REMT UTAMA SDN BHD 409864-W

Engineering And Contracting

Ground Floor, Lot 20
Grace Square, Jln Pantai Sembulan,
P. O. Box 14722,
88100 Kota Kinabalu, Sabah.
Tel: 088-257308
Fax: 088-260869

E-mail: remt.utama.sb@gmail.com

Tarikh : *12 Januari 2021*
Rujukan Kami : *RUSB/AD.C-AKT (BOMBA.BFORT) (las)/1.1.2/20-062*

Ketua Penolong Pengarah Kanan,
Unit Seni Bina,
Cawangan Pengurusan Projek,
Kementerian Perumahan Dan Kerajaan Tempatan,
Aras 5, No.15, Persiaran Perdana
Presint 4, 62100 Putrajaya,
U/P : Ar. Wan Mohammad Norshah Bin Abdul Satar

Tuan,

CADANGAN PEMBINAAN PROJEK BALAI BOMBA DAN PENYELAMAT BEAUFORT, SABAH
NO KONTRAK : KPKT/CPPP/JBPM/14/15/2019
- Permohonan Kelulusan Bahan - *Fire Rated Door Pilihan Ke-2*

Merujuk kepada perkara di atas dan borang kelulusan bahan yang telah dihantar kepada pihak Noor Izwan Arkitek pada 29 Ogos 2020.

2. Kami memohon pertimbangan semula pihak tuan untuk memberi kelulusan bahan bagi *Fire Rated Door* pilihan ke-2 jenama Gere dan diedarkan oleh High Reserve Marketing Sdn Bhd. Ini kerana pembekal pilihan pertama yang telah diluluskan iaitu Serai Harmoni Sdn Bhd tidak dapat membekalkan pintu tersebut kerana kesesakan sementara barisan pengeluaran kesan dari PKP 1.0.

3. Bersama ini disertakan semula borang kelulusan bahan beserta katalog, Sijil Kelulusan Bomba dan Sijil Sirim untuk rujukan dan kelulusan pihak tuan.

4. Segala maklumbalas dan perhatian daripada pihak tuan kami dahulukan dengan ucapan terima kasih.

Yang Benar,

REMT UTAMA SDN BHD
(Syarikat berdaftar TERAJU – Program TeraS)

SHIR ZAMAN BIN FAZUL RAHMAN
GENERAL MANAGER

REMT UTAMA SDN. BHD. Co. No. 409864-W

Tarikh : 12 Januari 2021
Rujukan Kami : RUSB/AD.C-AKT (BOMBA.BFORT) (las)/1.1.2/20-062

S.K - Noor Izwan Architect
K-2-7, Block K, Lorong Metro 4,
Metro Town, Jalan Lintas,
88300 Kota Kinabalu,
Sabah.

	BK-PEMB-PK(P)-08-07	**Pindaan**	**00**
	BORANG KELULUSAN BAHAN/PEMERIKSAAN MOCK-UP	Mukasurat	**1 / 1**
		Tarikh	**24/08/2020**

BORANG KELULUSAN BAHAN/PEMERIKSAAN MOCK-UP

PROJEK: CADANGAN PEMBINAAN PROJEK BALAI BOMBA DAN PENYELAMAT BEAUFORT, SABAH No. Kontrak : KPKT/CPPP/JBPM/14/15/2019		Kontraktor : REMT UTAMA SDN BHD	
BUTIRAN KERJA KELULUSAN BAHAN/MOCK-UP/ DESKRIPSI ITEM SAMPEL: 1 Hour Fire Rated Door (FD1, FD2, FD3)		Lokasi ~~*Mock-up~~/ Bahan/~~Kerja~~ : Blok Utama	Tarikh: 24/08/2020
Model: Gere -DL/1HR/8MM/MF	Pengilang: High Reserve Marketing Sdn Bhd	Negara Asal:. Malaysia	Pengedar Tempatan: High Reserve Marketing Sdn Bhd

PERAKUAN CPP/PERUNDING (Arkitek/~~M&E/C&S~~) **(*Jika projek R&B*):**

Saya dengan ini mengesahkan bahawa cadangan bahan/~~peralatan/*mock-up*~~ adalah mematuhi kehendak spesifikasi dan berfungsi seperti kehendak kontrak.

Disertakan :

Katalog ☐ Lukisan ☐ Sampel Bahan ☐ Spesifikasi ☐ Sijil ☐

Sampel kerja ☐ *Mock-up* ☐

Tandatangan ~~CPP~~/Perunding Arkitek/~~M&E/C&S~~*	Jawatan/Cap Rasmi
Nama : Ar. Noor Izwan Rahim	Tarikh : 24 Ogos 2020

PERAKUAN KONTRAKTOR :

Saya dengan ini berjanji akan mematuhi kehendak CPP/Perunding* dan memastikan *bahan/peralatan/mock up/kerja yang dicadangkan mengikut spesifikasi dan berfungsi seperti di dalam kontrak.

Tandatangan Wakil Kontraktor	Jawatan/Cap Rasmi
Nama : Sulastri Binti Pongot	Tarikh : 24 Ogos 2020

KEPUTUSAN JKR CPP:

Dipersetujui (*concurred*) ☐

Walaupun perkara di atas telah dipersetujui, adalah menjadi tanggungjawab kontraktor bagi memastikan *bahan/peralatan/mock up/kerja mematuhi kehendak spesifikasi dan berfungsi seperti yang telah dinyatakan di dalam kontrak.

Ditolak dan perlu kemukakan semula ☐

Tandatangan KUR*(Arkitek/M&E/C&S)/Wakil PP	Jawatan/Cap Rasmi
Nama :	Tarikh

Nota: * Potong yang tidak berkenaan

REMT

SAMPLE SUBMISSION FORM

REF. NO. : RUSB/BOMBA/SSF/029

CADANGAN PEMBINAAN PROJEK BALAI BOMBA DAN PENYELAMAT BEAUFORT, SABAH

TO : AR. NOOR IZWAN - NOOR IZWAN ARCHITECT (NIA)

FROM : SULASTRI - REMT UTAMA SDN BHD

DATE : 24 Ogos 2020

MATERIAL : 1 Hour Fire Rated Door

	DESCRIPTION	COMPANY/BRAND	MODEL/TECHNICAL
1	FD 1 : Single Leaf	Option 1 :	1100mm (W) x 2200mm (H)
		Brand : Thung Hing	
		Manufacturer : Serai Harmoni Sdn Bhd	
		Option 2 :	
		Brand : Gere	
		Manufacturer : High Reserve Marketing Sdn Bhd	
2	FD 2 : Double Leaves	Option 1 :	1800mm (W) x 2200mm (H)
		Brand : Thung Hing	
		Manufacturer : Serai Harmoni Sdn Bhd	
		Option 2 :	
		Brand : Gere	
		Manufacturer : High Reserve Marketing Sdn Bhd	
3	FD 1 : Single Leaf	Option 1 :	900mm (W) x 2200mm (H)
		Brand : Thung Hing	
		Manufacturer : Serai Harmoni Sdn Bhd	
		Option 2 :	
		Brand : Gere	
		Manufacturer : High Reserve Marketing Sdn Bhd	

SIGNATURE :

REMT UTAMA SDN. BHD. Co. No. 409864-W

COMMENT : For your perusal and approval.

