WALLROC

WALLROC FIREPROOF PANELS

WALL TECHNOLOGY COMPANY

THE LEADER IN TECHNOLOGICALLY ADVANCED HIGH QUALITY PANELS

WALL TECH

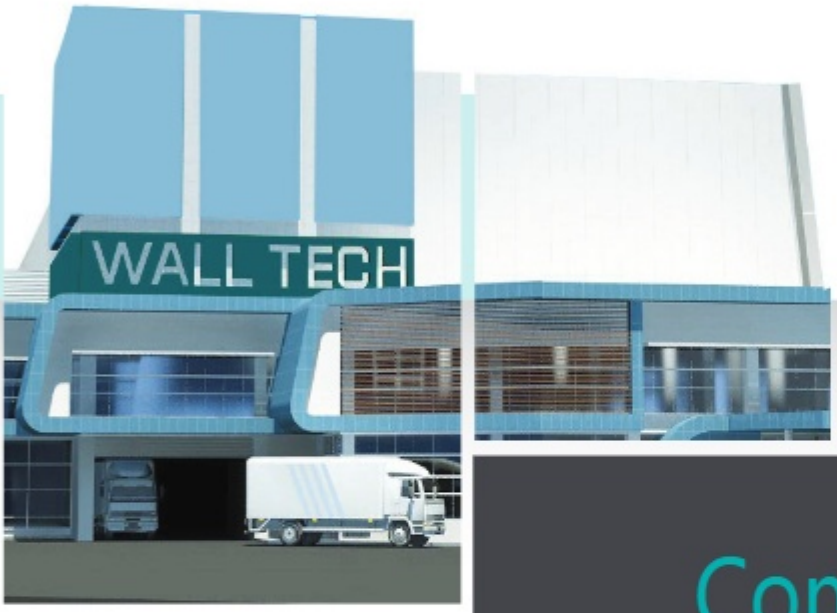
FM Approvals
Member of the FM Global Group

Professional
Engineer Team

Publication date : Feb 2024

WALL TECH

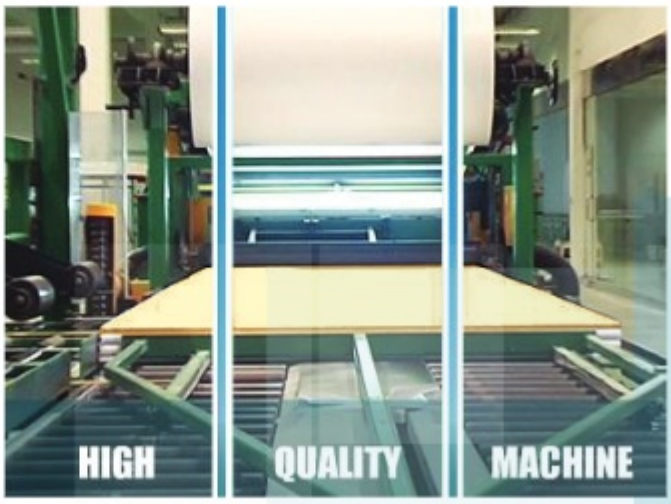
We insulate the world



Wall Tech was established in 1992 and started the business by the expert engineering team in cooling system and cold room engineer. However, from the expertise and continuous development of our engineer. Nowadays, Wall Tech is the leader in insulation business which produces sandwich panels suitable for walls and ceilings in Cold Room, Clean Room, and Freezers etc.

Company Profile

Wall Tech prefers to use Z-lock Panel Laminating Machinery for making Insulated Panels in Z-lock system. This type of machine is automatically operated and is controlled entirely by a computer system. Therefore, every stage of the production process is monitored for precise quality and measurement. The panels maintain proper strength and accuracy. This quality helps save the energy almost 30%.



