



CIVIL ENGINEERING LABORATORY

Department of Civil Engineering

Faculty of Engineering

King Mongkut's University of Technology North Bangkok

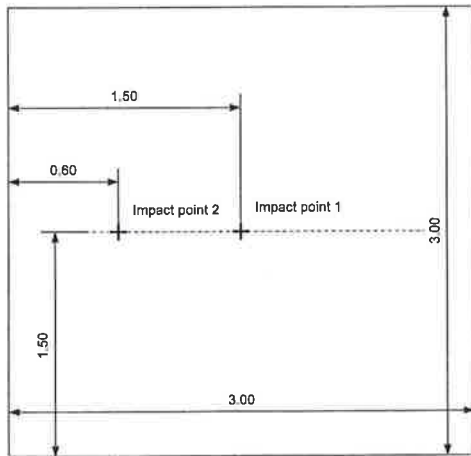
1518 Pracharat 1 Road, Bangsue, Bangkok 10800, Thailand

Tel. : 0-2555-2000 Ext. 8628, 8625 Fax. : 0-2587-4337

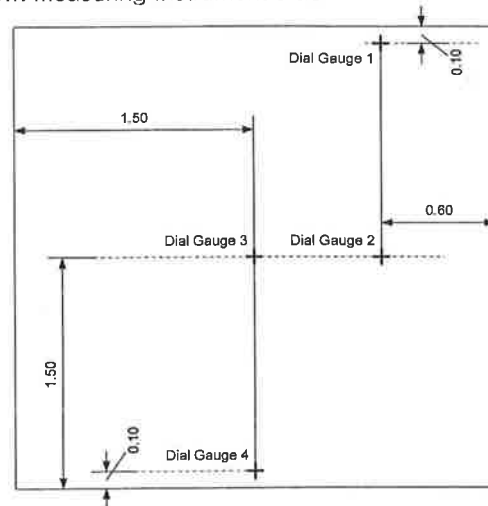
PARTITIONS TEST

Test Date: April 8, 2015 Test Name: Resistance to damage by impact from
a large soft body using 6mm. tied.
 Starting Time: 13:20
 Ending Time: 14:00 Product Name: Innowall
 Test Duration: 0:40 Size of a partition: 3.00 x 3.00 m.
 Room Temperature: 32.5 °C Level of Impact Energy: 40 N·m
 Room % RH: 51%

Front View: Impact side



Rear View: Measuring Instrument Side



Any Surface Damage: No

Any Structural Damage: No

Any Changes Observed During Test: No

Conclusion of the condition

of the specimen tested: No damage

Tested by : CM MW

(Wannawit Taemthong)

Department Head : Utthairit Rochanavibhata

(Utthairit Rochanavibhata)

Permanent Deformation Observed in millimeters.

After Test at Impact point 1	Dial Gauge 1	4.35
	Dial Gauge 2	3.78
	Dial Gauge 3	4.40
	Dial Gauge 4	0.00
After Test at Impact point 2	Dial Gauge 1	4.86
	Dial Gauge 2	3.40
	Dial Gauge 3	0.00
	Dial Gauge 4	0.00

Remarks 1. The testing results are good only for those specimens tested.

