

**AGiBS**<sup>®</sup>  
SUSTAINABLE LIVING

**AJIYA**<sup>®</sup>  
Ajiya Green Integrated  
Building System



**SIMPLER**



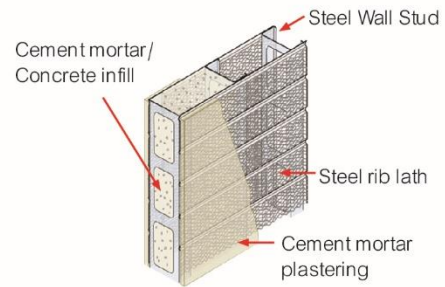
**LIGHTER**



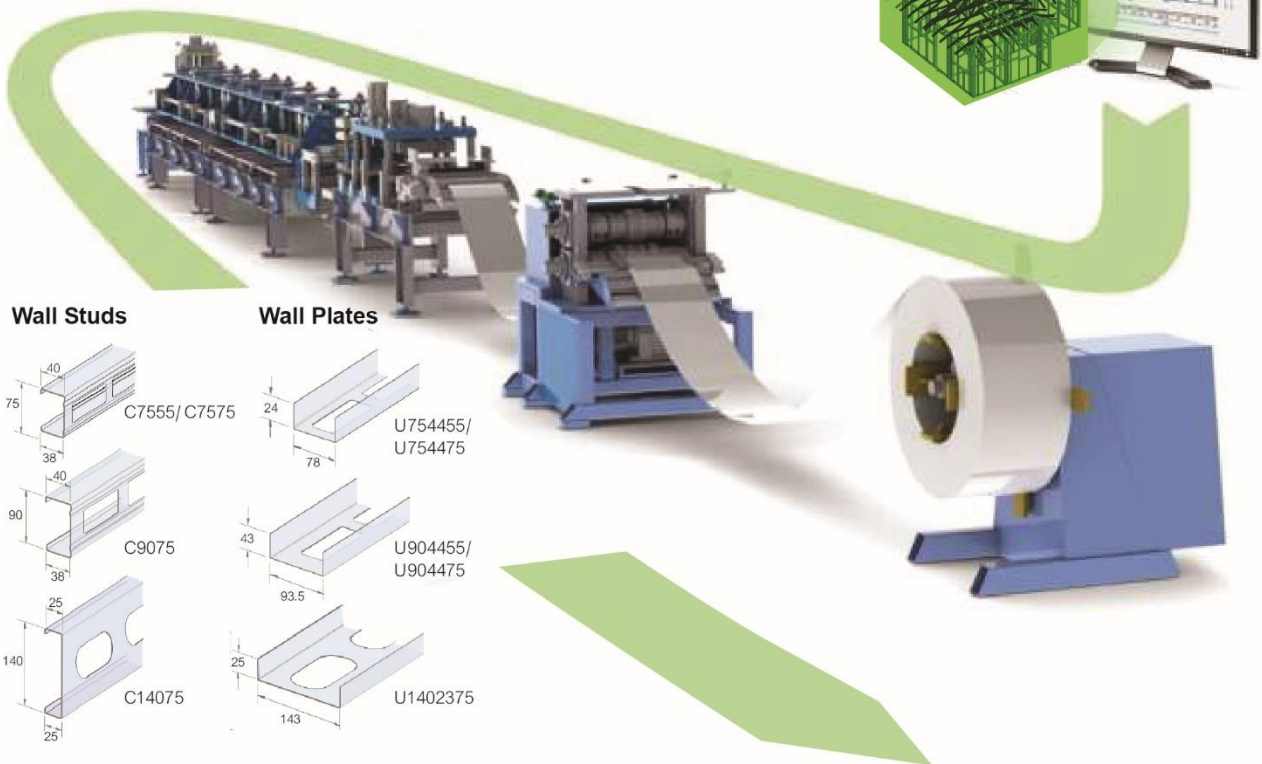
**FASTER**

AGiBS®, AJIYA Green Integrated Building System can be used to design, detail and manufacture steel frames for both residential and light commercial market. It is the next phase of eco-friendly construction evolution that promises accelerated project completion and higher productivity due to shortened construction time, reduced labour and wastages. The breakthrough complies with Industrialised Building System (IBS) endorsed by CIDB Malaysia.

