Assurance

Intertek Certification Limited, 10A Victory  
Park, Victory Road, Derby DE24 8ZF, United  
Kingdom

Intertek Certification Limited is a  
UKAS accredited body under  
schedule of accreditation no. 014.



# CERTIFICATE OF REGISTRATION

This is to certify that the management system of:

## Smart Insulation Finishing Systems LLC

Main Site: Plot no. 890, Area no. 1, New industrial Area, P. O. Box 3350,  
Umm Al Quwain, United Arab Emirates

has been registered by Intertek as conforming to the requirements of:

## ISO 14001:2015

The management system is applicable to:

Design, Development and Manufacturing of Insulation and Protective  
Coating Products.

Certificate Number:  
0103257

Initial Certification Date:  
07 July 2020

Date of Certification Decision:  
07 July 2020

Issuing Date:  
07 July 2020

Valid Until:  
06 July 2023



**Intertek**

014

**Calin Moldovean**  
President, Business Assurance

Intertek Certification Limited, 10A Victory  
Park, Victory Road, Derby DE24 8ZF, United  
Kingdom

Intertek Certification Limited is a  
UKAS accredited body under  
schedule of accreditation no. 014.



# CERTIFICATE OF REGISTRATION

This is to certify that the management system of:

## Smart Insulation Finishing Systems LLC

Main Site: Plot no. 890, Area no. 1, New industrial Area, P. O. Box 3350,  
Umm Al Quwain, United Arab Emirates

has been registered by Intertek as conforming to the requirements of:

## ISO 45001:2018

The management system is applicable to:

Design, Development and Manufacturing of Insulation and Protective  
Coating Products.

**Certificate Number:**

0103258

**Initial Certification Date:**

07 July 2020

**Date of Certification Decision:**

07 July 2020

**Issuing Date:**

07 July 2020

**Valid Until:**

06 July 2023



Intertek Certification Limited

A handwritten signature in black ink, appearing to read 'Calin Moldovean'.

**Calin Moldovean**

President, Business Assurance

Intertek Certification Limited, 10A Victory  
Park, Victory Road, Derby DE24 8ZF, United  
Kingdom

Intertek Certification Limited is a  
UKAS accredited body under  
schedule of accreditation no. 014.





*This is to certify that*

# *Smart Insulation Finishing Systems*

*Supports the promotion and development of Sustainable Buildings  
in the United Arab Emirates, and is a*

**Corporate Member**

*of the*

**مجلس الإمارات للابنية الخضراء  
Emirates Green Building Council**

*March 2021 – December 2021*

**H.E. Ali Al Jassim**  
Chairman

**Habiba Al Marashi**  
Co-Founder & Treasurer