2. Not valid unless signed and sealed.

Test No.: 2558WNW01

3. Dial Gauges 2 and 3 are in the opposite side of impact point 2 and 1, respectively.

Sheet 1 of 2



CIVIL ENGINEERING LABORATORY

Department of Civil Engineering

Faculty of Engineering

King Mongkut's University of Technology North Bangkok

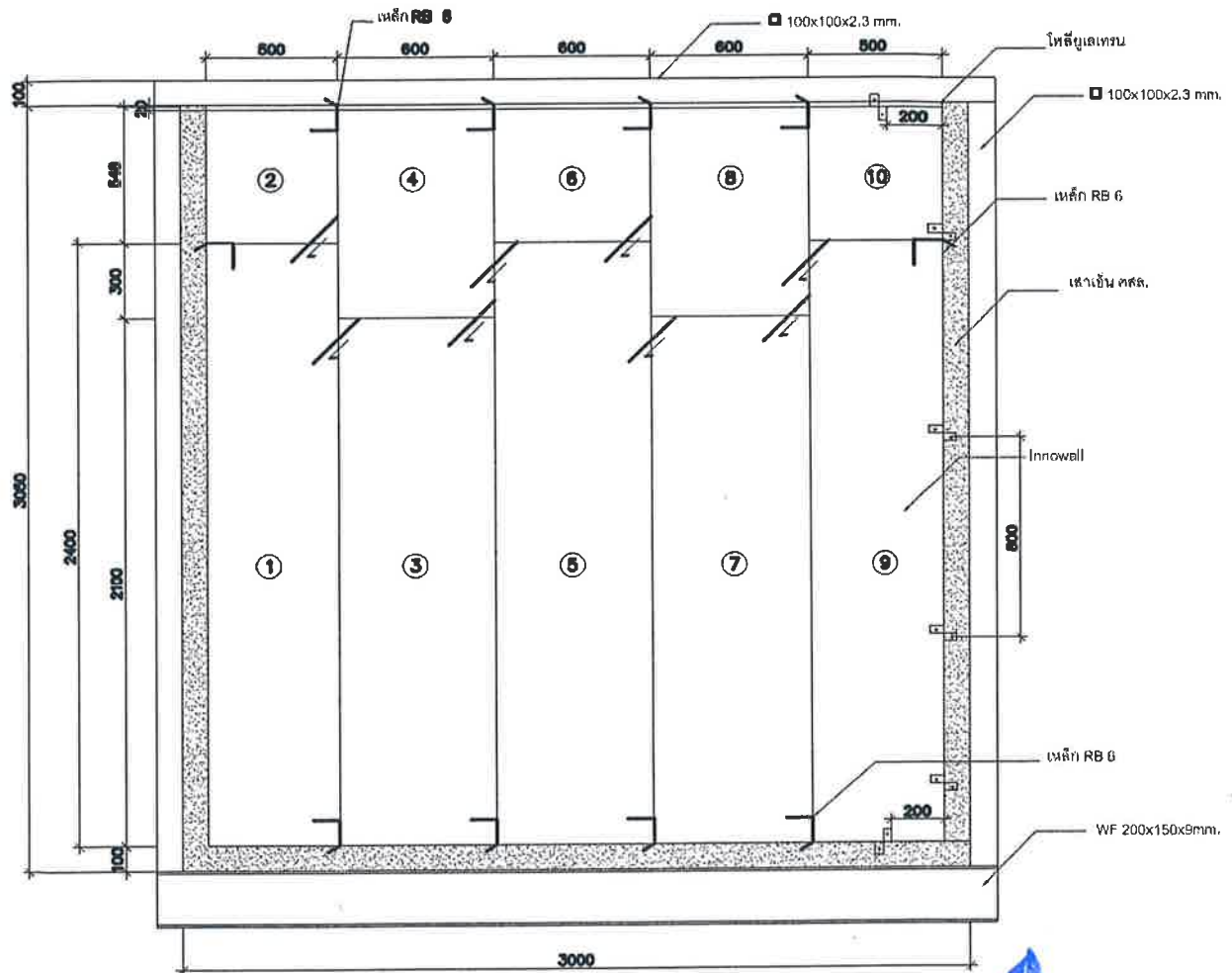
1518 Pracharat 1 Road, Bangsue, Bangkok 10800, Thailand

Tel. : 0-2555-2000 Ext. 8628, 8625 Fax. : 0-2587-4337

DRAWING

Test Date: April 8, 2015

Test Name: Resistance to damage by impact from
a large soft body using 6mm. tied.



Tested by : *Wannawit Taemthong*
(Wannawit Taemthong)

Department Head : *Uthairith Rocharavibhata*
(Uthairith Rocharavibhata)

Remarks 1. The testing results are good only for those specimens tested.