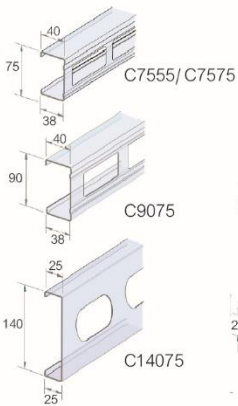
### Typical Section of AGiBS® Wall



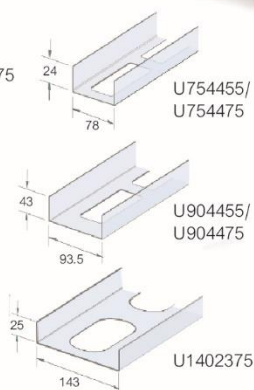
### Manufacturing Process



#### Wall Studs



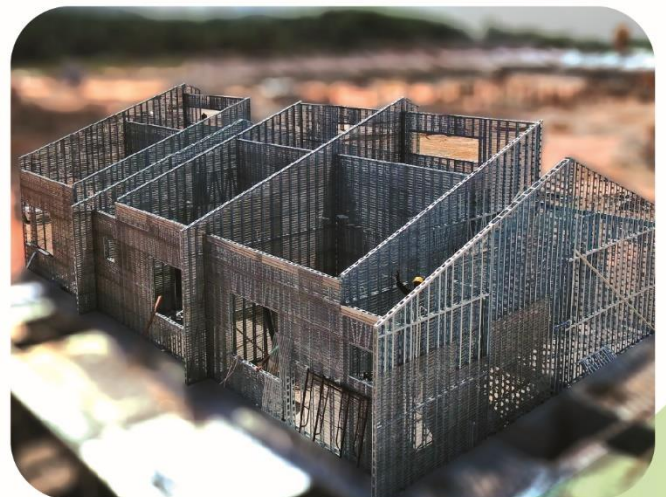
#### Wall Plates



### LEADING SOFTWARE FOR COLD FORMED STEEL (CFS) CONSTRUCTION

AGiBS® incorporates the leading software for Cold Formed Steel (CFS) technology for digital fabrication and the entire building can be built in a computer. For faster project delivery with fully integrated Wall Framing and Roof Trusses building design and detailing in one model.

Our system integrated with CAD / CAM link and utilizing BIM technology, maximizes productivity and accuracy by generating architectural and structural drawing data and architectural visualizations all from one building model.