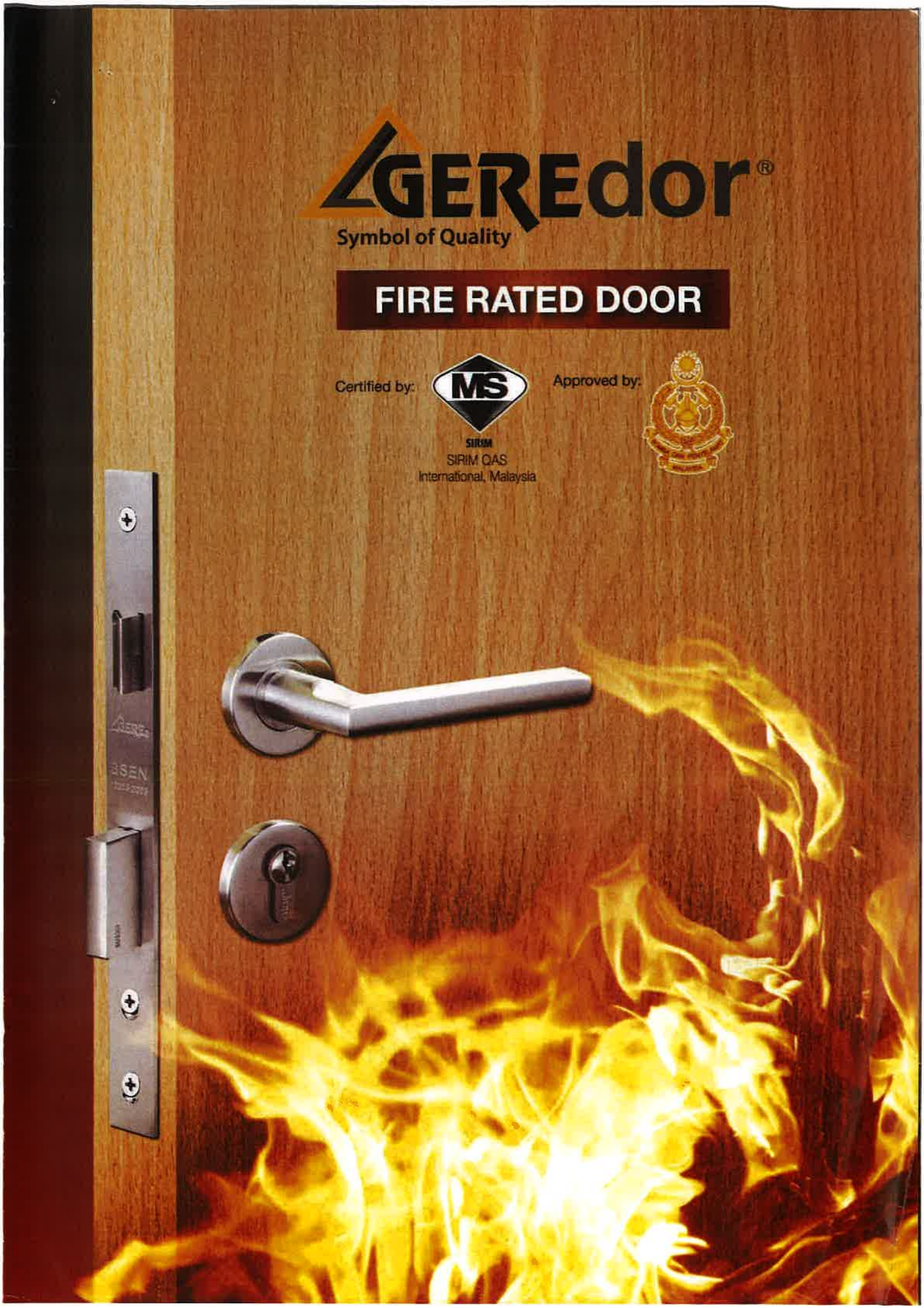
APPROVED/RESUBMIT :

- To ensure the certificate is updated during test.
- No objection subject to client's acceptance

SIGNATURE : DATE : 09 SEP 2020

ATTACHMENTS : [/] YES [ ] NO

DISTRIBUTION : [ ] CLIENT [/] ARCHITECT [ ] C&S [ ] M&E


GEREdor®
Symbol of Quality
FIRE RATED DOOR
Certified by:
MS
SIRIM
SIRIM QAS
International, Malaysia
Approved by:

GERE
Symbol of Quality

COMPANY PROFILE

Since 1995, High Reserve Marketing established the GERE brand with proven standards of reliability and trust. Its product range represents a sophisticated composition of mechanical ingenuity and cutting-edge design innovation.

Prestigiously reputed as the ultimate lock and hardware maker, each product in this catalogue is highly reflective of GERE's brand mission. The brand mission is to provide you with superior manufacturing excellence and premium product quality.

GERE, a brand name well ingrained within the architectural imprint that have carved the path towards GERE INTERNATIONAL. It has been making waves in the overseas export market to South America and planning to expand to other countries worldwide.

GERE product range such as the well-built padlocks are well recognised by the United Kingdom Accreditation Service (UKAS) under the BS EN 12320:2001, UK Standard, CEN European Standard BS EN 12320:2001 and TUV BS EN ISO9227:2007, BS EN 1670:2007, INTERTEK BS EN 1670:2007/2009/AC. GERE products has obtained ANSI BHMA 156.2 from SIRIM QAS International, a rare public endorsement by an independent certification agency for a Malaysian brand.



SECURE YOUR HOME & BELONGINGS

GERE's superior and innovative product range have achieved many certifications from SIRIM QAS International and other certification bodies:

YEAR	PRODUCT	STANDARD	CERTIFICATION
2007	GERE Padlock CL939 & CL99	BS EN 12320:2001	UKAS
2010	GERE Cylindrical Knobset, Turbular Knobset	ANSI/BHMA A 156.2:2003	SIRIM QAS International
2010	GERE Mortise Lock	ANSI/BHMA A 156.13:2005	SIRIM QAS International
2010	GERE Handle Set & DeadBolt	ANSI/BHMA A 156.5:2001	SIRIM QAS International
2010	GERE Padlock	BS EN ISO9227:2007 BS EN 1670:2007	Technischer Überwachungsverein (TUV)
2013	GERE Padlock	BS EN 12320:2012	SIRIM QAS International
2013	GERE Padlock	BS EN 1670:2007/2009/AC	INTERTEK
2013	GERE Mortise Lock	BS EN 12209:2003	SIRIM QAS International (Fire Rated Door Compliance)
2013	GERE Hinge	BS EN 1935:2002	SIRIM QAS International (Fire Rated Door Compliance)
2015	GERE Door Closer	BS EN 1154:1997	SIRIM QAS International (Fire Rated Door Compliance)
2015	GERE Floor Spring	BS EN 1154:1997	SIRIM QAS International (Fire Rated Door Compliance)

GERE Padlock is the first and the only padlock in Malaysia to achieve SIRIM QAS International's certification in year 2013.