2. Not valid unless signed and sealed.

3. Dial Gauges 2 and 3 are in the opposite side of impact point 1 and 2, respectively.

Test No.: 2558WNW01

Sheet 2 of 2



CIVIL ENGINEERING LABORATORY

Department of Civil Engineering

Faculty of Engineering

King Mongkut's University of Technology North Bangkok

1518 Pracharat 1 Road, Bangsue, Bangkok 10800, Thailand

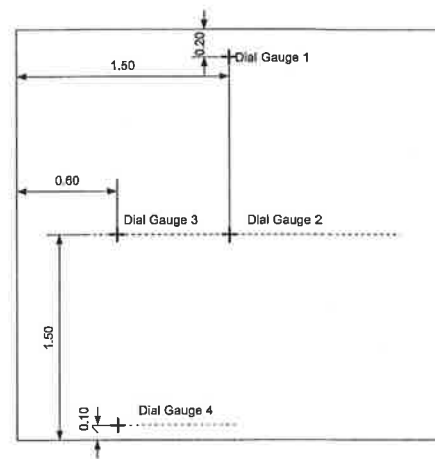
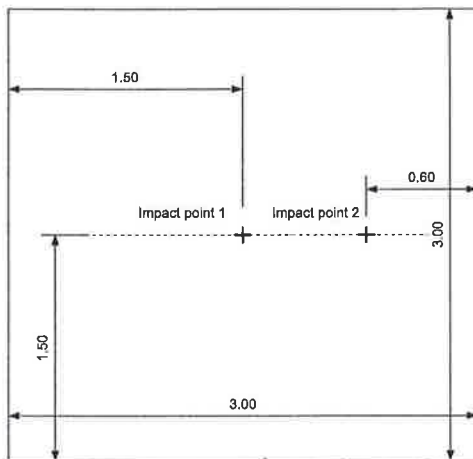
Tel. : 0-2555-2000 Ext. 8628, 8625 Fax. : 0-2587-4337

PARTITIONS TEST

Test Date: April 22, 2015 Test Name: Resistance to damage by impact from
 Starting Time: 14:00 a large soft body using a clip lock method.
 Ending Time: 14:30 Product Name: Innowall
 Test Duration: 0:30 Size of a partition: 3.00 x 3.00 m.
 Room Temperature: 31 °C Level of Impact Energy: 40 N·m
 Room % RH: 45%

Front View: Impact side

Rear View: Measuring Instrument Side



Any Surface Damage: No

Any Structural Damage: No

Any Changes Observed During Test: No

Conclusion of the condition

of the specimen tested: No damage

Tested by : Wannawit Taemthong
 (Wannawit Taemthong)

Department Head : Uthairith Rochanavibhata
 (Uthairith Rochanavibhata)

Permanent Deformation Observed in millimeters.

After Test at Impact point 1	Dial Gauge 1	0.00
	Dial Gauge 2	0.00
	Dial Gauge 3	0.00
	Dial Gauge 4	0.00
After Test at Impact point 2	Dial Gauge 1	0.00
	Dial Gauge 2	0.00
	Dial Gauge 3	0.00
	Dial Gauge 4	0.00

Remarks 1. The testing results are good only for those specimens tested.