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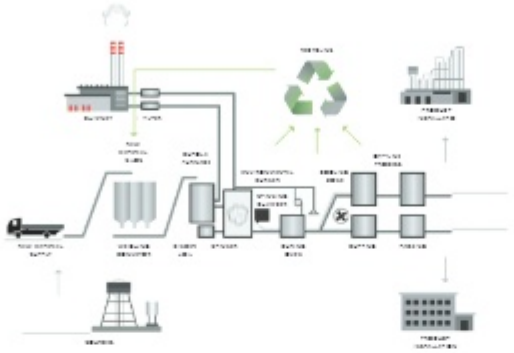


DURABILITY of WALLROC

WALLROC employs specially - produced stone wool which is water-repellent meaning that water cannot penetrate thus preventing moisture from impacting on the stability of the core and the binder. The adhesive used in Wallroc is specially formulated to ensure effective bonding between the core and the steel sheets under all kinds of environmental conditions during the panel's lifetime.

The steel sheet used for Wallroc sandwich panel is coated with Zinc 275 g/m² with the outer surface coated with colored acrylic sealer and primer to withstand harsh environments. The steel's inner surface is coated with two primer layers: the first primer together with the zinc coating prevents the corrosion inside the panel, the second primer ensures the rigid bonding between the steel sheet and the adhesive.

The connecting point of Z - lock [the self - locking system] is designed to withstand high temperature under all kinds of harsh environmental conditions.

Description	Rock Wool
Density	100-125 kg/m³
Fire Resistance	NON Combustible (ASTME-136-82)
Water Absorption	< 1.0 kg/m², EN1609
Certification	FM Approvals, BS476
Thermal Conductivity (k)	0.034W/mK

WALLROC is our company's advanced rockwool insulated panel comprising three important properties

Strength	The panel can withstand compression and tension stresses.
Durability	The panel is durable throughout the building's lifetime.
Fire-Resistance	The panel's core and structure is made of rockwool which is wholly non-combustible and 100% fireproof material

STRENGTH of WALLROC

In order to obtain highest possible strength and stiffness, Wallroc panel is composed of two types of materials: a non - combustible structural core [rockwool] bonded on both sides with coated steel sheets, thus creating an interactive composite structure that absorbs the loads acting upon it.

Strength properties is equally applied in all cross sections of the panel to ensure homogeneous load capacity.

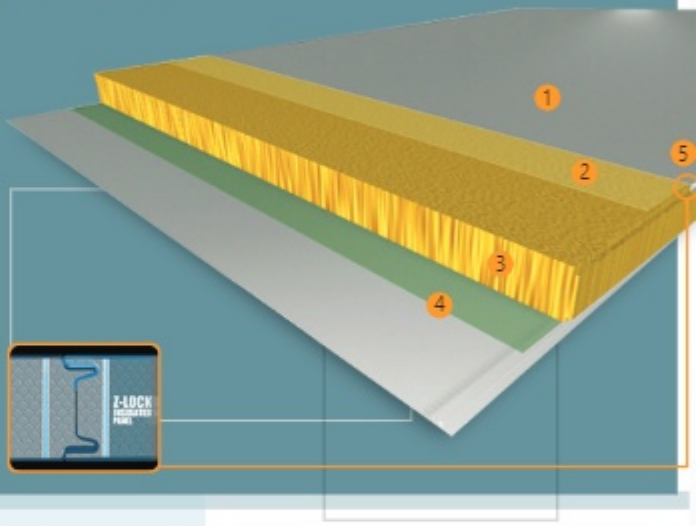
Bonding strength threshold value with the steel sheets is 100 kN/m²

WALLROC is evenly strong at every cross sectional area due to small arrangement and high adhesion of structure of insulator layer. Inside the Wallroc sandwich panel is a layer of stone wools which are cut into lamellas and rotated so as to make the very fine mineral fibers align and direct at 90 degree to the steel surface to attain maximum efficiency of sandwich panel.

The interior side of steel sheet facings in Wallroc sandwich panel has multi - primer system to maximize the bonding between the adhesive and the zinc layer of steel sheet. The adhesive is specially formulated to serve the high demand of strength and durability on the structural bonding between the facings and the core.

COMPOSITION of WALLROC

1. PPGI [Pre-Painted Galvanized Iron] steel sheet with two layers zinc-coated 275 g/m2 for inner layer and two layers of environmentally-resistant acrylic sealer.
2. Non-combustible insulating core provides strength to all cross sectional core of the panel.
3. Specially developed adhesive is evenly applied throughout and rigidly covered the whole surface area of the panel.
4. Multiple prime layers with high efficient adhesion between zinc-coated steel sheet and structural stone wool core.
5. The latest self-locking technology in sandwich panel manufacturing Z-Lock ensures the durability of connecting points on all panels.