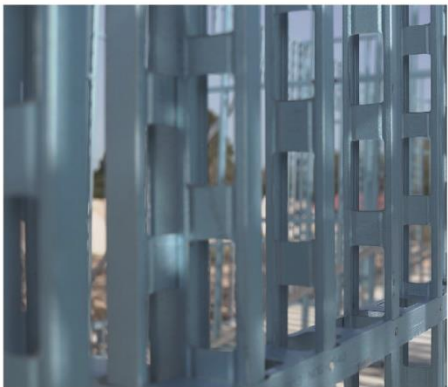
Flexible Design



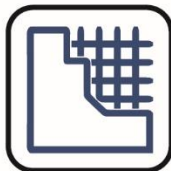
Fast & Easy  
Lightweight Installation



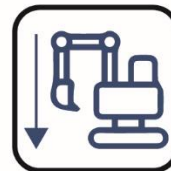
Less Labour Cost



Welding Not Required



Equivalent Reinforce  
Concrete Wet Wall  
System



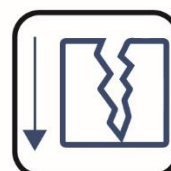
Decreased Heavy  
Machinery Usage



Decreased Site Cleaning  
Costs



Smoother & Even Wall  
Surface

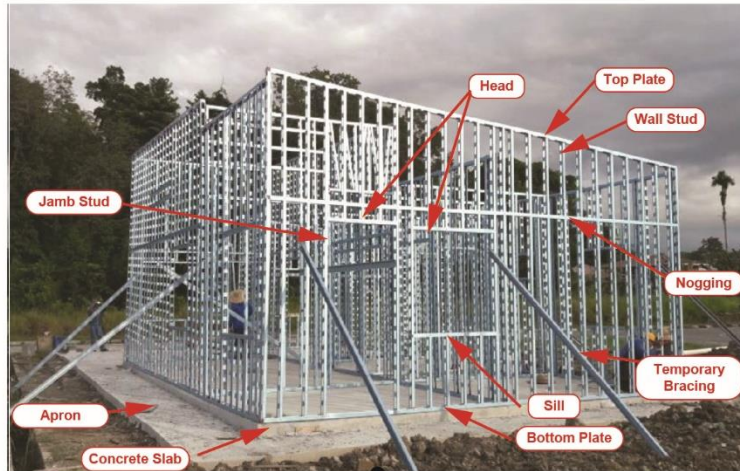


Minimizes Crack  
Lines





QR AGiBS VIDEO



QR METHOD STATEMENT

**STEP 01**  
GROUND SLAB PREPARATION



**STEP 02**  
MARKING OUT THE PANELS

**STEP 03**  
ASSEMBLY & ERECTION OF AGiBS WALL FRAME USING SIMPLE TOOLS



**STEP 04**  
FIX AJIYA METAL DOOR & WINDOW FRAMES

**STEP 05**  
PRE-INSTALL M&E CONDUITS



**STEP 06**  
FIX RIB LATH (WIRE MESH) FOR CONCRETING

**STEP 07**  
PREPARATION OF CONCRETE/ MORTAR MIXING IN MORTAR PUMP



**STEP 08**  
INFILLING CONCRETE/ MORTAR BY LAYERS AT MAXIMUM HEIGHT OF 1.5M

**STEP 09**  
PLASTERING

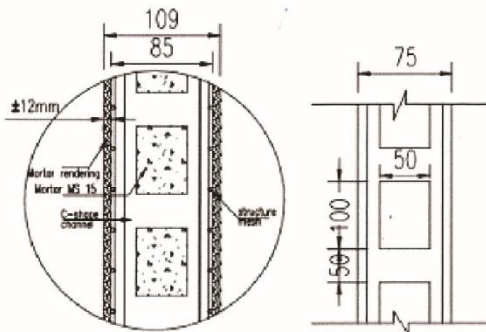


**STEP 10**  
ROOFING & OTHER FINISHING

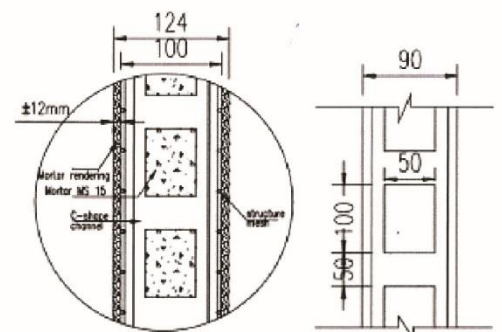
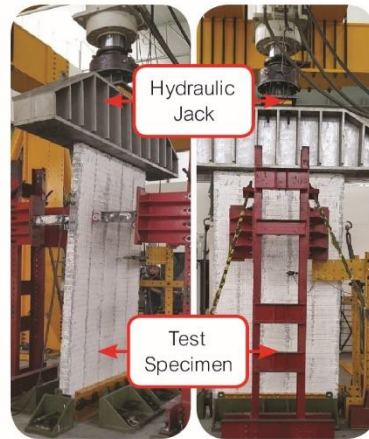


COMPLETED AGiBS PROJECT

**AXIAL LOAD TEST ON AGiBS WALL PANEL**



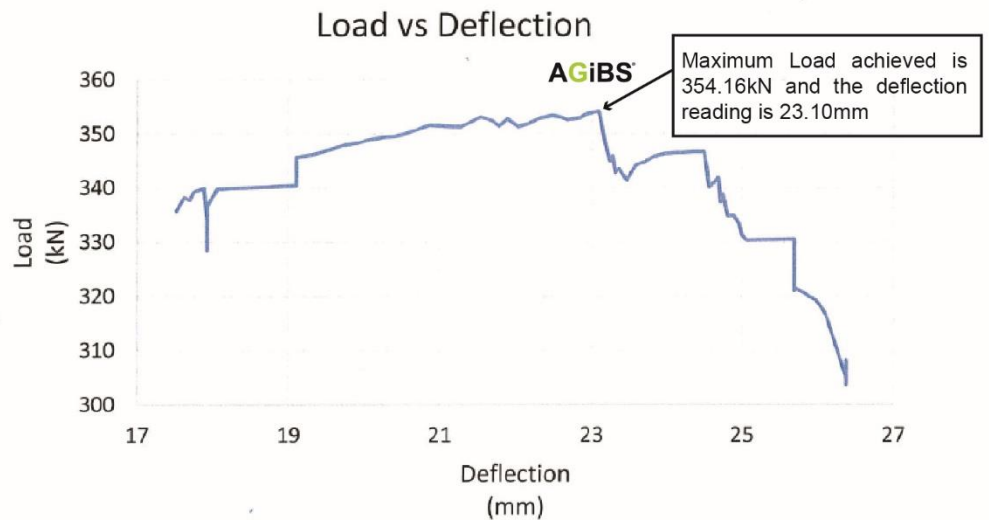
**Detail Drawing AGiBS Wall of C75**



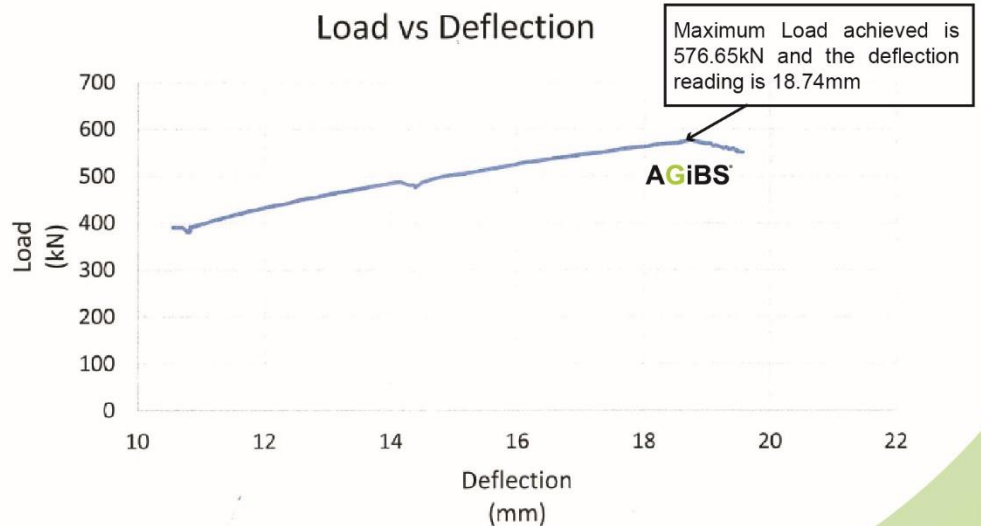
**Detail Drawing AGiBS Wall of C90**

Load test are carried out to perform increase of load vertically over the wall frame structure to examine the integrity and strength of the wall panel.

