



DEPARTMENT OF BULDING
UNIVERSITI TEKNOLOGI MARA
(PERAK)

INSTALLATION OF FIRE DOOR AND HIGH SECURITY
LOCKSET AT IPK PERLIS PROJECT

Prepared by :

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It is recommended that the report of this practical training provided

By

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entitled

Installation of Fire Door and Lockset

accepted in partial fulfilment of requirement has for obtaining Diploma in Building

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STUDENT'S DECLARATION

I hereby declare that this report is my own work, except for extract and summaries for which the original references stated herein, prepared during practical training session that I underwent at Kasyaf Bina Sdn Bhd for duration of 14 weeks starting from 3 September 2018 and ended on 7 December 2018. It is submitted as one of the prerequisite requirement of DBG307 and accepted as a partial fulfilment of the requirement for obtaining the Diploma in Building

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ABSTRACT

Fire door have been used for most of all building for emergency use. This report is focusing on the other use of fire door which is using as a high security door. The strength and quality of material have been the main reason of choosing fire door as high security fire door. Several interview and observation made on how the door is installed from nothing till complete at site. The other component of fire door is needed and properly installed to make sure it comply with both use for fire resistance and high security. Good quality material that have been used for fire resistance can be used for another purpose which is high security and anti-breaching. Knowledge and skill will provide a good decision and creative thinking that will serve for many purpose with only for 1 item. Proper working sequence and rule will help us in need and will bring out the outmost ability that something can muster.

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CHAPTER 1.0

INTRODUCTION

1.1 Background of Study

This report is mainly focus on the installation of fire door. Fire door is a element that almost all building must have according to BOMBA requirement for passive firefighting mechanism. Fire door will help give us some time to escape when there is fire breakout. Fire door have the same usage as ordinary door but have special feature which is firefighting that make it special in lot of ways starting from the material to make the door and until the door is installed and ready to use.

“Buildings are compartmentalised to delay the spread of fire from one area to another. These compartments are usually linked by fire doors to allow the flow of traffic around the building. Fire doors have two important functions in a fire; when closed they form a barrier to stop the spread of fire and when opened they provide a means of escape.” Source by Safelincs Ltd(2005) Fire Door.

This report also will uncover another use of fire door in the industry which is not every people know. The strength of the door will make it hard to broke, weather resistant, and more durable. A little alteration to the lockset is enough to add another usage to which is high security beside of its firefighting feature. Lockset also have many kind and usage other than to lock the door. For fire door, the lockset is also fire resistant and hard to break because a good material was used to make it durable

1.2 Objective

1.2.1 To identify the component and material use for fire door at IPK Perlis Project

1.2.2 To investigate the method of installation of fire door and high security lockset at IPK Perlis Project

1.3 Scope of Study

This report was made based on 'Cadangan Pembinaan Ibu Pejabat Polis Kontinjen (IPK) Perlis Dan Perumahan (Kwarters) (Reka Dan Bina) Di Atas Sebahagian Lot 20055 (Lot Asal PT 1519) Mukim Seriab, Utan Aji, Perlis Untuk Kementerian Dalam Negeri Malaysia'. This report will mainly focus on installation of fire door at this project as a fire fighting mechanism and high security door for classified and dangerous item.

The study are based on method of installation of the door and the function of the door based on the room. Each room have their own usage and the lockset need to be able to fulfil the function of the room such as door to staircase with a lock and a key is needed when a person want to use the stairs and it will be a problem when there is fire. Every item for the door need to perfectly install to make sure the high security feature working properly. The quality of the material also is something that need to be concern in the study for high security purpose. This is because low quality item is easily broken and there is no high security if it is can easily be damaged.

1.4 Research Method

1. Observation – Observation was made when the fire door was installed by the workers starting from the door unload from the lorry, fitted to the frame with hinges and installation of lockset. All of the installation progress was recorded with picture while doing supervision for daily work progress
2. Interview – interview happen during the period of observation and when review document for function of the lockset. Interview during the observation happen with the fire door specialist which have experience more than 25 years in installation of fire door. The interview while review the document happen with the architect, En. Bukhari Bin Ahmad and QA&QC officer, Ms. Anith Zakirah Binti Ashran and Ms. Nazzatul Syima.
3. Document Review – Several document was used as an guide at site and also to learn which is architecture drawing which contain the location of all door at the site, detail door and lockset schedule to determine what kind of door and lockset each room use.

CHAPTER 2 COMPANY BACKGROUND

2.1 Introduction of Company

Kasyaf Bina Sdn Bhd is a company located at Kuala Lumpur and have branch office at north peninsula. Kasyaf Bina started as Class F contractor and keep moving forward and archive class C license. Because of their good reputation and well organised management, they have attracted many professional to their rank. This company have manage to completed several project before the due date of the project.

This company have done many project that is for public use and the government as a client. This show that this company is competent enough to be constantly awarded project by the government. This company have also gain its own reputation through several expert that join the rank.