In year 2013, High Reserve Marketing and GERE have also attained the prestigious Keris Award (Asia Pacific International Honesty Enterprise and Honesty Product) respectively.

As for the Fire Rated Door, GEREdor has attained the 60 minutes Single Leaf Composite Fire Resistant Door with EG Steel Door Frame. Tested by SIRIM QAS International Sdn. Bhd. Under MS 1073:Part 3:1996 with latest (Amd.1:2003) Specification for Fire Resistant Doorset in year 2015.

Being the pioneer in this industry, it is GERE's vision to have that unyielding mission to continuous pursue the latest in design and material innovative advancement in order to continually evolve its product range to new heights of distinction.

Our main mission is our customers. GERE's brand mission is upholding our customers' continual trust and unwavering support.

To enquire more about us and GERE products and its large range of the latest products offerings, please log in to ***www.gere-products.com***.

GEREdor®
Symbol of Quality

QUALITY FIRE-RATED DOOR

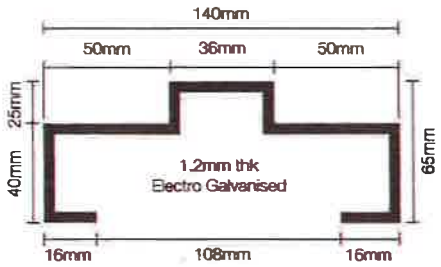
GEREdor specialises in Fire Rated Doors that meet the needs of our clients. **GEREdor** Fire Rated Doors come in various styles and configurations to meet the needs of both residential and commercial projects. **GEREdor** has been tested by Sirim QAS International Malaysia which has been approved by Jabatan Bomba dan Penyelamatan Malaysia.

- **1 HOUR RATED FIRE RESISTANCE**
- **BS EN 12209:2003 STANDARD AND ANSI/ BHMA A 156.13:2003 COMPLIANCE IRONMONGERIES**
- **TESTED AND IN COMPLIANCE TO MS 1073: PART 3: 1996 (AMD. 1: 2003)**
- **ELECTRO GALVANISED METAL DOOR FRAME**
- **SCREW ON TYPE HINGES**