**AGiBS WALL PANEL (C75)**



**AGiBS WALL PANEL (C90)**

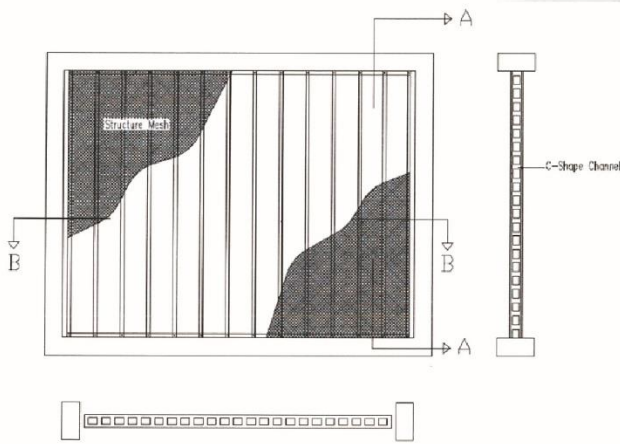


\*CREAM TEST REPORT AVAILABLE UPON REQUEST

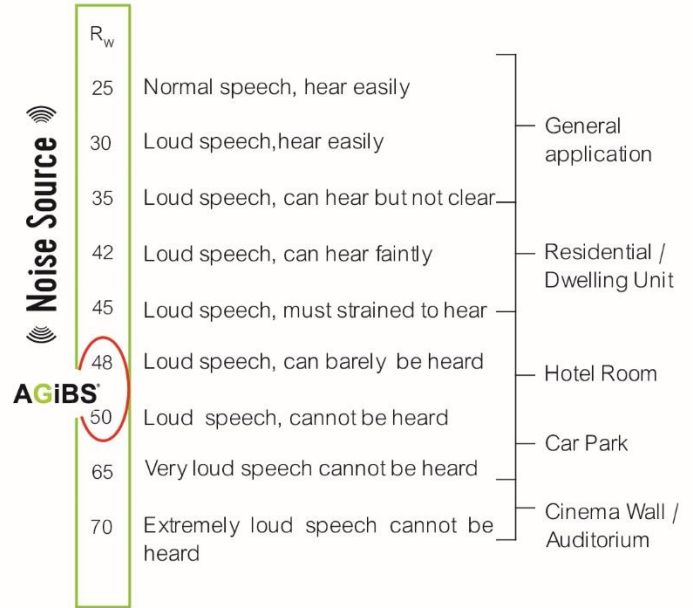


ACOUSTIC (SOUND) TEST OF AGIBS WALL PANEL

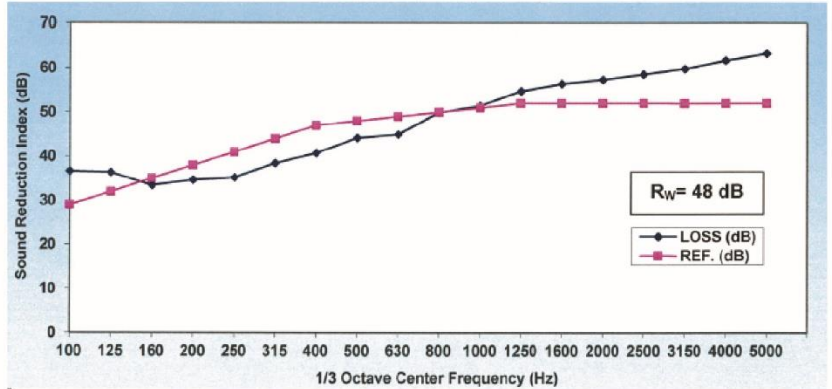
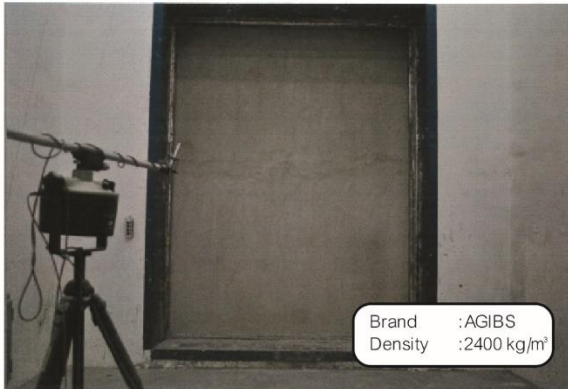
ACOUSTIC PERFORMANCE