2.2 Company profile

Kasyaf Bina Sdn Bhd main office is at No. 331 – A&B, Urban 1 Jalan Bandar Melawati, Pusat Bandar Melawati, 53100, Kuala Lumpur and its branch office at northern region at No 158, Tingkat Satu, Kompleks Alor Setar, Lebuhraya Darulaman, 05100 Alor Setar, Kedah Darul Aman. This started at 23rd July 2000 starting with class F contractor license. Kasyaf Bina Sdn Bhd (KBSB) started as class F contractor with 500 workers



Figure 2.1 Kasyaf Bina office

2.3 Organization chart

Organization chart below shows the hierarchy of all working personnel at Kasyaf Bina Sdn Bhd Site IPK Perlis

KASYAF BINA SDN BHD

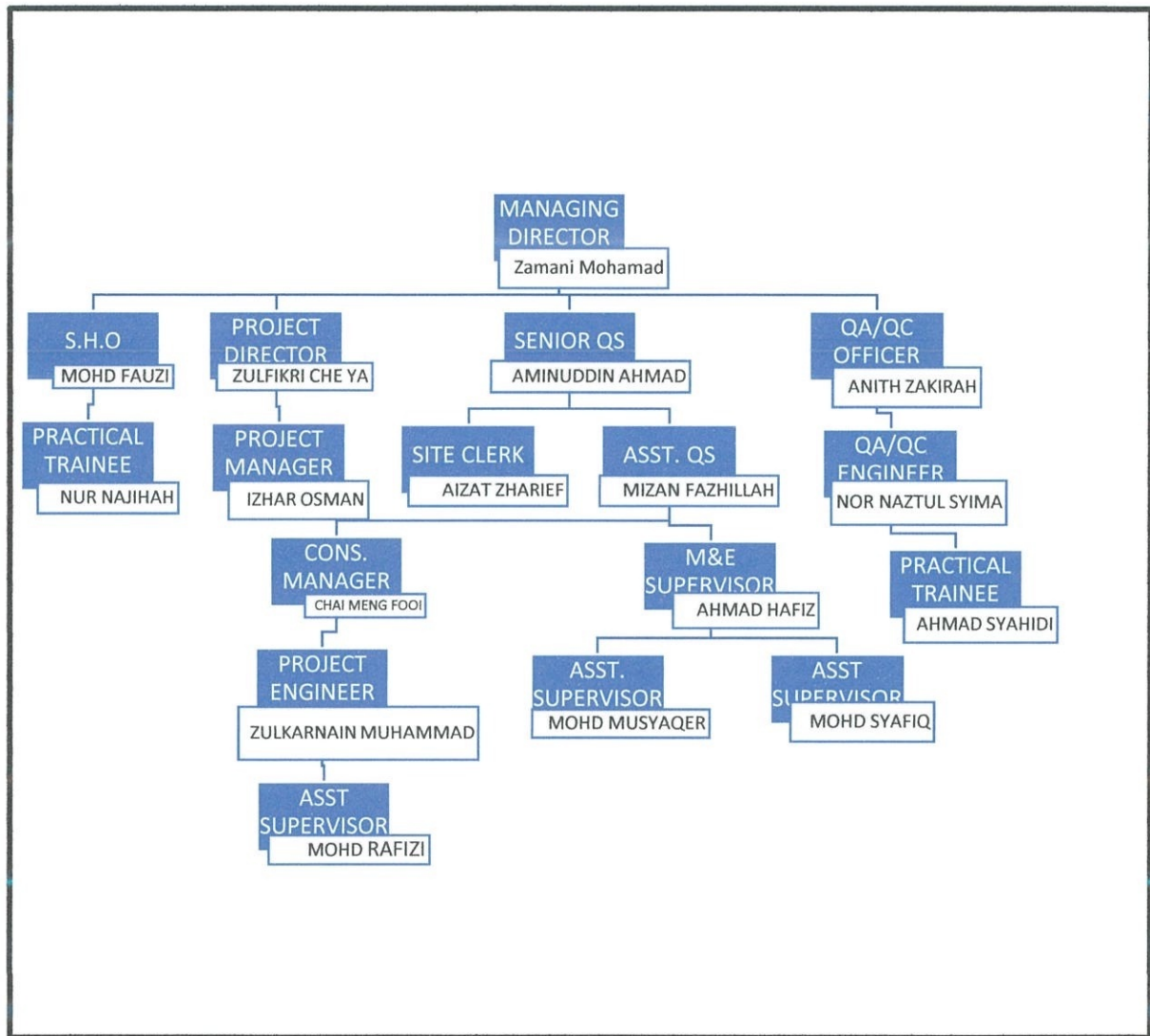


Figure 2.2 IPK Perlis Kasyaf Bina Headquarters and Site Organization Chart

2.4 List of Project

2.4.1 Completed Project

Table 2.1 below shows several project that have been done by Kasyaf Bina Sdn Bhd

NO	KETERANGAN PROJEK	NILAI PROJEK	NAMA & ALAMAT MAJIKAN
1	Cadangan mengubahsuai Pasar Lama dan kerja-kerja berkaitan untuk dijadikan Ruang Niaga di Padang Serai, Kulim, Kedah Darul Aman. 20-08-2000(Mula) 22-08-2001(Siap)	RM932,526.72	Puncak Utara Sdn. Bhd/Majlis Daerah Kulim, Kedah
2	Cadangan menaiktaraf MedanSelera di Pekan Kepala Batas (PT 184) Mukim Bukit Tinggi, Daerah Kubang Pasu, Kedah. 25-09-2000 (Mula) 18-12-2000 (Siap)	RM 257,482.52	Koperasi Pekebun Kecil Daerah Sik, Kedah/ Majlis Daerah Kubang Pasu, Jitra Kedah.
3	Cadangan pembinaan sebuah masjid baru di Felda Lubuk Merbau di atas Lot HSM 2552 Mukim Tekai, Daerah Padang Terap, Kedah Darul Aman 15-04-2001 (Mula) 17-09-2001 (Siap)	RM 502,739.00	Puncak Utara Sdn Bhd/Pejabat Pembangunan Negeri Kedah
4	Membina blok tambahan di Sekolah Kebangsaan Tok Kepak, Daerah Kubang Pasu, Jitra, Kedah Darul Aman. 14-03-2002 (Mula) 13-11-2003 (Siap)	RM 2579,000.00	Jabatan Kerja Raya, Negeri Kedah Darul Aman
5	Cadangan membina Kompleks Niaga di Pekan Yan Kechill, Daerah Yan, Kedah Darul Aman 24-07-2002 (Mula) 25-03-2003 (Siap)	RM 1584,255.00	Majlis Daerah Yan, Yan, Kedah Darul Aman
6	Cadangan pembinaan dan kerja-kerja berkaitan di Pusat Perlancongan Pertanian @ Agrotosium Di Projek Buah-buahan Bendang Man, Sik, Kedah Darul Aman. 16-11-2003 (Mula) 16-02-2004 (Siap)	RM 1,197,782.25	Lembaga kemajuan Wilayah Kedah, (KEDA) Kementerian Pembangunan Luar Bandar.