2. Not valid unless signed and sealed.

Test No.: 2558WNW02

3. Dial Gauges 2 and 3 are in the opposite side of impact point 1 and 2, respectively.

Sheet 1 of 2



CIVIL ENGINEERING LABORATORY

Department of Civil Engineering

Faculty of Engineering

King Mongkut's University of Technology North Bangkok

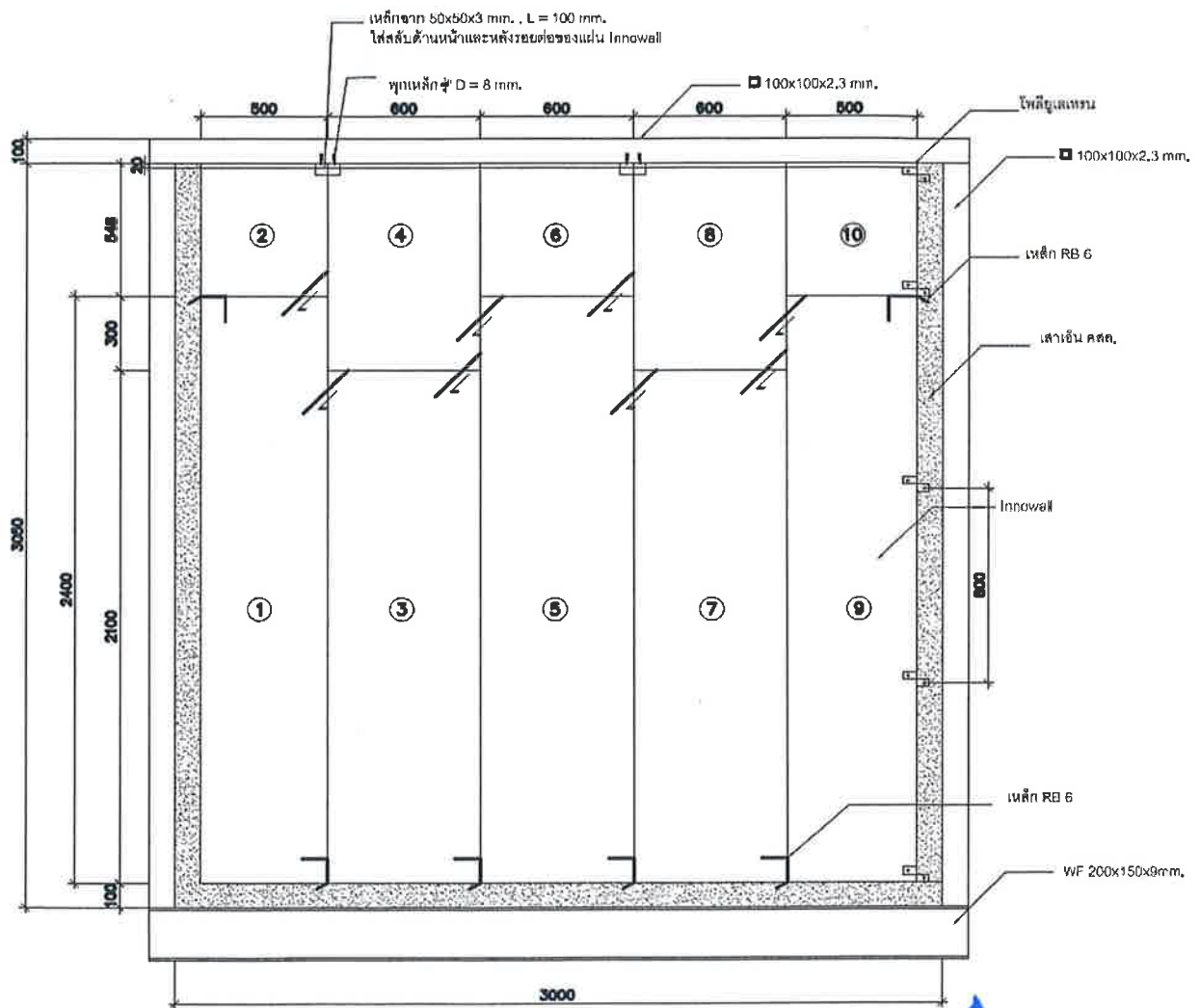
1518 Pracharat 1 Road, Bangsue, Bangkok 10800, Thailand

Tel. : 0-2555-2000 Ext. 8628, 8625 Fax. : 0-2587-4337

DRAWING

Test Date: April 22, 2015

Test Name: Resistance to damage by impact from
a large soft body using a clip lock method.



Tested by :
(Wannawit Taemthong)

Department Head :
(Uthairith Roohanavibhata)

Remarks 1. The testing results are good only for those specimens tested.