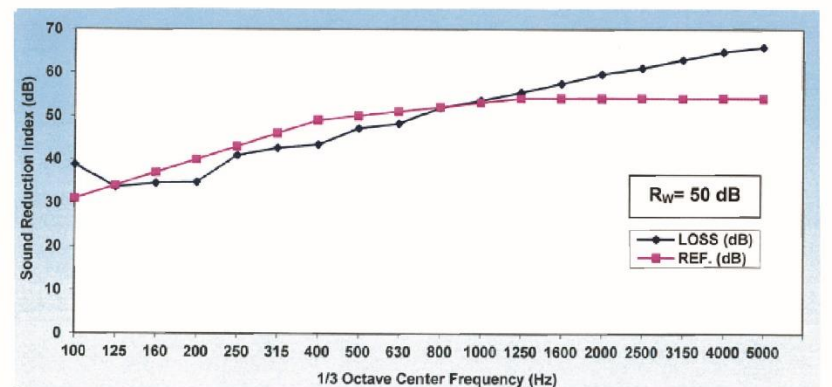
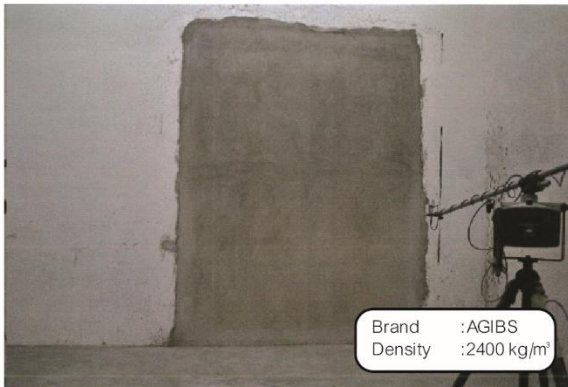
General construction drawing of Ajiya Light Weight Permanent Formwork Reinforced Concrete & Mortar Wet Walling System



Ajiya Light Weight Permanent Formwork Reinforced Mortar Wet Walling System C75 / C90



Ajiya Light Weight Permanent Formwork Reinforced Concrete Wet Walling System C75 / C90



\*SIRIM TEST REPORT AVAILABLE UPON REQUEST

**FIRE RESISTANCE TEST ON AGIBS WALL PANEL**

**FIRE TEST STANDARD AS PER BS 476: PART 21: 1987**



The exposed face of the wall system before the test



At about 120 minutes of test



The unexposed face of the wall system after the test

**FIRE RESISTANCE TEST U - Observations from unexposed face**

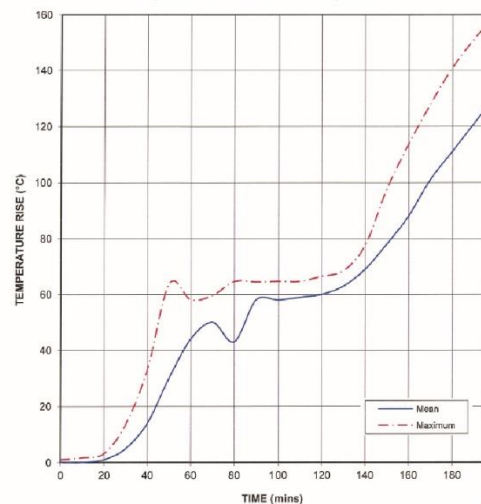
TIME (min)	TEST FACE	OBSERVATIONS
-	-	30min of total vertical pre-load of 196kN was applied upright to the wall system.
0	U	Test commenced.
15	U	No significant change is observed.
35	U	Slight damping is observed throughout the surface of the wall system.
60	-	The wall system still maintains its integrity and insulation criterion.
75	U	Slight steam released from damping is observed.
100	U	No significant change is observed.
120	-	The wall system still maintains its integrity and insulation criterion.
140	U	Slight crack is observed at the left bottom corner of the wall.
170	U	Damping as mentioned above has dried.
180	-	The wall system still maintains its integrity and insulation criterion.
195	-	The wall system still maintains its integrity and insulation criterion. The test was terminated as per client request.