7	Cadangan menyediakan kemudahan-kemudahan latihan dan prasarana Program Khidmat Negara (Zon Utara) Kem Sintok, Universiti Utara Malaysia, Sintok, Kedah. 16-11-2003 (Mula) 15-05-2006 (Siap)	RM 2,282,155.00	Uniutama Management Holdings Sdn Bhd. Rumah Universiti Utara Malaysia, Sintok Kedah
8	Kerja-kerja membina prasarana dan kemudahan untuk Kem Latihan Khidmat Negara, Lagenda Seri Negeri Langkawi, Kedah 13-12-2005 (Mula) 15-05-2006 (Siap)	RM 4,925,000.00	HBH Pelangi Sdn Bhd/ Kementerian Pertahanan Malaysia, Jln Pdg, Tembak Kuala Lumpur
9	Cadangan Membina Dan Menyiapkan Sebuah Bangunan Pejabat Pendaftaran Negara (JPN) Daerah Kulim di Mukim Sungai Ular, Darah Kulim, Kedah.	RM 2,694,581.10	Kementerian Hal ehwal dalam negeri, Putrajaya & Jabatan Pendaftaran Negara.
10	Cadangan Kerja-kerja Pengubahsuaian Di Tingkat 1&2, Blok Annex, Menara Tun Razak Untuk International Centre For Education In Islamic (INCIF) Jalan Raja Laut, Kuala Lumpur	RM1,000,500.00	Zamri Resources Sdn Bhd/International Centre For Education in Islamic
11	Cadangan Kerja-kerja Pengubahsuaian Di Wisma Consplant 1 & Wisma Guthrie Subang Jaya, Selangor Darul Ehsan.	RM 1,101,075.00	Zamri Resources Sdn Bhd/Sime Pantations Sdn Bhd
12	Cadangan Membina dan menyiapkan sebuah sekolah kebangsaan Taman Awana yang mengandungi 24 bilik Darjah & Kemudahan berkaitan di daerah Kota Setar, Kedah	RM 13,200,823.66	Kementerian Pelajaran Malaysia, Pusat Pentadbiran Kerajaan Persekutuan, Putrajaya
13	Cadangan Membina Dan Menyiapkan Dewan Serbaguna Uitm Cawangan Permatang Pauh, Pulau Pinang. 28-07-2008 (Mula) 10-04-2010 (Siap)	RM 10,005,709.70	Kementerian Pelajaran Malaysia, Pusat Pentadbiran Kerajaan Persekutuan, Putrajaya
JUMLAH		RM42,263,629.95	

2.4.2 Project In Progress

Table 2.2 below shows project that are currently on going by Kasyaf Bina Sdn Bhd

No	Keterangan Projek	Nilai Projek	Nama & Alamat Majikan
1	Cadangan Pusat Komuniti Bersepadu Sentuhan Kasih di atas Tanah Felda, Tenggara, Johor Darul Takzim. (kerja-kerja tanah)	RM 6,518,361.00	IRIS Corporation Bhd/Felda FGV Berhad
2	Cadangan merekabentuk, membina dan menyiapkan bangunan-bangunan asrama bagi pelajar Kolej Universiti Insaniah Fasa 1, sebanyak lapan (8) unit serta kerja-kerja berkaitan di atas sebahagian Lot 3449 di Kuala Ketil, Mukim Tawar, Daerah Baling, Kedah Darul Aman.	RM12,950,000.00	Kolej Universiti Insaniah
3	Cadangan menaiktaraf dan membina blok tambahan Ibu Pejabat Syarikat Air Darul Aman Sdn Bhd (SADA) 15 tingkat dengan 1 aras tempat letak kereta bawah tanah, 3 aras tempat letak kereta bertingkat dan lain-lain kerja berkaitan, di atas Lot 109 dan 159 di Daerah Kota Star, Bandaraya Alor Star, Kedah Darul Aman.	RM67,868,023.00	Syarikat Air Darul Aman Sdn Bhd
4	Projek menggantikan Jambatan Struktur No.FT175/058/20 Kg. Charok Tenang, Laluan FT175, Jalan Gurun-Sik-Pedu Daerah Sik, Kedah Darul Aman	RM3,787,999.00	Syarikat Pembinaan Nidzam Sdn Bhd
5	Penstrukturan semula RAMD serta kerja-kerja lain berkaitan di Kem Syed Sirajuddin, Gemas, Negeri Sembilan.	RM18,863,719.00	Kementerian Pertahanan Malaysia
6	Design and build for proposed development of 'Perumahan Generasi Baharu Felda' (PGBF) using IBS System-phase 2 (P2)-Package (A2-4) at Wilayah Jengka at Felda Bukit Tajau (100unit)	RM12,363,400.00	FELDA Lembaga Kemajuan Tanah Persekutuan
7	Pembinaan Ibu Pejabat Polis Kontinjen (IPK) Perlis (Reka & Bina)	RM141,500,000.00	Kementerian Dalam Negeri

CHAPTER 3.0 INSTALLATION OF FIRE DOOR AND LOCKSET

3.1 Introduction to Fire Door and High Security Lockset

New building for IPK Perlis is built for police department use and some security aspect has been requested by the client due to their working scope of dangerous material and confidential file. Fire door is one of the element that have been chosen to protect room that contain confidential file, dangerous item, and high ranking officer that may be targeted.