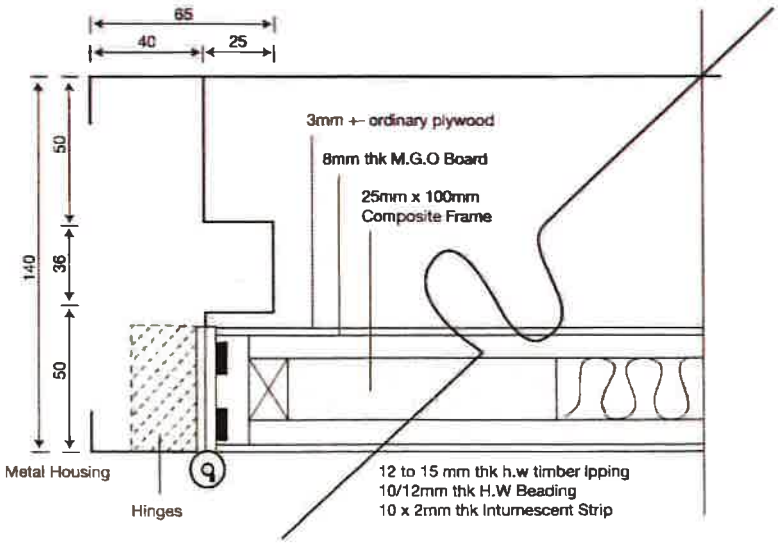
TYPICAL DOOR JAMB SECTION



Diagram

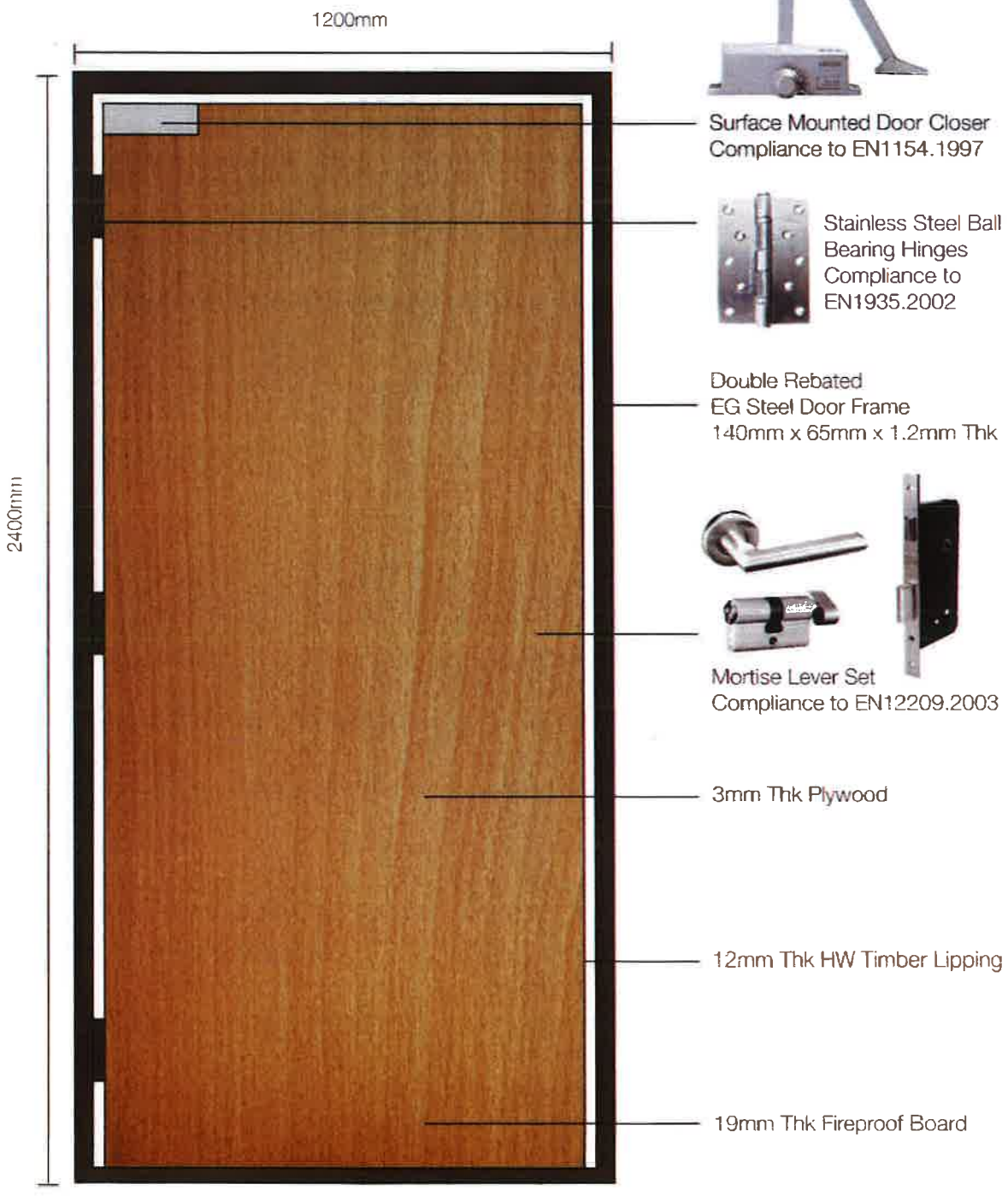


CROSS SECTION OF DOOR LEAF



SINGLE LEAF ONE HOUR FIRE RATED DOOR WITH ELECTRO GALVANIZED METAL DOOR FRAME

Maximum Size 1200mm x 2400mm
Model : GEREdor MFKL/SL/1H/8MM/GERE



IRONMONGERIES SET

STAINLESS STEEL SUS 304 LEVER HANDLE

Model:
G 101



Model:
G 102



Model:
G 103



Model:
G 105



Model:
G 106



Model:
G 111



Model:
G 1003



Model:
G 1007



SIRIM
CERTIFIED TO: ANSI/BHMA A 156.13:2005
BS EN 12209:2003

MORTISE LOCK CASE

Model:
Entrance
GML 8561

Model:
Passage / Closet
GML 8563

Model:
Classroom Lock
GML 8564

Model:
Deadlock
GML 8566

Model:
Anti Panic
GML 7261



BS EN 12209:2003
SIRIM
FIRE RATED
ONE KEY
Inox
CERTIFIED TO: ANSI/BHMA A 156.13:2005

IRONMONGERIES SET

DOOR CLOSER 800 SERIES

Model:
G801



Model:
G803



Model:
G805BC



Model:
G806BC



Power Size Available

- EN 3 - 60kg
- EN 4 - 80kg
- EN 5 - 100kg
- EN 6 - 120kg

CERTIFIED TO: BS EN 1154:1997
CERTIFICATION NO: PC 091790

PROFILE CYLINDER

Model:
GC601S
Entrance



Available Function

- Cylinder with Thumb Turn
- Double Keyed Cylinder
- Coin Slot with Thumb Turn
- Half Cylinder with Thumb Turn
- Half Cylinder with Key

BS EN 12209:2003

CERTIFIED TO: ANSI/BHMA A 156.13:2005

HINGES

GH5353BB

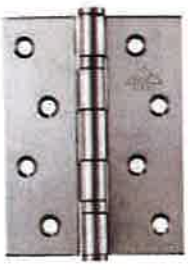


Stainless Steel Hinges with Bearing
127mm x 90mm x 3.0mm

BS EN Rating

4	7	6	0	1	4	0	13

GH4322B



Stainless Steel Hinges with Bearing
102mm x 76mm x 2.0mm

BS EN Rating

3	7	4	0	1	3	0	11

BS EN 1935:2002

IRONMONGERIES SET

DOOR CLOSER 800 SERIES

Model:
G801



Model:
G803



Model:
G805BC



Model:
G806BC



Power Size Available
- EN 3 - 60kg
- EN 4 - 80kg
- EN 5 - 100kg
- EN 6 - 120kg

CERTIFIED TO: BS EN 1154:1997
CERTIFICATION NO: PC 001790

PROFILE CYLINDER

Model:
GC601S
Entrance



Available Function
- Cylinder with Thumb Turn
- Double Keyed Cylinder
- Coin Slot with Thumb Turn
- Half Cylinder with Thumb Turn
- Half Cylinder with Key

BS EN 12209:2003

FIRE RATED

ONE KEY

CERTIFIED TO: ANSI/BHMA A 156.13:2005

HINGES

GH5353BB

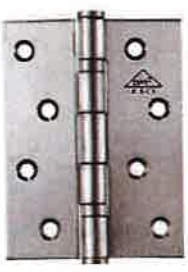


Stainless Steel Hinges with Bearing
127mm x 90mm x 3.0mm

BS EN Rating

4	7	6	0	1	4	0	13

GH4322B



Stainless Steel Hinges with Bearing
102mm x 76mm x 2.0mm

BS EN Rating

3	7	4	0	1	3	0	11

BS EN 1935:2002

FIRE RATED

GEREdor®

Symbol of Quality

HIGH RESERVE MARKETING SDN. BHD.

No.2&4, Jalan BK 1/19, Kinrara Industrial Park,
Bandar Kinrara, 47100 Puchong, Selangor.
Tel: +603 8076 1833 **Fax:** +603 8076 1822
Web: www.gere-products.com
Email: service@highreserve.com





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No Lesen : PC003165
Licence No :

LESEN PENSIJILAN BARANGAN
Product Certification Licence

SIRIM

SIRIM QAS International Sdn. Bhd. dengan ini menganugerahkan kepada
SIRIM QAS International Sdn. Bhd. hereby grants to

HIGH RESERVE MARKETING SDN. BHD.
NO. 2 & 4, BK 1/19
KINRARA INDUSTRIAL PARK
BANDAR KINRARA
47100 PUCHONG
SELANGOR, MALAYSIA

Lesen untuk menggunakan Tanda Pensijilan di atas barangan
a licence to use the Certification Mark on
COMPOSITE FIRE RESISTANT DOORSET (DOUBLE LEAF)

Please refer to detail in the SCHEDULE

sebagai mematuhi keperluan
as complying with
MS 1073 : PART 3 : 1996 (AMD.1 : 2003)

Mohd Azanuddin bin Salleh
Ketua Pegawai Eksekutif
Chief Executive Officer
SIRIM QAS International Sdn. Bhd.

SIRIM QAS International Sdn. Bhd.
(No. Syarikat 410334-X)
1, Persiaran Dato' Menteri
Seksyen 2, Peti Surat 7035
40700 Shah Alam
Selangor Darul Ehsan
MALAYSIA.

Tel : 60-3-55446400
Faks : 60-3-55446400

http://www.sirim.my
http://www.malaysiancertified.com.my

Tarikh Mula Pensijilan	**: 15 September 2017**	**Tarikh Dikeluarkan**	**: 28 August 2019**
Certified Since		*Issue Date*	
Sah Sehingga	**: 15 September 2020**	**No Siri**	**: 048797**
Valid Until		*Serial No*	

Lesen ini dianugerahkan tertakluk kepada syarat-syarat Perjanjian Pensijilan Barangan SIRIM QAS International Sdn. Bhd.
This Licence is granted subject to the provisions of the Product Certification Agreement of SIRIM QAS International Sdn. Bhd.

No Lesen : PC003165
Licence No :

SCHEDULE

HIGH RESERVE MARKETING SDN. BHD.

SIRIM

Trade Mark : GEREDOR
Model : DL/1HR/8MM/MF
Rating : ONE HOUR;
Integrity : 61 minutes,
Insulation : 61 minutes
Type : DOUBLE LEAF
METAL FRAME
Size : DOOR FRAME : 2407mm x 2439mm x 140mm
DOOR LEAF : 2360mm x 2351mm x 48.5mm
VISION PANEL : 350mm x 180mm

FRAME SUPPLIED BY : BMC METAL INDUSTRIES SDN BHD
DOOR SUPPLIED BY : WARISANDOR SDN. BHD
Test report : 2017FE0308

TEST REPORT NO. : 2017FE0308

Factory Name and Location :
WARISANDOR MARKETING SDN. BHD.
NO.33, JALAN PBI 3
PERINDUSTRIAN BUKIT INDAH
47000 SUNGAI BULOH
SELANGOR, MALAYSIA

End of page

SIRIM QAS International Sdn. Bhd.
(No. Syarikat 410334-X)
1, Persiaran Dato' Menteri
Seksyen 2, Peti Surat 7035
40700 Shah Alam
Selangor Darul Ehsan
MALAYSIA.