**AGiBS**



\*SIRIM TEST REPORT AVAIL ABLE UPON REQUEST

**FIGURE 2. UNEXPOSED FACE TEMPERATURE CURVE**  
Temperature rise above initial mean temperature





### THERMAL (HEAT) PERFORMANCE ON AGiBS WALL PANEL

#### COMPLIANCES & PERFORMANCE



\*Click to open the QR Code

**WhatsApp**  
for Technical  
Enquiry & Proposal



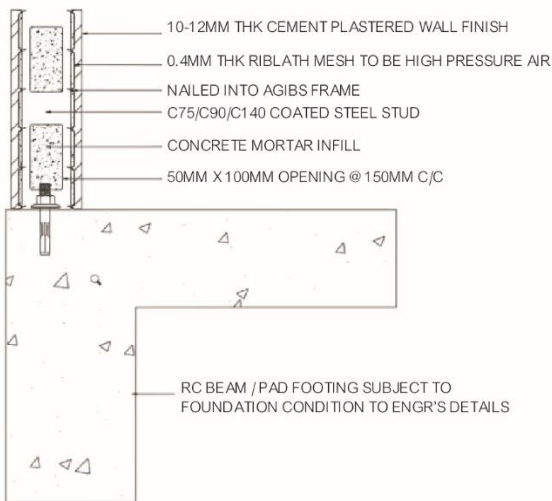
#### THERMAL PERFORMANCE

Building Material R-value			
#	Material	Thickness	R-value
1	Face Brick	4"	0.44
2	Concrete Masonry Unit	4"	0.80
3	Concrete Masonry Unit	8"	1.11
4	Concrete Masonry Unit	12"	1.28

**AGiBS®**

R-value is the measurement of a material's capacity to resist heat flow from one side to the other. In simple terms, R-values measure the effectiveness of insulation and a higher number represents more effective insulation.

#### AGiBS WET WALL



#### SPECIFICATION

##### C75

To Design & Supply AJIYA AGiBS Steel frame concrete/mortar in field load-bearing/ non load-bearing wet wall system with plastering finishes of total thickness **+/- 115mm**. Details in accordance with the manufacturer's instructions and compliance with Perakuan Pematuhan Standard (PPS).

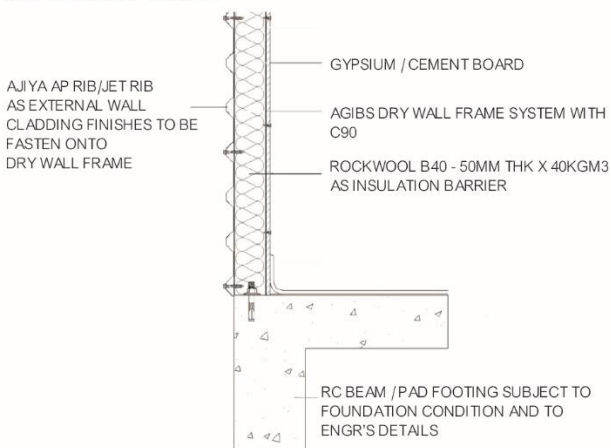
##### C90

To Design & Supply AJIYA AGiBS Steel frame concrete/mortar in field load-bearing/ non load-bearing wet wall system with plastering finishes of total thickness **+/- 130mm**. Details in accordance with the manufacturer's instructions and compliance with Perakuan Pematuhan Standard (PPS).

##### C140

To Design & Supply AJIYA AGiBS Steel frame concrete/mortar in field load-bearing/ non load-bearing wet wall system with plastering finishes of total thickness **+/- 180mm**. Details in accordance with the manufacturer's instructions and compliance with Perakuan Pematuhan Standard (PPS).

#### AGiBS DRY WALL



##### C90

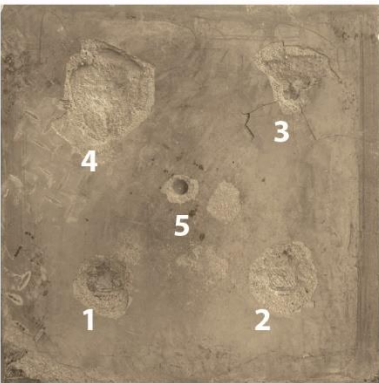
To Design & Supply AJIYA AGiBS Steel frame Rockwool/Glasswool in field load-bearing/ non load-bearing dry wall system. Details in accordance with the manufacturer's instructions and compliance with Perakuan Pematuhan Standard (PPS).







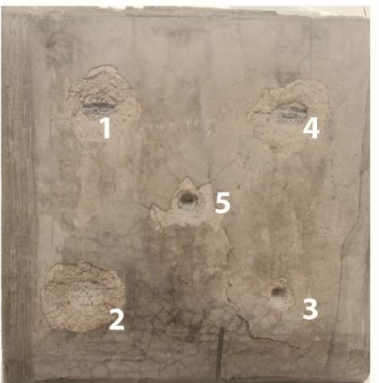
**C75.55**  
Ratio: 1.2  
Level 111A. Passed



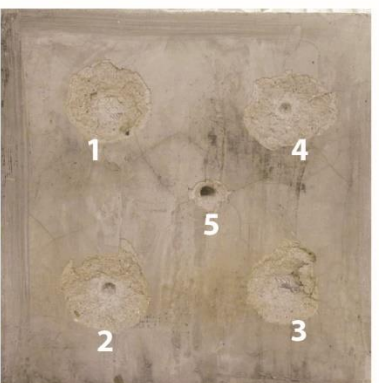
**C90.75**  
Ratio: 1.2  
Level 111A. Passed