Fire door have been chosen as a high security door because of its material use for fire resistance have made it more sturdy and hard to breach. Its high quality lockset that are specially made for fire resistance prove to be useful for anti-breaching which is very sturdy. Some of the lockset may look ordinary but its quality will be proven when in use. The door is very sturdy when all component been installed and some unofficial had been done for a mock up door that have been pick randomly at site. The door is not moving and only damage to the paint detect after 2 adult ram into it.

3.2 Material And Component Used For Fire Door And High Security

Lockset

Fire door leaves and ironmongery for project IPK Perlis have been supplied by Warisandor and catalogue from supplier have been included in appendix 1 for sample picture and references(Secure Your Home & Belonging.Geredor). All of the material have been approved by the client for usage in the project and all of the component is compliance with BS EN 12209:2003. Several detail about material and component that have been given by the supplier will be describe and some of the detail can't be obtain because of business secret.

3.2.1 Material

i) Door leaves

Fire door leaves that have been provide by the supplier contain 3 mm at the outer most layer as a finish layer and can be painted by the end user. 8 mm magnesium oxide (M.G.O) board as a water proofing layer to prevent water from entering the high fire resistance substance and cause the door to be damaged. 25 mm thk high resistance substance are the core of the door and being protected by the M.G.O board and 12 mm timber lipping at the edge.(Fire door(2018).Wikipedia). The cross section of door leaves have been include in the catalogue at appendix 1.

ii) Ironmongeries

All of the ironmongery have stainless steel finish. Tough and high heat resistance metal have been use to made the lockset to make it able to resist fire which are hard to break.

3.2.2 Component

i) Lever handle

Use to pull spring latch to open or close the door.

ii) Mortise Lock case

Lock case that contain spring latch, deadbolt and euro cylinder. This lock case will be inserted inside the door and lock in by screw and can't be seen after being installed. For Project IPK Perlis, several type lock case have been use for different ty of lock function.

iii) Profile Cylinder

Used to push or pull the deadbolt to lock or unlock the door. 2 type of cylinder have been use for Project IPK Perlis which is 70mm thumbturn cylinder and 60mm half cylinder.

iv) Hinges

Hinges for fire door are a little bit different in quality and size. This is due to the weight of the door and fire resistance feature.

v) Flush Bolt

Flush bolt that have been used for Project IPK Perlis are automated type that automatically push when the door touch each other. Flush bolt only used for double leaves door

vi) Door Closer

Used to automatically closed the space. This door closer is using pump to pull the door leaves

3.3 Installation Of Fire Door And High Security Lockset At Project IPK Perlis

3.3.1 Installation of door leaves

Fire door frame must be installed at the wall. The measurement will be taken according to the frame. The gap usually is top/bottom and left/right is 12mm in total. Sometime the gap at the bottom will be different according to floor finish.

Door leaves must be painted especially at the bottom part to avoid exposure to water and the door will be damaged. For this project, 1 layer of undercoat and 2 layer of alkyd paint. Painting process for the door is shown in photo 3.1.



Photo 3.1 : Painting work for door leaves

Workers will install the fire door hinges at the frame, measure and mark the location of hinges at the door. After the marking is done, marked location will be sculpt out to place the hinges as shown in photo 3.2. That part of the door need to be sculpt out to minimize the gap between the door and the frame to avoid the smoke from entering the area.



Photo 3.2: Sculpting out marked area for placing hinges

The door will leaves will be screwed to the hinges like shown in the photo 3.3. A long and high quality need to be used to avoid the door leaves fall because the plain single leaf fire door is about 40kg to 50kg weight.



Photo 3.3 : Fix in the door leaves with screw

The alignment of the door leaves will be checked by the workers as shown in the photo 3.4. No obstruction when opening and closing door, for double leaf door both door leaves must be at the same height. The door need to stay still and not to automatically open or closed on its own.