Tel : 60-3-55446400
Faks : 60-3-55446466

http://www.sirim.my
http://www.malaysiancertified.com.my

Tarikh Mula Pensijilan *Certified Since*	: 15 September 2017	Tarikh Dikeluarkan *Issue Date*	: 28 August 2019
Sah Sehingga *Valid Until*	: 15 September 2020	No Siri *Serial No*	: 048797

Lesen ini dienugerahkan tertakluk kepada syarat-syarat Perjanjian Pensijilan Barangan SIRIM QAS International Sdn. Bhd.
This Licence is granted subject to the provisions of the Product Certification Agreement of SIRIM QAS International Sdn. Bhd.

No. Fail: **JBPM/IP/RNP:700-7/2/648 (7)**
(PEMBAHARUAN: KEDUA)

SIJIL PEPASANGAN KESELAMATAN KEBAKARAN

APPROVAL CERTIFICATE

Jabatan Bomba dan Penyelamat Malaysia
dengan ini memperakukan
Fire and Rescue Department of Malaysia
hereby certify

FIRE RESISTANCE COMPOSITE DOOR
DOUBLE LEAF WITH EG STEEL DOOR FRAME
(1 HOURS) INTEGRITY & INSULATION

Berdasarkan Piawaian
Complying with

MS 1073: PART 3:1996 (Amd.1:2003)

Syarikat Berdaftar
Registered company

HIGH RESERVE MARKETING SDN BHD (106032-T)
No.2 & 4, Jalan BK 1/19 ,
Kinrara Industrial Park,
Bandar Kinrara,
47100 Puchong,
Selangor Darul Ehsan.

Tempoh sah perakuan: **06/10/2019 hingga 15/09/2020**

(DATO' YUSOF BIN SIDEK)
Pengarah
Bahagian Perancangan dan Penyelidikan,
b.p. Ketua Pengarah
Jabatan Bomba dan Penyelamat Malaysia.

Tarikh: 04 Oktober 2019

** **Peringatan:**
Sila patuhi sepenuhnya syarat-syarat dan had kegunaan seperti dalam Lampiran A1

No. Fail: JBPM/IP/RNP:700-7/2/3-523 (13)
(PEMBAHARUAN : KELIMA)

SIJIL PEPASANGAN KESELAMATAN KEBAKARAN

Jabatan Bomba dan Penyelamat Malaysia
dengan ini memperakukan
Fire and Rescue Department of Malaysia
hereby certify

PINTU RINTANGAN API

SINGLE – LEAF COMPOSITE FIRE RESISTANCE DOOR WITH METAL DOOR FRAME (1 JAM)
MODEL:GEREDOR/MFKL/SL/1H/8MM/GERE
INTERGRITI : 70 MINIT
INSULASI : 70 MINIT

Berdasarkan Piawaian
Complying with

MS 1073: PART 3: 1996 (Amd.1:2003)

Syarikat Berdaftar
Registered company

HIGH RESERVE MARKETING SDN BHD (106032-T)
NO.2 & 4,JALAN BK 1/19,
KAWASAN PERINDUSTRIAN KINRARA, BANDAR KINRARA,
47100 Puchong,
Selangor Darul Ehsan

Tempoh sah perakuan: **23/12/2019 hingga 02/10/2020**

(DATO' YUSOF BIN SIDEK)
Pengarah
Bahagian Perancangan dan Penyelidikan,
b.p. Ketua Pengarah
Jabatan Bomba dan Penyelamat Malaysia.

Tarikh: 25 NOVEMBER 2019

Peringatan:
Sila patuhi sepenuhnya syarat-syarat dan had kegunaan seperti dalam Lampiran A1

SIRIM QAS International Sdn. Bhd.
No. 1, Persiaran Dato' Menteri, P.O. Box 7035, Seksyen 2, 40700 Shah Alam,
Selangor, Darul Ehsan. MALAYSIA.
Tel: 03-55446465 Fax: 03-55446454 http: //www.sirim.my
(Company No: 410334-X)

MS ISO/IEC 17025
TESTING
SAMM NO. 231

TEST REPORT

REPORT NO.: 2015FE0195	PAGE: 1 OF 33

This Test Report refers only to samples submitted by the applicant to SIRIM QAS International Sdn. Bhd. and tested by SIRIM QAS International Sdn. Bhd. This Test Report shall not be reproduced, except in full and shall not be used for any purpose by any means or forms (including but not limited to advertising purpose) without written approval from the Managing Director SIRIM QAS International Sdn. Bhd. Please refer overleaf of Page 1 for Condition Relating to the Use of Test Report.

Applicant / Manufacturer	:	**HIGH RESERVE MARKETING SDN. BHD.** Factory: Warisandor Sdn. Bhd. Lot 46099, Jalan Sungai Tua,Batu 9, 68100 Batu Caves, Selangor Darul Ehsan. (Attn.: Mr. Yeo Boon Ho)
Product	:	**Single-leaf Composite Fire Resistant Door with EG Steel Door Frame**
Reference Standard/ Method of test	:	MS 1073: Part 3: 1996 (Amd. 1:2003) Specification for Fire Resistant Doorsets Part 3: Methods for determination of the fire resistance – Type of Doorsets Clause 6 – Determination of fire resistance of partially insulated doorsets and shutter assemblies. Appendix B: Cyclic movement endurance test (side-hung doors only)
Description of test specimen	: Brand	: **GEREDOR** Model : **GEREDOR MFKL/ SL/1H/8MM/GERE** Rating : **1 Hour**
	PP2 ref.	: **P5-007923** Date : **17/10/2013**
	Requested by	: Nurrulhuda Binti Mahmud Industrial and Consumer Certification Section (Fire Group) SIRIM QAS International Sdn. Bhd.
	Door Leaves overall dimension	: **2386 mm (*h*) × 1134 mm (*w*) × 49.3 mm (*t*) (DOOR A)** **2386 mm (*h*) × 1134 mm (*w*) × 49.3 mm (*t*) (DOOR B)**
	Door Frame overall dimension	: **2434 mm (*h*) × 1220 mm (*w*) × 140 mm (*d*) (DOOR A)** **2434 mm (*h*) × 1220 mm (*w*) × 140 mm (*d*) (DOOR B)**
Test Result	:	**Integrity : 70 minutes** **Insulation : 70 minutes** **At 100,000 cycles, the doorset was capable of closing properly, maintaining all clearances between leaf to frame and floor. Please refer to part 2 of this report for details.**
Date received	:	03.12.2013
Job No. / Ref.No.	:	J20131440537/ SQAS/FPS/15/1-3
Issued Date	:	31 MAR 2015

Approved signatories:

KAMARULZAMAN MAT ZIN
Testing Executive

TESTING SERVICES DEPARTMENT
FIRE PROTECTION SECTION

ROHAYA IBRAHIM
Head
Fire Protection Section
Testing Services Department
SIRIM QAS International Sdn. Bhd.