AGiBS



**C75.55**  
Ratio: 1.3  
Level 111A. Passed



**C90.75**  
Ratio: 1.3  
Level 111A. Passed



**BALLISTIC RESISTANT PROTECTIVE MATERIALS -  
BULLET RESISTANCE PROTECTIVE MATERIAL NIJ 0108.00  
LEVEL IIIA  
Test Weapon:  
Universal Test Gun (Prototypa)  
Ammunition:  
9x19mm FMJ RN**

National Institution of Justice (NIJ)						
ARMOR TYPE	WEAPON	TEST AMMUNITION	NOMINAL BULLET MASS	SUGGESTED BARREL LENGTH	REQUIRED BULLET VELOCITY	REQUIRED HITS PER ARMOR SPECIMEN
I		22 LRHV Lead	2.6 g	15 to 16.5 cm	320 ± 12 m/s	5
		38 Special RN Lead	10.2 g	15 to 16.5 cm	250 ± 15 m/s	5
II-A		357 Magnum JSP	10.2 g	10 to 12 cm	381 ± 15 m/s	5
		9 mm FMJ	8.0 g	4 to 4.75 in	1250 ± 50 ft/s	5
II		357 Magnum JSP	10.2 g	15 to 16.5 cm	320 ± 12 m/s	5
		9 mm FMJ	8.0 g	10 to 12 cm	1395 ± 50 ft/s	5
III-A		44 Magnum Lead SWC	15.55 g	6 to 8.5 in	350 ± 12 m/s	5
		Gas Checked 9 mm FMJ	8.0 g	4 to 4.75 in	1175 ± 40 ft/s	5
III		308 Winchester FMJ	9.7 g	14 to 16 cm	425 ± 15 m/s	5
		30-06 AP	10.8 g	56 cm	1400 ± 50 ft/s	5
IV		30-06 AP	166 g	56 cm	838 ± 15 m/s	1

AP - Armor Piercing  
FMJ - Full Metal Jacketed  
RN - Round Nose  
JSP - Jacketed Soft Point  
SWC - Semi-Wadcutter

**RESTRICTED**  
**TEST REPORT**  
REPORT NO: KP/STRIDE/BTP.600-10/4/3 JILID 2 (1).

	INSTITUT PENYELIDIKAN SAINS DAN TEKNOLOGI PERTAHANAN BAHAGIAN TEKNOLOGI PERSENJAJAAN KEMENTERIAN PERTAHANAN 48100 BATU ARANG, SELANGOR, MALAYSIA TEL: 003-00352121 FAX: 003-80352134	
Job No: STRIDE/TP/2023-059	Date of Issue: 31 OCTOBER 2023	Page 1 of 5
<b>Authority/Reference for Test:</b> ARI UTARA SDN. BHD dated 10 October 2023	<b>Test Sample's Details:</b> Item Type: Ballistic Resistance Materials Sample Quantity: 4 unit Sample Identification: Refer to Test Result	
<b>Client's Details:</b> Name: Tee Sing Huat Executive Director	<b>Test Details:</b> Nature of Test: Performance Test	
<b>Address:</b> Ari Utara Sdn. Bhd., Lot 28, Taman Perindustrian Bukit Makmur, 08000, Sungai Petani, Kedah Darul Aman.	<b>Test Specifications/Standard Referred:</b> 1. NIJ 0108.01 Ballistic Resistance Protective Materials Standard. 2. Ballistic Range Safety Rules and Regulations	
<b>Test Facility Details:</b> 600 m Ballistic Range and Laboratory Weapons Technology Division, 48100, Batu Arang, Selangor. D.E.	<b>Measuring /Test Equipment:</b> 1. 60 kg Digital Platform Scale 2. Digital Meteorological Data Logger (Rotronic) 3. Portable Projectile Velocity Measurement System (HIP) 4. Vernier Calliper (Mitutoyo) 5. Ballistic Range Target Monitoring System	
<b>Test Weapon:</b> Universal Test Gun (Prototypa)	<b>Approved for Issue:</b>	
<b>Test Barrel:</b> 1. 9 mm Test Barrel		
<b>Ammunition:</b> 1. 9 x 19 mm FMJ RN		

OSMERNA BIN ISMAIL  
Director  
Weapon Technology Division  
STRIDE



**CIDB MALAYSIA**  
PERAKUAN PEMATUHAN STANDARD (BAHAN BINAAN)

Adalah dengan ini Pengilang/Pengeluar yang ditandakan di bawah ini telah mengemukakan bahan binaan yang dipanggil oleh Lembaga Pengilang/Bekal (LPPB) atau Lembaga Pemasangan Bekal (LPMB) Perumahan Malaysia (Pindas 2013). Perakuan ini adalah tertakluk kepada syarat-syarat yang telah ditetapkan. Perakuan ini mengesahkan bahawa beban dan produk binaan yang dipaparkan di bawah telah dipentaskan.