2. Not valid unless signed and sealed.

3. Dial Gauges 2 and 3 are in the opposite side of impact point 1 and 2, respectively.

Test No.: 2558WNW02

Sheet 2 of 2



CIVIL ENGINEERING LABORATORY

Department of Civil Engineering

Faculty of Engineering

King Mongkut's University of Technology North Bangkok

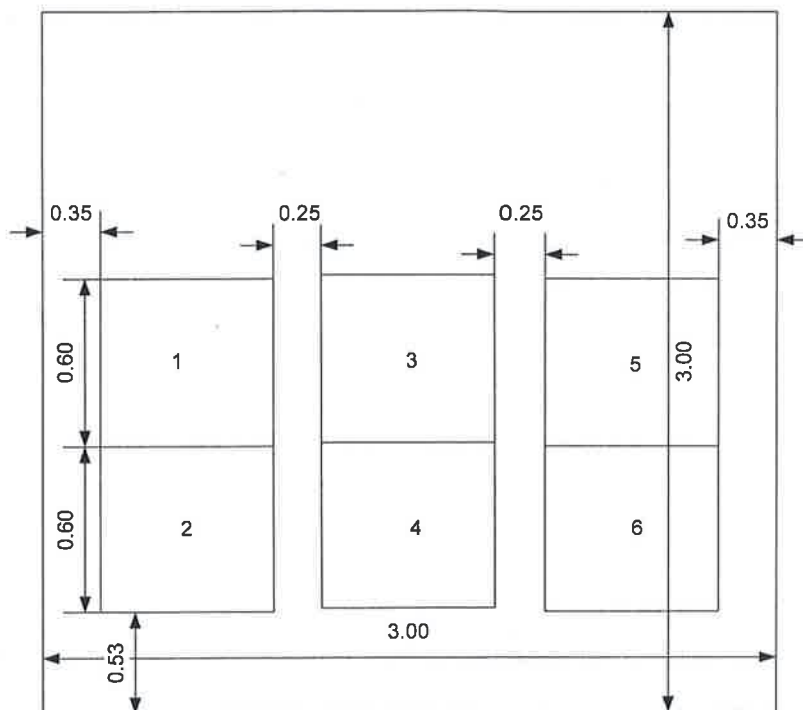
1518 Pracharat 1 Road, Bangsue, Bangkok 10800, Thailand

Tel. : 0-2555-2000 Ext. 8628, 8625 Fax. : 0-2587-4337

PARTITIONS TEST

Test Date:	May 6, 2015	Test Name:	Resistance to damage of wall ceramic tiles by impact
Starting Time:	9:30		from a large soft body using various bonding agents.
Ending Time:	10:00	Product Name:	Innowall
Test Duration:	0:30	Size of a partition:	3.00 x 3.00 m.
Room Temperature:	31°C	Level of Impact Energy:	40 N·m
Room % RH:	57%	Average Mortar Thickness:	8.05 mm.


Front View: Impact side



Any Tile Surface Damage: No
Any Wall Panel Damage: No
Any Cracking on Mortar: No

Conclusion of the condition of the specimen tested: Ceramic tiles and mortars are in good conditions.

All 6 ceramic tiles attached to wall are in good conditions after tested.

Tested by : 
(Wannawit Taemthong)

Department Head : 
(Uthairith Rochanavibhata)

- Remarks**
1. The testing results are good only for those specimens tested.
 2. Not valid unless signed and sealed.
 3. See attached drawings for more details.