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PART ONE: FIRE RESISTANCE TEST

1. TEST CONSTRUCTION

The specimen comprised of two sets of single-leaf partially insulated single acting composite doors and EG steel door frames installed within suitably sized aperture in a brick wall construction. The door leaves were designated DOOR A (opening away from furnace) and DOOR B (opening into the furnace). The constructions of the door leaves were identical.

Inspection was carried out during the construction of the test doorsets to verify on its design, dimensions and materials used. The construction and installation of the test specimen was arranged and carried out by the applicant and its agent.

1.1 Door Leaves

Each door leaf was fabricated from the framework which was made from 19 mm (t) magnesium oxide board and sandwiched by 3.1 mm (t) plywood. The overall thickness of the framework was found to be of 25.2 mm (t). The framework was consisted of top rail, intermediate rails, bottom rail, vertical stiles and vision panel framing section. The top rail, vertical stiles and bottom rails are having dimension of 100 mm (w) x 25 mm (t) while the intermediate rails are having dimension of 70 mm (w) x 25 mm (t). The vison panel framing section having dimension of 50 mm (w) x 25 mm (t). The framework was fastened together with staples of size 5 mm x 15 mm (2 pieces at each joint). A 19 mm x 18 mm finger joint mixed hardwood internal lipping was placed at the outer perimeter of the framework using glue. The void areas construction of the framework was infilled with 25 mm thick rockwool. The framework was then sandwiched with 7.9 mm thick magnesium oxide board using glue and air nail of size Ø 1 mm x 30 mm. The door leaf was then faced on both sides with 3.1 mm thick plywood. The door leaf was finished with 10 mm thick hardwood timber edging strips.

The door leaves were weighed and were found to be as follows 83.7 kg **(Door A)** and 83.9 kg **(Door B)** respectively.

1.2 Door Frame

Each door leaf was hung and fixed in a double rebated EG steel door frame having a sectional size of 140 mm x 65 mm x 1.2 mm (t) by 4 nos. of hinges which were welded to EG steel door frame and screwed to the door leaf.

The frame was fixed to a 215 mm thick masonry brick wall using cement mortar. Any gaps and voids between the frame and brick wall were filled with mortar. The overall dimensions of the door frame were 2434 mm (*h*) x 1220 mm (*w*) x 140 mm (*d*) for **DOOR A** and 2434 mm (*h*) x 1220 mm (*w*) x 140 mm (*d*) for **DOOR B**.



31 MAR 2015

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1.3 **Vision Panel**

Each door leaf was incorporated with vision panel, constructed with aluminium capping and 6.6 mm thick wired glass providing a clear aperture of 285 mm (h) × 135 mm (w) (0.04 m^2). The glass was encased by aluminium capping (of size 20 mm × 20 mm × 0.8 mm thick) to form a vision panel of overall size of 325 mm (h) × 175 mm (w). The gaps between the glass and capping/core were lined with two layers of 8 mm thick magnesium oxide board strips then were air nailed using air nail of Ø 1 mm × 30 mm long.

1.4 **Intumescent Seal**

Two strips of uncapsulated intumescent seals with sectional size of 10 mm (w) × 2 mm (t) were fitted at hardwood timber edging strip that were fitted at the perimeter of the door leaf.

TESTING SERVICES DEPARTMENT FIRE PROTECTION SECTION

31 MAR 2015

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1.5.2 The hardware installed on the doors were as follows :-

Hardware	Description
a) Door Closer	Each door leaf was fitted with surface mounted door closer with c/w backcheck of 'GERE' brand; model: 'G805BC' and Power size: 5. The door closers were screw-fixed to the door leaf and EG steel door frame. The weights of the door closer excluding the arm were found to be 1621 g for DOOR A and 1620 g for DOOR B respectively.
b) Hinges	Each door leaf was hung by 4 nos. of stainless steel hinges with 2 ball bearings of 'GERE' brand; "GERE GH5335-M26D' model of size 127 mm × 89 mm × 3 mm (*t*) which were welded to EG steel door frame and screw-fixed to the door leaf using screws of size Ø 4.2 mm × 31 mm length.
c) Lockset	Each door leaf was was fitted with mortise lockset consisting of lockcase with anti-panic function of 'GERE' brand; model: GML 7261-M26D, stainless steel lever handle of 'GERE' brand, model: G111-M26D, and euro profile cylinder of 'GERE' brand, model: GC7015-M26D. The cylinder and lever handle were installed centered 910 mm and 1050 mm up from its sill level respectively.

1.6 The doorset was installed in a masonry brick wall, built-in with a concrete slab of 600 mm wide by 75 mm thick. A lightweight lintel of 190 mm by 150 mm section was incorporated on the top of each door aperture, to ensure no load was imposed on the test specimens.

For more details of the doorset and its construction, see Figure 3 to 8.



31 MAR 2015

REPORT NO.: 2015FE0195	PAGE: 30 OF 33

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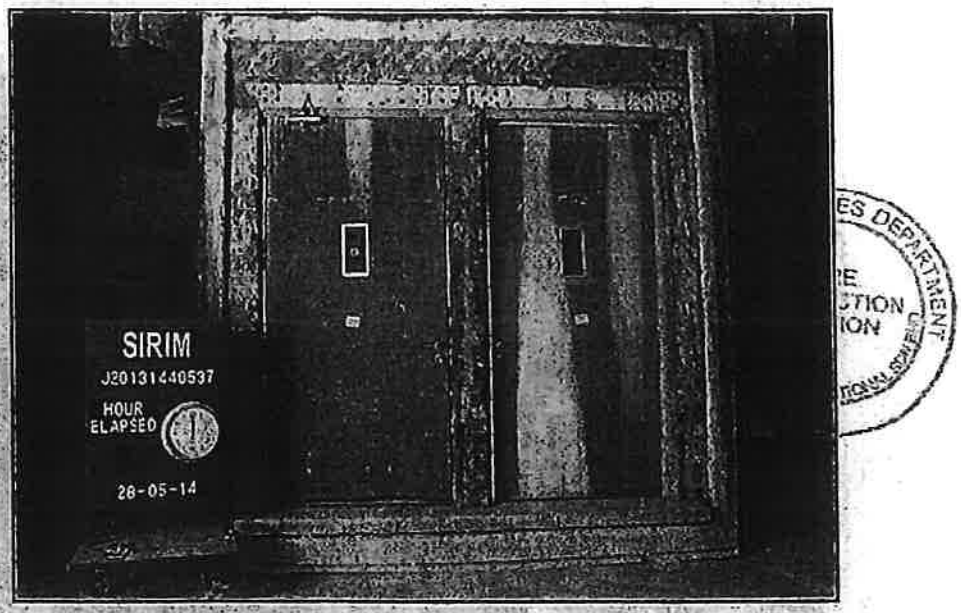