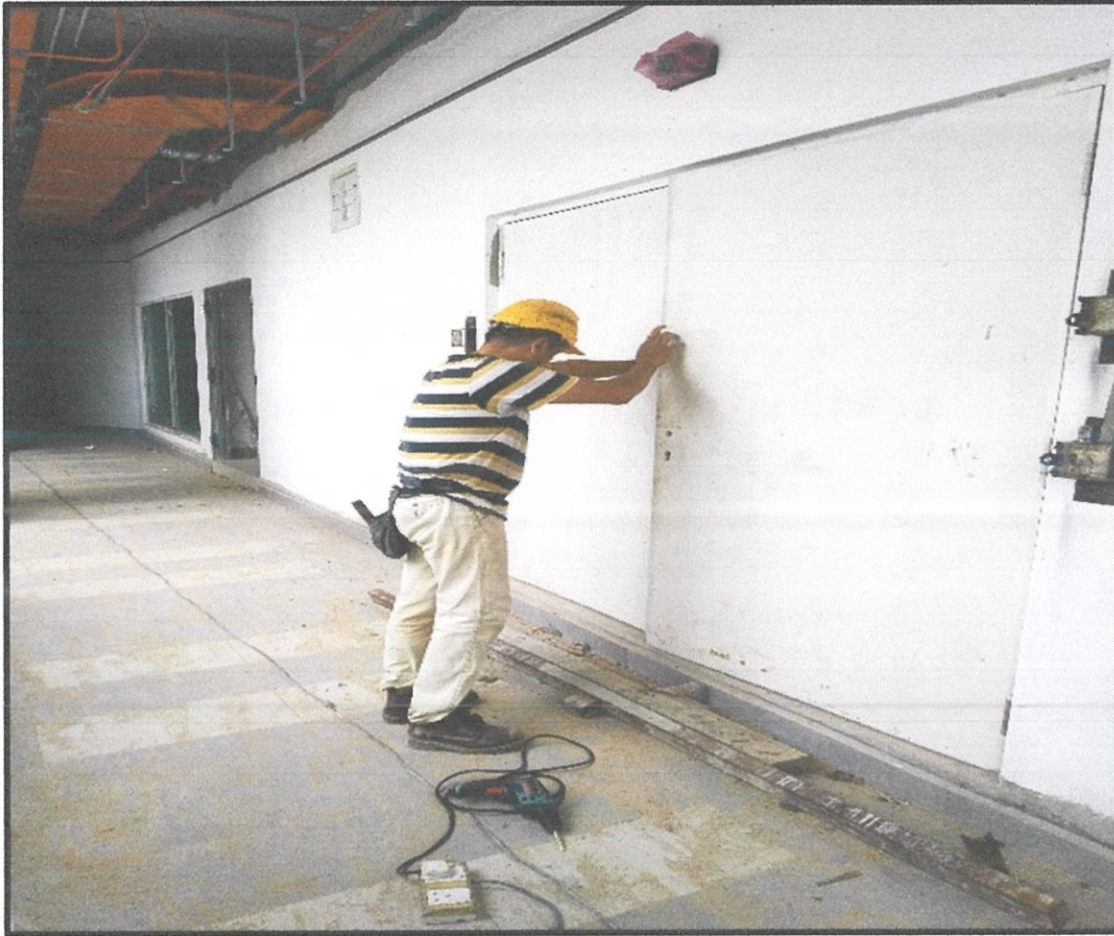


Photo 3.4: Worker checking the alignment of the door leaves

3.3.2 Installation of lockset

The workers will measure and mark the location of lockset. After the location is set, the worker will drill out using special equipment to make the hole for the lockset like in figure 3.5. Special equipment was use to make sure the mortise lockase totally fit to avoid damage to the key cylinder



Photo 3.5 Drilling out hole for mortise lock case using special equipment

After the hole for lockset is done, workers will insert mortise lock case and test to make sure the mortise is perfectly fit and flush with the door. If the lock case is not flush with the door leaves, the door can't be properly closed or the spring latch will be damaged. Workers will mark the location of the profile and sculpt out the void for profile cylinder. For double leaves door, rebated part need to be installed at the mortise because some part of the mortise will be exposed and have some edges that can damaged the part of other door leaves when opening the door. (Distributor Tech Data-Section 7 Fire Door/Fire Door Frame. Ceco Door)

After all holes for cylinder is set, mortise lock case will be installed by using screw. Profile cylinder will be installed along side with profile cylinder to make sure

the alignment is right and will not hinder the lock and unlocking the door. Profile cylinder will be bind to the mortise by using special screw.

For double leaves door, rebated part need to be installed at the mortise because some part of the mortise will be exposed and have some edges that can damaged the part of other door leaves when opening the door. Also automatic flush bolt need to be installed at both top and bottom side by sculpt out and screw in the flush bolt.

Inspection for holes and damages at the door will be made for last time to make sure the door can be useful when fire happen and hold smoke from spreading. After that, door closer will be installed at top of the door, the pump will be installed at the frame and the ankle will be screw in at the door leaves. Certificate plate will be installed at the door and frame after all component been installed and inspect. (Distributor Tech Data-Section 7 Fire Door/Fire Door Frame. Ceco Door)

3.4 Lockset Function

For this project lockset type of lockset is divided by 4 type which is L1-Entrance Function, L3-Antipanic Function, L4-Storeroom Function, and L5 Passage Function. Each of the function must be placed at an appropriate places to avoid disturbance. There is slightly different from others that some people think that all the lockset is the same but it is entirely different. All the lockset have 1 mortice lock case that is slightly different for each function, 1 set of lever handle, 1 key cylinder, 1 door closer, 1 door selector(double leaf), 1 set of flush bolt(double leaf), and 1 mortice lock rebated part(double leaf).

i)L1-Entrance Function

The lockset is used at a room that where people can enter and stay inside. The lock is not automatic and it will only lock when the thumbturn or key is used to lock the door. Entrance function used at a room that is have public use and connected to other working spaces like boss room, head of agency. The room also can be used for the item that is not very high in value but still need to be locked like a store for new office item.