No. Pendaftaran : J1900000070  
Nama Pengilang/Pengeluar : ARI UTARA SDN BHD.  
Alamat Kilang/Bekal : LOT 28, TAMAN PERINDUSTRIAN BUKIT MAKMUR, 08000 SUNGAI PETANI, KEDAH.

Kategori Bahan Binaan :  
INDUSTRIALISED BUILDING SYSTEM (IBS)  
(Rujukan LAMPIRAN A untuk butiran terperinci bahan atau produk/binaan yang dipaparkan)  
IRON AND STEEL PRODUCTS  
(Rujukan LAMPIRAN A untuk butiran terperinci bahan atau produk/binaan yang dipaparkan)

Tarikh Mula Berkuatkuasa :  
Tarikh Tamat Tempoh Perakuan :  
Perakuan ini boleh diperbaharui bermula :  
Nota: Perakuan diluluskan setelah produk-produk yang melampirkan di bawah ini telah mengemukakan dan dipentaskan di Pejabat Produk/Produk Certificate.



SITI RAFAHAI BAHAROM  
PENGARAH  
CIDB NEGERI KEDAH  
P. Kertan Disakuff

SJIL NI ADALAH CETAK

**CIDB MALAYSIA** IBS MANUFACTURER & PRODUCT ASSESSMENT & CERTIFICATION IMPACT

Adalah dengan ini diumumkan bahawa :  
ARI UTARA SDN. BHD. (272002-U) LOT 28, TAMAN PERINDUSTRIAN BUKIT MAKMUR, 08000 SUNGAI PETANI, KEDAH.

Sebagai syarikat Status IBS yang mengeluarkan produk IBS berikut:  
SISTEM KERANGKA LOGAM AJIYA LIGHTWEIGHT STEEL FRAMING WITH MET WALL SYSTEM

No. Laporan / Report No. : SFKD10022IBS07023  
Tarikh Dikeluarkan / Issued Date : 15-06-2022  
Sah Sehingga / Valid Until : 15-06-2026

Kategori / Category : FENGGELUAR  
Standard / Reference : CIDB 38 - CONSTR

CIDB IBS SDN BHD  
100, Jalan Damai, Seksyen 13,  
46000 Kuala Lumpur,  
Malaysia  
Tel: 03-9222009  
FAX: 03-9222002  
Laman Web : www.cidb.com.my

Pendaftaran ini hendaklah dipertahankan.





**KLINIK DESA, KG. JAWA, SELANGOR**

BEFORE



AFTER



**TANDAS AWAM ANJUNG GURNEY, PENANG**

BEFORE



AFTER



**SINGLE STORY, KEDAH**

BEFORE



AFTER



**PEMBAIKAN SEKOLAH DAIF, SG PETANI, KEDAH**

BEFORE



AFTER



## AGIBS APPLICATION



**SINGLE-STOREY DETACH**  
 House RMR, Kuala Muda



**SINGLE-STOREY TERRACE**  
 House, Sg. Petani, Kedah



**DOUBLE-STOREY TERRACE**  
 House, Kuala Terengganu



**HYBRID SCHOOL**  
 SK Genting Tumpat, Kelantan



**LIGHT INDUSTRIAL WAREHOUSE**  
 Puchong



**QUARTERS**  
 Water Treatment Plant, Semenyih

**Corporate Head Office & Factory**  
 Lot 153, Kawasan Perindustrian  
 Jalan Genuang, 85000 Segamat,  
 Johor.  
 Tel: +607-943 4211  
 Fax: +607-943 1054  
 Email: enquiry@ajiya.com

**Marketing HQ & Factory**  
 No. 4, Jalan Sg Pelubung 32/149  
 Seksyen 32, 40460 Shah Alam,  
 Selangor.  
 Tel: +603-5121 0011  
 Fax: +603-5121 0111

**Southern Marketing Office & Factory**  
 Lot 7068, Jalan Seelong,  
 Kampung Maju Jaya,  
 81300 Johor Bahru, Johor.  
 Tel: +607-557 3733  
 Fax: +607-556 5733

**Mentakab Marketing Office & Factory**  
 No.11, Jalan Industri 3/5,  
 Taman Perindustrian Temerloh,  
 28400 Mentakab, Pahang.  
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 Fax: +609-270 1311

Related Companies

**ARI UTARA SDN BHD** (273092-U)  
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 Bukit Makmur, 08000 Sungai Petani,  
 Kedah.  
 Tel: +604-442 2899  
 Fax: +604-442 2799

Subsidiary Companies

**ARI TIMUR (KB) SDN BHD** (714587-K)  
 Lot 1306, Kawasan Perindustrian  
 Pengkalan Chepa II,  
 16100 Kota Bharu, Kelantan.  
 Tel: +609-774 5946  
 Fax: +609-774 6946



[www.ajiya.com](http://www.ajiya.com)

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## SUSTAINABLE DEVELOPEMENT GOAL



**AGIBS MANUAL**

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