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FIRE-RESISTANCE of WALLROC

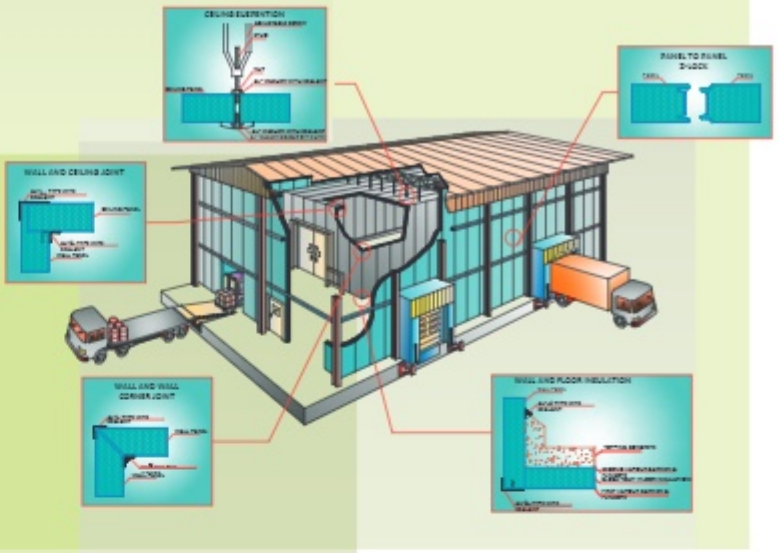
The core material of Wallroc sandwich panel is stone wool which is wholly non-combustible rendering it unable to ignite or contribute heat to the fire.

WALLROC has good thermal insulation. It will neither shrink nor melt under the condition of high temperature. The adhesive is specially developed and designed to create a strong bond between the insulator and the steel sheet, thus making the insulation core bonded to the unexposed facing during the fire.

WALLROC has received British Standard - BS 476 [Integrity > 4 hours up to 1,100 degree Celsius] which is an internationally - recognized standard for Fire Testing Performance in addition to being awarded the "FM Approvals"

WALLROC FIREPROOF PANELS

Installation



Site Reference

Project Name

Continental Automotive
(Thailand) Co., Ltd.
Product : WALLROC
Area : 35,000 m²

Microchip Technology
(Thailand) Co., Ltd.
Product : WALLROC
Area : 10,400 m²

Cargill

CPF

Nestlé
Good Food, Good Life

Unilever

APPROVAL REPORT

Z-LOCK WALL AND CEILING PANELS FOR INTERIOR INSTALLATION WITH NO HEIGHT RESTRICTION

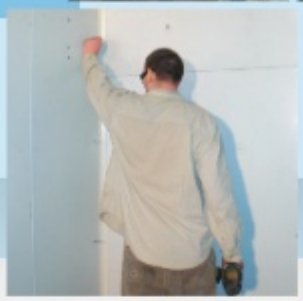
Prepared for:

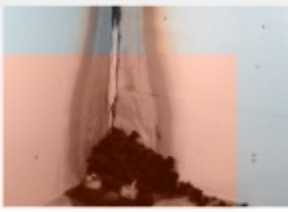
Well Technology Co. Ltd.
70 Moo 13, Phutthamonthon 8ai 5 Rd.
Raikhing, Sampran
Nakompathom
Thailand, 73210

Project ID: 3034550
Class: 4880
Date of Approval:
Authorized by:

FACULTY OF ENGINEERING
CHULALONGKORN UNIVERSITY
FIRE SAFETY RESEARCH CENTER

FURNACE TEMPERATURE





WALLROC

(Certification)

Confidence in quality with international standards.

FM Approvals

Like Z-LOCK

Z-Lock International Standard

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WALL TECHNOLOGY CO., LTD.

70 Moo 13, Phutthamonthon Sai 5 Rd., Raikhing, Sampran, Nakhonpathom 73210
Tel. : (66) 2019-8000 Fax.: (66) 2019-8800 www.wtg.co.th E-mail: csgroup@wtg.co.th

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