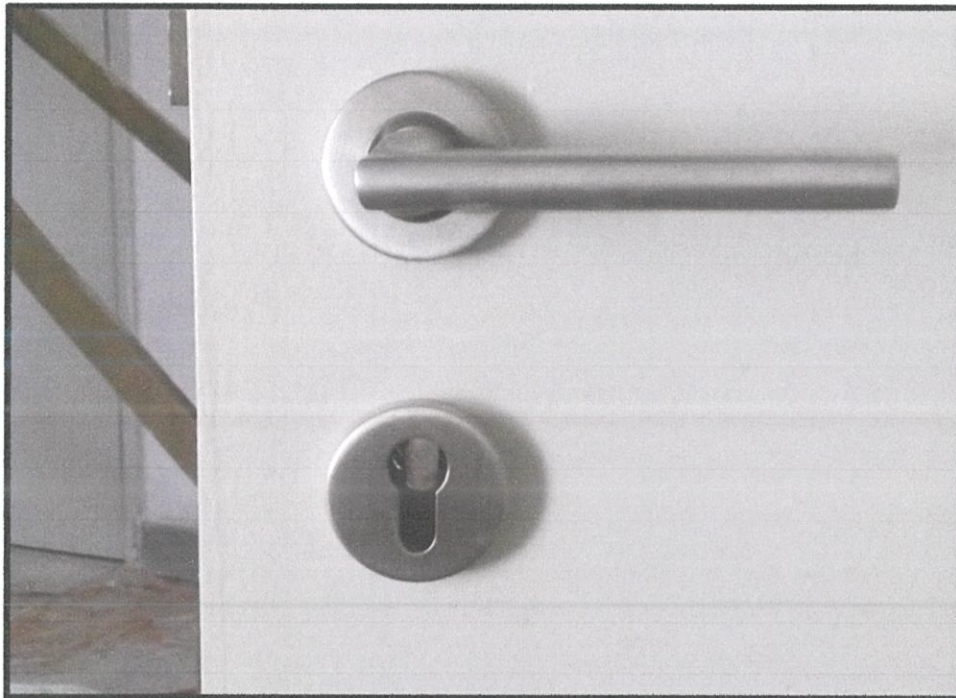


Photo 3.6 Outside view of entrance function lockset



Photo 3.7 Side view of entrance function lockset

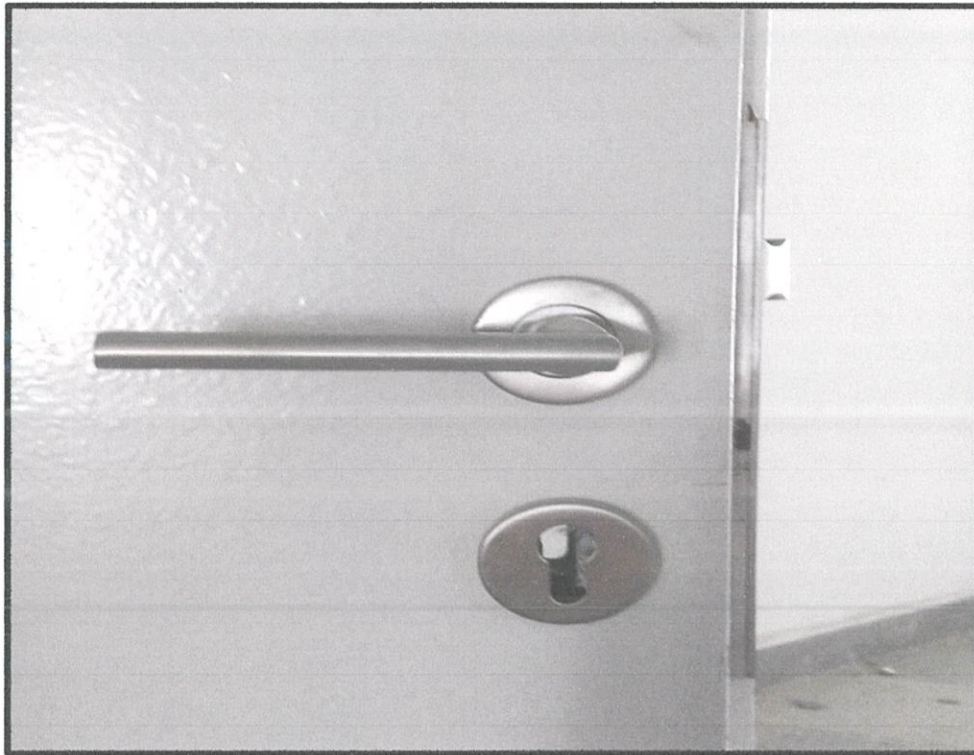


Photo 3.8 Inside view of entrance function lockset

ii)L3-Antipanic Function

This lockset is used at a fire escape route or a room that need fast response to get out of the room. This lockset have a key cylinder and can be locked from both side but someone from the inside can unlock the locked door just by pulling the lever handle but people from the outside can't use the door if its locked. The lock is not automatic and it can only be locked by using thumbturn or a key. Sometime, a door is needed at the secure the escape route and prevent outsider enter the building using the emergency escape route so this function is used at an escape route because of its unique function of automatically unlock the door with just pulling the lever handle.

iii)L4-Storeroom Function

This type of lockset is used at a room that stored high value and confidential item. This lockset is this project used for confidential information file for PDRM and case

item store. This lockset can't be access from outside without a key, its automatically lock if the door is closed but the person from inside can open it automatically by pulling the lever handle. This lockset only contain half lever handle, storeroom mortise lock case and a half key cylinder. This kind of lockset it suitable for confidential item because it is automatically locked when closed without needing to turn the thumbturn, and only the person who got the permission(key) can enter the room.

iv)L5-Passage Function

Passage Function is used for emergency escape. It is usually connected corridor to the staircase and it is connected inside the building. This door is used to maintain the air pressure at the staircase and prevent smoke from spreading to the other area through staircase. This lockset didn't have hole for key cylinder which made it can never be locked. This lockset can't be use as an entrance door that connected outside to inside to the building. This lockset contain one mortise lock case and level handle.