Photo 1: The exposed face of the doorset before the test

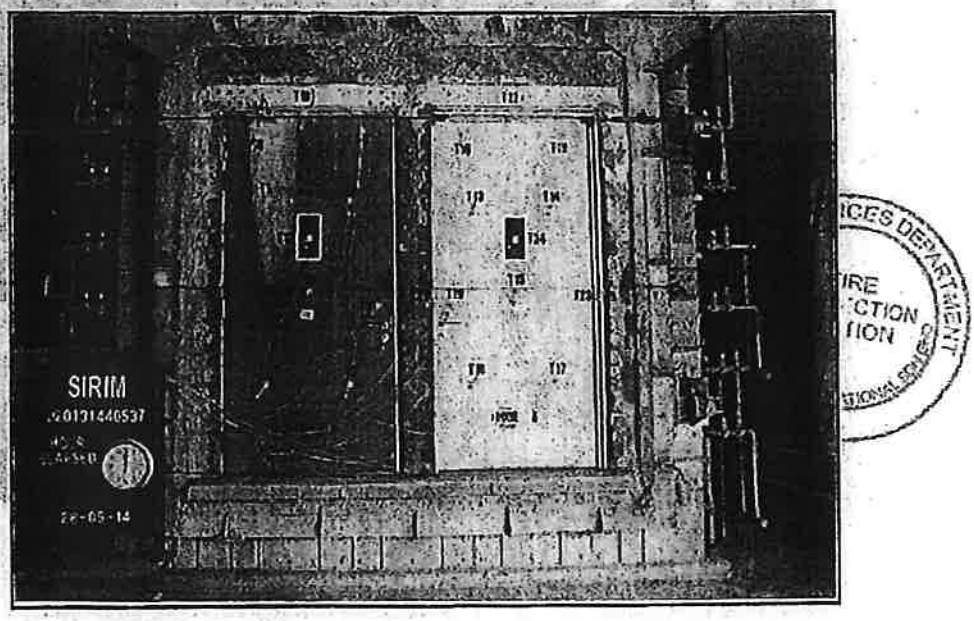


Photo 2: The unexposed face of the doorset before the test

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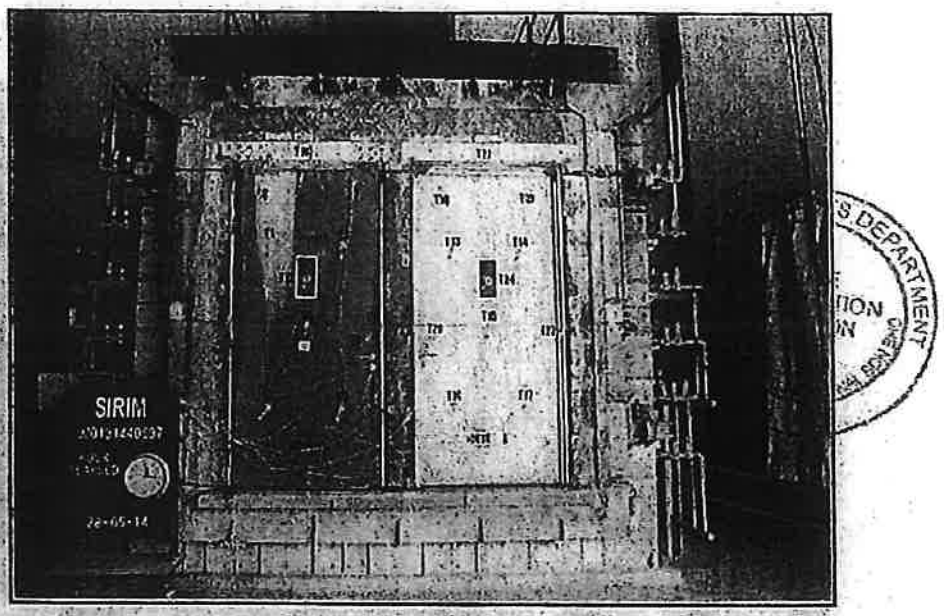


Photo 3: At about 15 minutes of test

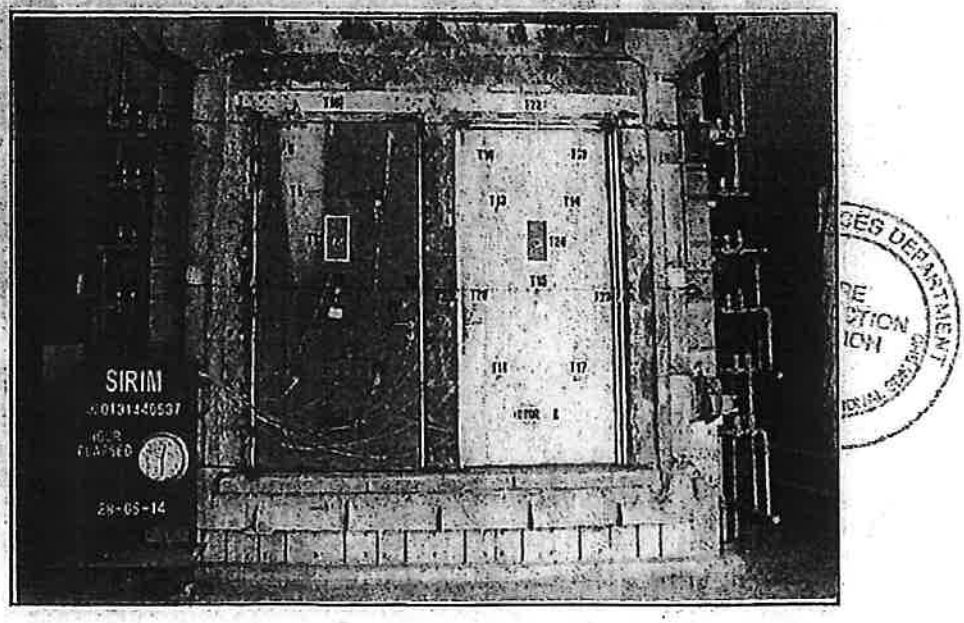


Photo 4: At about 30 minutes of test

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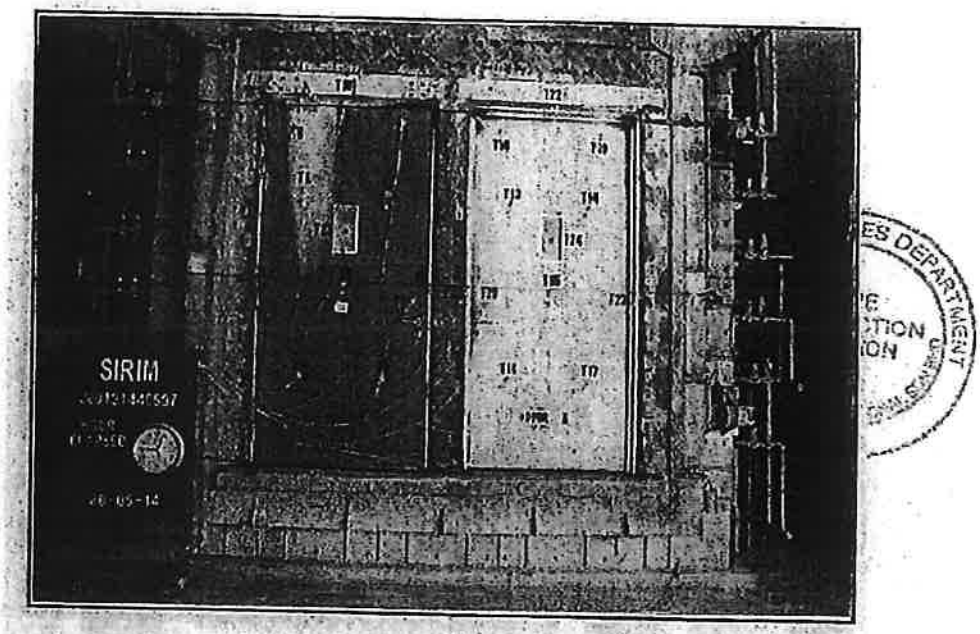