Test No.: 2558WNW03

Sheet 1 of 2



CIVIL ENGINEERING LABORATORY

Department of Civil Engineering

Faculty of Engineering

King Mongkut's University of Technology North Bangkok

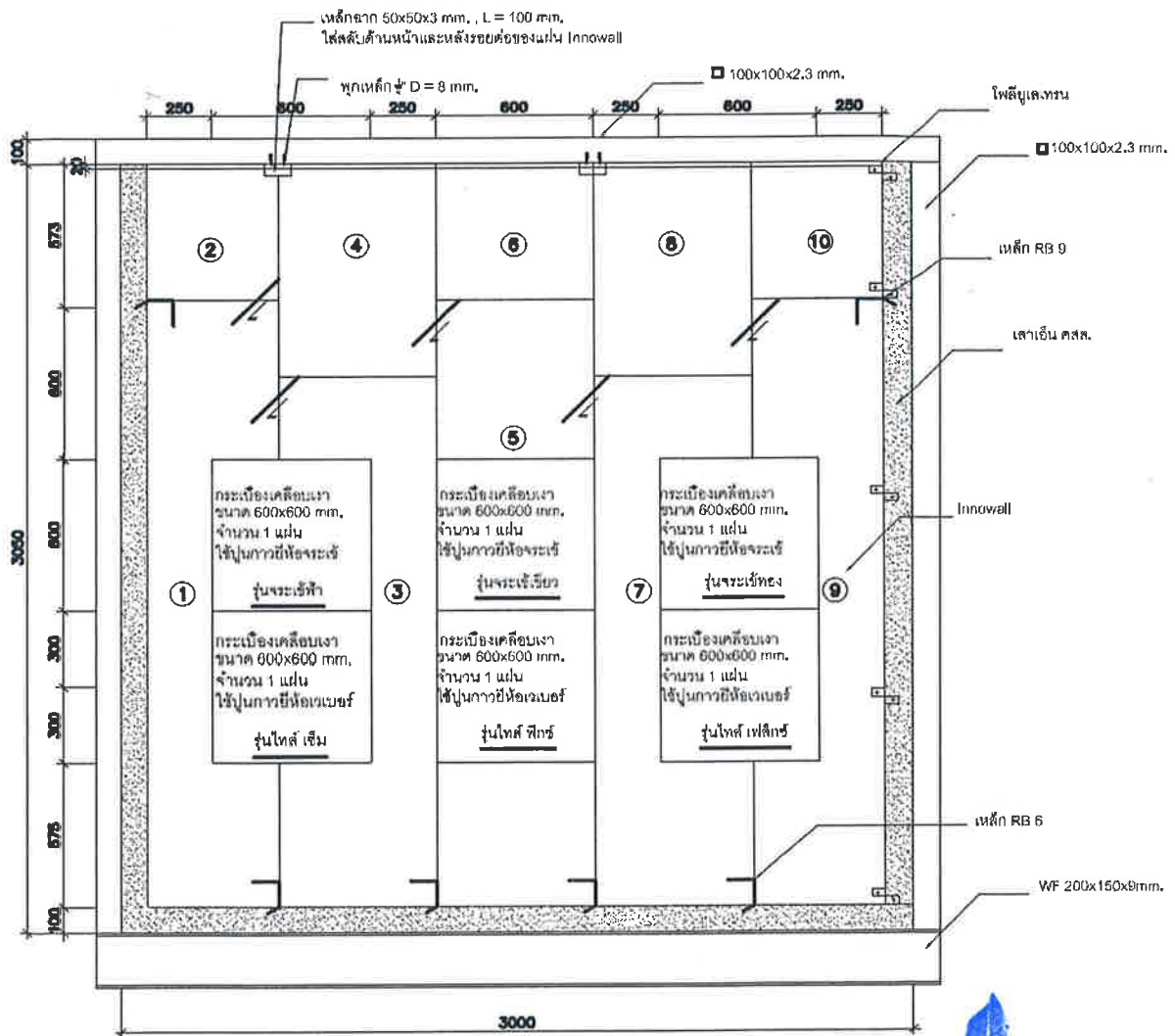
1518 Pracharat 1 Road, Bangsue, Bangkok 10800, Thailand

Tel. : 0-2555-2000 Ext. 8628, 8625 Fax. : 0-2587-4337

DRAWING

Test Date: May 6, 2015

Test Name: Resistance to damage of wall ceramic tiles by impact from a large soft body using various bonding agents.



Tested by : *Wannawit Taemthong*
(Wannawit Taemthong)

Department Head : *Uthairit Rechanavibhata*
(Uthairit Rechanavibhata)

- Remarks**
1. The testing results are good only for those specimens tested.
 2. Not valid unless signed and sealed.
 3. See attached drawings for more details.