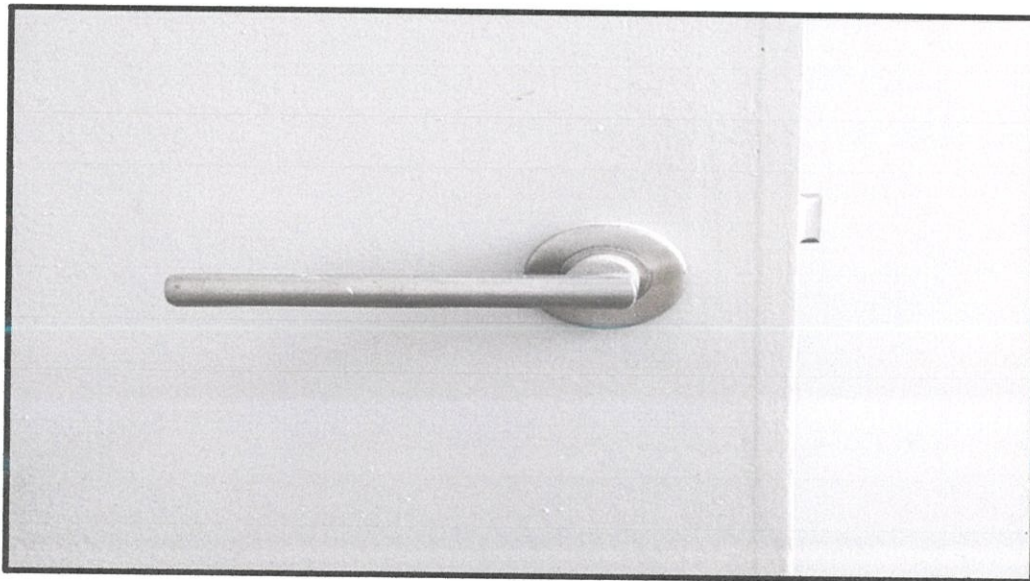


Photo 3.11 Inside view of passage function lockset



Photo 3.12 Side view of passage function lockset

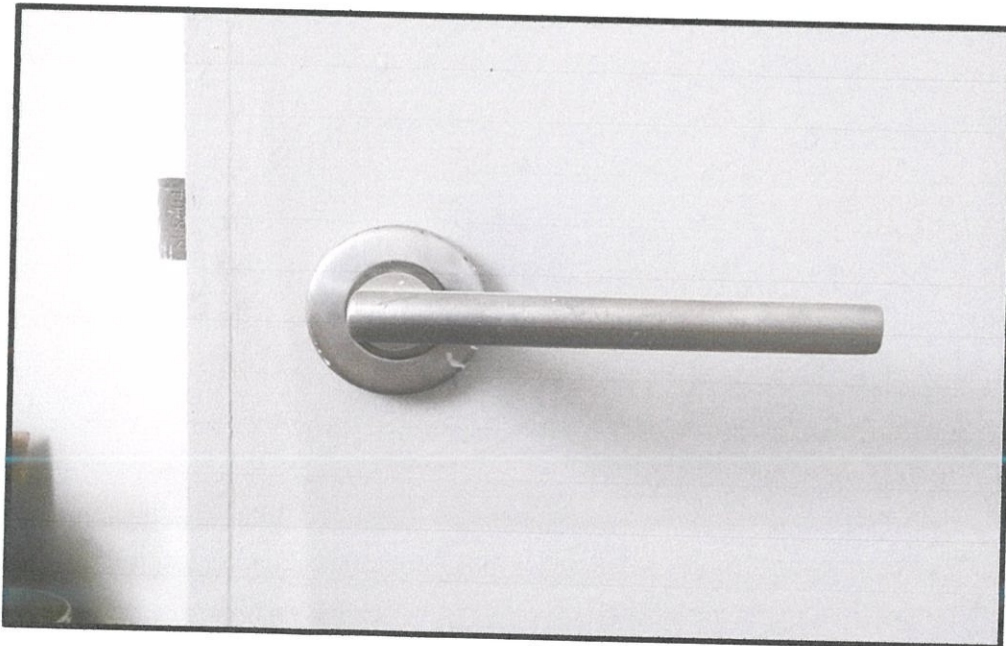


Photo 3.13 Outside view of passage lockset

4.0 CONCLUSION

In conclusion, fire door have been upgraded from a door that just resist fire into a type of door with high security feature. This feature may only differ at ironmongeries but its quality speak for themselves saying that they are not only ordinary door. High quality ironmongeries that resist high temperature and being backed by a sturdy door leaves made a good combination.

Material is one of the most important element in in choosing high security door and lockset. Ordinary door will not hold when collide with big force and easy to break. The same can be said for lockset, lockset use for Project IPK Perlis have very tiny gap and sturdy metal which made it is hard to breach by normal means.


The usage of fire door as a high security lockset is a good innovation because of its quality of material. It is easy to obtained a fire door with a reasonable price. The fire door will serve two purpose which is fire resistance and high security door. Implementation of high security lockset into fire door is good innovation for everyone.

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4. Life Safety and Security Door Hardware(2013) Detex.
5. Distributor Tech Data-Section 7 Fire Door/Fire Door Frame. Ceco Door.
Available from
<https://www.cecodoor.com/.../Ceco/.../Tech%20Manual/Complete%20Ceco%20Tech%...>

APPENDIX

1. Catalogue from Warisandor



GERE
Symbol of Quality

SECURE YOUR HOME & BELONGINGS


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 12220:2001, UK Standard, CEN European Standard BS EN 12220:2001 and TÜV BS EN ISO9227:2007, BS EN 1570:2007, INTERTEK BS EN 1570:2007/2009/AC. GERE products has obtained ANSI B-HMA 156.2 from SIRIM QAS International, a rare public endorsement by an independent certification agency for a Malaysian brand.