Photo 5: At about 45 minutes of test

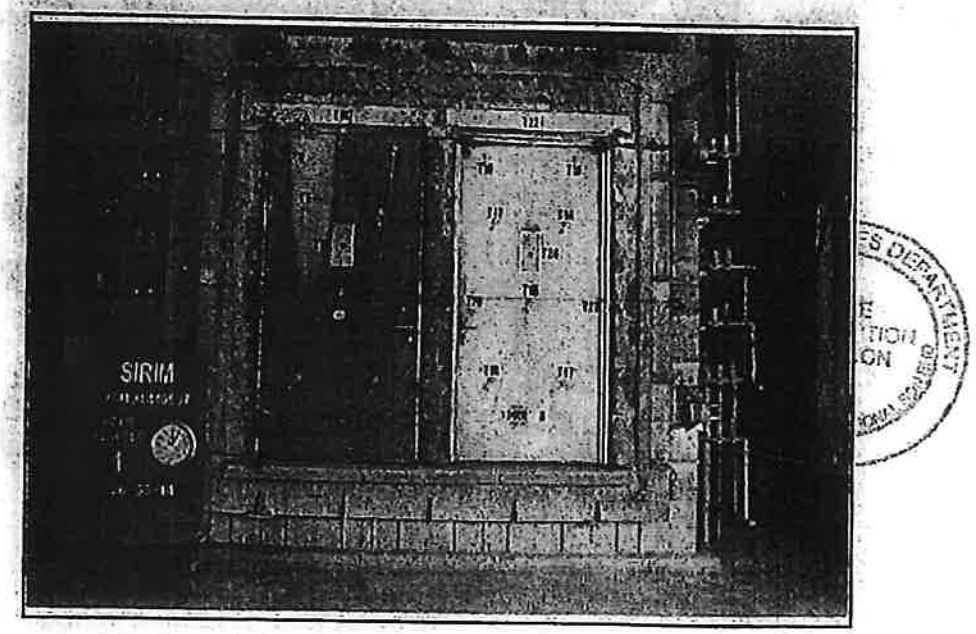


Photo 6: At about 60 minutes of test

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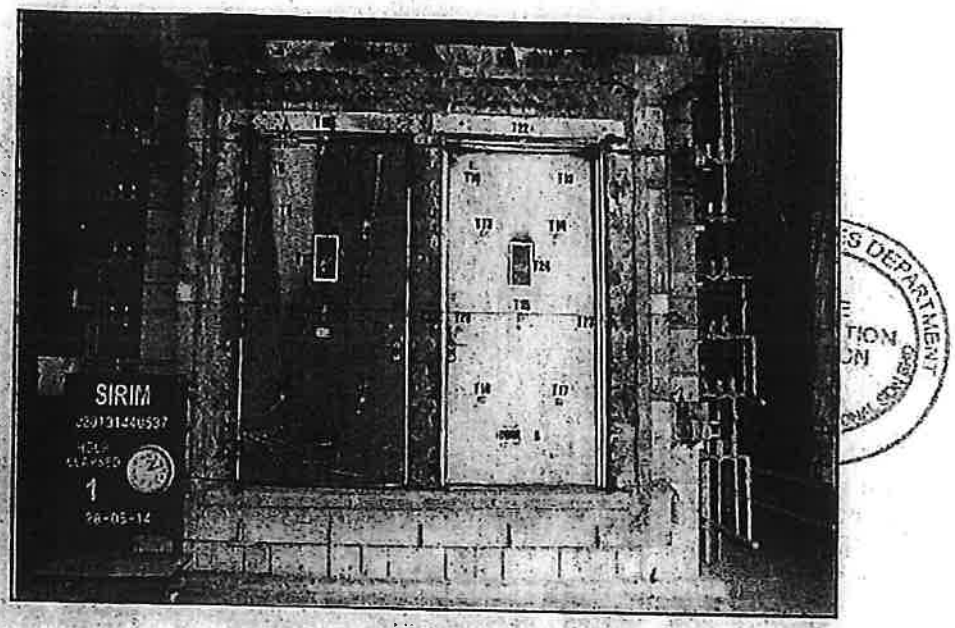


Photo 7: At about 70 minutes of test

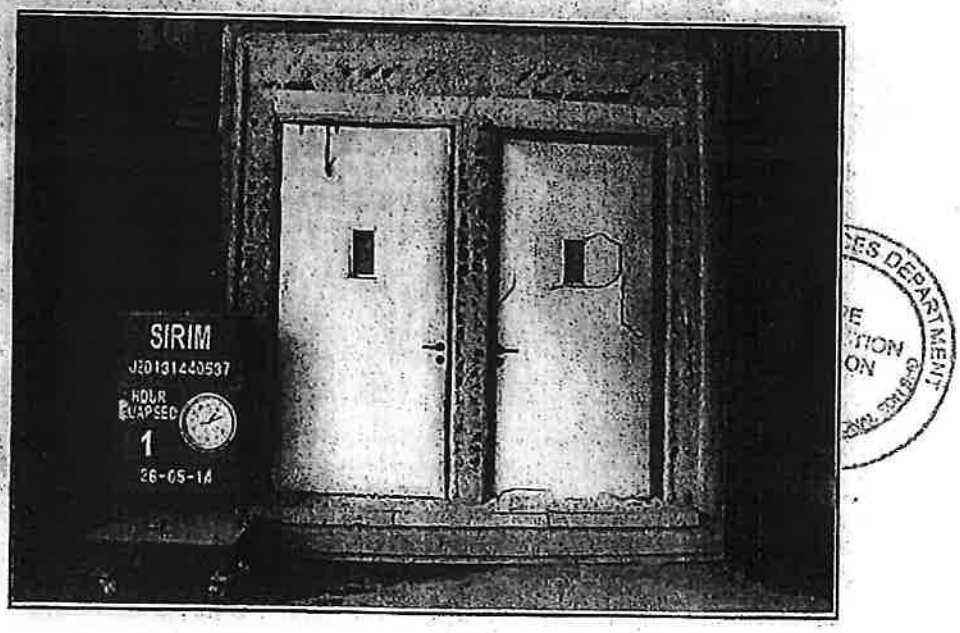


Photo 8: The exposed face of the doorset after the test

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