Test No.: 2558WNNW03

Sheet 2 of 2



CIVIL ENGINEERING LABORATORY

Department of Civil Engineering

Faculty of Engineering

King Mongkut's University of Technology North Bangkok

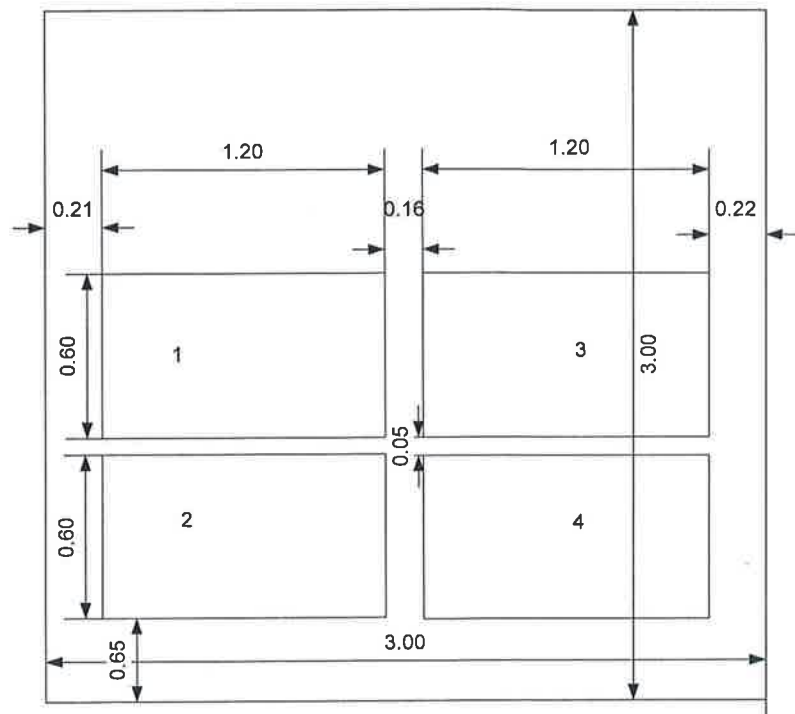
1518 Pracharat 1 Road, Bangsue, Bangkok 10800, Thailand

Tel. : 0-2555-2000 Ext. 8628, 8625 Fax. : 0-2587-4337

PARTITIONS TEST

Test Date: <u>May 14, 2015</u>	Test Name: <u>Resistance to damage of wall granite tiles by impact</u>
Starting Time: <u>11:30</u>	<u>from a large soft body using various bonding agents.</u>
Ending Time: <u>12:00</u>	Product Name: <u>Innowall</u>
Test Duration: <u>0:30</u>	Size of a partition: <u>3.00 x 3.00 m.</u>
Room Temperature: <u>31°C</u>	Level of Impact Energy: <u>40 N·m</u>
Room % RH: <u>57%</u>	Average Mortar Thickness: <u>9.25 mm.</u>


Front View: Impact side




Any Tile Surface Damage: No
Any Wall Panel Damage: No
Any Cracking on Mortar: No

Conclusion of the condition of the specimen tested: Granite tiles and mortars are in good conditions.

All 4 granite tiles attached to wall are in good conditions after tested.

Tested by: 
(Wannawit Taemthong)

Department Head: 
(Uthairit Bochanwibhata)

- Remarks
1. The testing results are good only for those specimens tested.
 2. Not valid unless signed and sealed.
 3. See attached drawings for more details.

Test No.: 2558WNW04

Sheet 1 of 2



CIVIL ENGINEERING LABORATORY

Department of Civil Engineering

Faculty of Engineering

King Mongkut's University of Technology North Bangkok

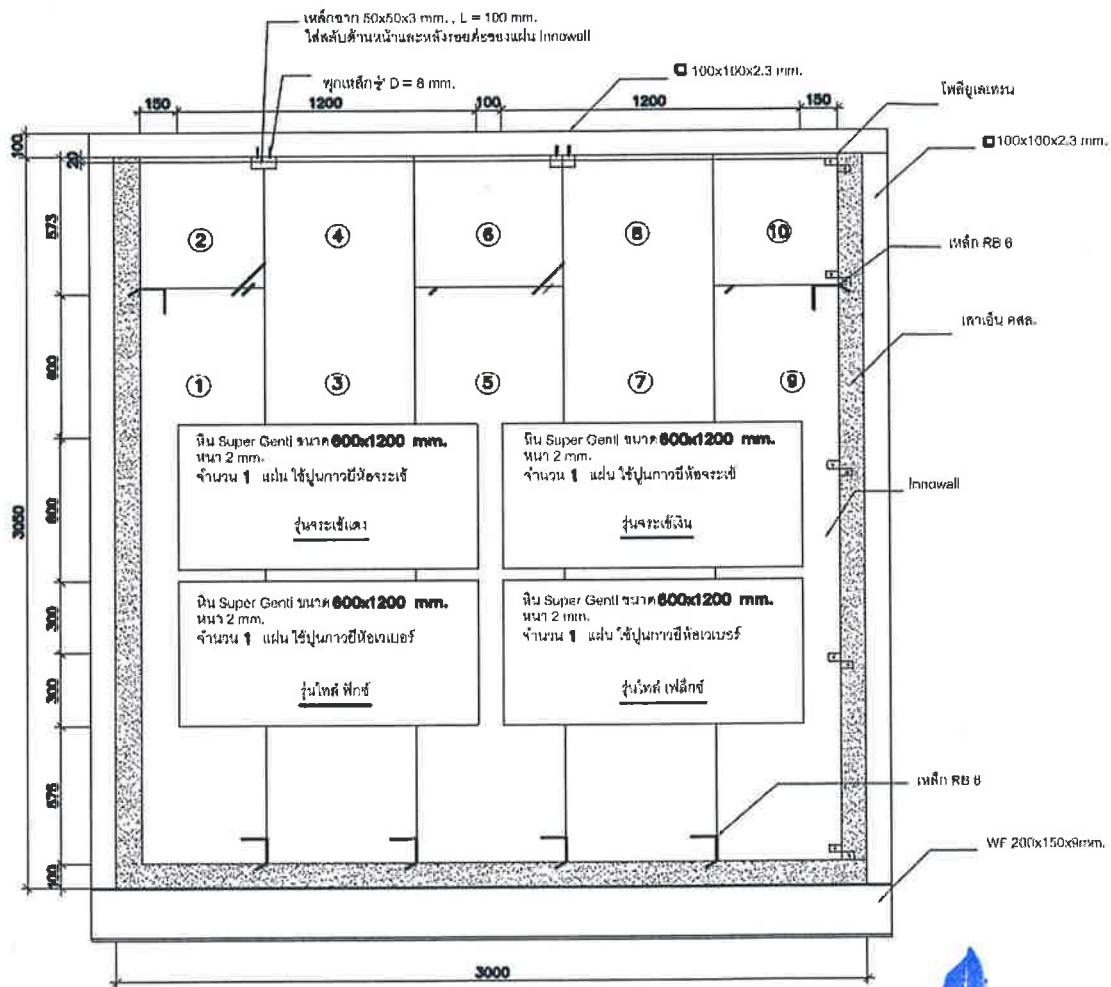
1518 Pracharat 1 Road, Bangsue, Bangkok 10800, Thailand

Tel. : 0-2555-2000 Ext. 8628, 8625 Fax. : 0-2587-4337

DRAWING

Test Date: May 14, 2015

Test Name: Resistance to damage of wall granite tiles by impact from a large soft body using various bonding agents.



Tested by : *Wannawit Taemthong*
(Wannawit Taemthong)

Department Head : *Uthairith Rochnavibhata*
(Uthairith Rochnavibhata)

- Remarks
1. The testing results are good only for those specimens tested.
 2. Not valid unless signed and sealed.
 3. See attached drawings for more details.

Test No.: 2558WNNW04

Sheet 2 of 2