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 CL539 & CL39	BS EN 12220:2001	UKAS
2010	GERE Cylindrical Knobset, Tubular Knobset	ANSI B-HMA A 156.2:2005	SIRIM QAS International
2010	GERE Mortise Lock	ANSI B-HMA A 156.12:2005	SIRIM QAS International
2010	GERE Handle Set & Deadbolt	ANSI B-HMA A 156.5:2001	SIRIM QAS International
2010	GERE Padlock	BS EN ISO9227:2007 BS EN 1570:2007	Technischer Überwachungsverein (TUV)
2013	GERE Padlock	BS EN 12220:2012	SIRIM QAS International
2013	GERE Padlock	BS EN 1570:2007/2009/AC	INTERTEK
2014	GERE Mortise Lock	BS EN 12299:2003	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 Kars Award (Asia Pacific International Honesty Enterprise and Honesty Product) respectively.

As for the Fire Rated Door, GEREdor has obtained 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 3:1995 with latest (Amendment 1:2003) Specialisation for Fire Resistant Doorset in year 2015.

Being the pioneer in this industry, it is GERE's vision to have that unyielding mission to continuously 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

IRONMONGERIES SET

STAINLESS STEEL SUS 304 LEVER HANDLE

Model G 001 Solid	Model G 002 Solid	Model G 006 Solid
		
Model G 101 In-line	Model G 102 In-line	Model G 103 In-line
		
Model G 105 In-line	Model G 106 In-line	Model G 111 In-line
		
Model G 144 Solid	Model G 1003 In-line	Model G 1007 In-line
		
Model G 2010 NEW In-line	Model G 2020 NEW In-line	Model G 2030 NEW In-line
		
Model G 2040 NEW In-line	Model G 2060 NEW In-line	
		




CERTIFICATO ISO 9001:2008
Distribuzione: COCIS

IRONMONGERIES SET

DOOR CLOSER 800 SERIES

Model G 801 T4.1	Model G 803 T4.1	Model G 805BC T4.1	Model G 808BC T4.1
			

Power Size Available

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













CONFORME ALLA NORMA
Distribuzione: COCIS

CE EN 1154 - 1007
Power Available per
MCMC open.

MORTISE LOCK CASE

Model Entrance GML 6561	Model Passage / Closet GML 6563	Model Classroom Lock GML 6564	Model Deadlock GML 6566	Model Anti Panic GML 7261
				


CERTIFICATO ISO 9001:2008
Distribuzione: COCIS

IRONMONGERIES SET

PROFILE CYLINDER

Model
GCT01S
Entrance



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

HINGES

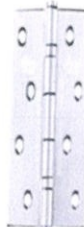
Model
GH5530BB



Stainless Steel Hinges
SUS 304
127mm x 50mm x 2,0mm

BS EN Rating
4 7 6 0 1 4 3 12

Model
GH4322B



Stainless Steel Hinges
SUS 304
120mm x 70mm x 2,0 mm

BS EN Rating
3 7 4 2 1 3 0 11

FLUSH BOLT

Model
GFB 3-AUTO
Auto Bolt



Finishing
• MSB - Satin Chrome

REBATED PART

Model
GRP 240
Minior Lock Rebated Part



Finishing
• MS - Polished Brass
• MS - Anticad Brass
• MSB - Satin Chrome



CONFORME A LA NORME EN 12538
Certifiée au PSC200



IRONMONGERIES SET

DOOR SELECTOR

Model
GDL 280



Model
GDC 005



Model
GDC 006



Model
GDL 300



CONFORME A LA NORME EN 12538
Certifiée au PSC200



CONFORME A LA NORME EN 12538
Certifiée au PSC200



CONFORME A LA NORME EN 12538
Certifiée au PSC200

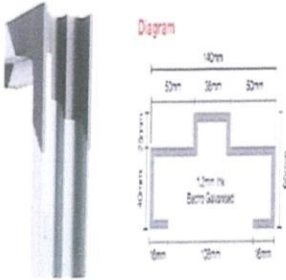


QUALITY FIRE-RATED DOOR

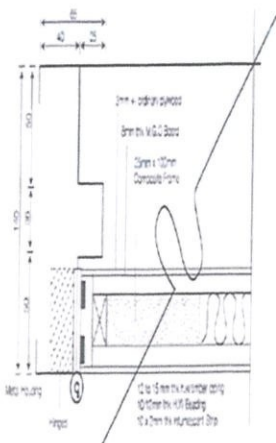
GEREDOR specialises in Fire Rated Doors that meet the needs of our clients. GEREDOR Fire Rated Doors come in various styles and configurations to meet the needs of both residential and commercial projects. GEREDOR has been tested by SIRIM QAS International Malaysia which has been approved by Jabatan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

- 1 HOUR RATED FIRE RESISTANCE
- BS EN 12239:2003 STANDARD AND ANSI/BHMA A 156.10:2003 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



CROSS SECTION OF DOOR LEAF

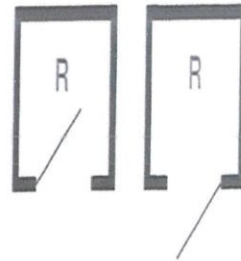


HOW TO DIFFERENTIATE AND IDENTIFY LEFT OR RIGHT FOR METAL FRAME

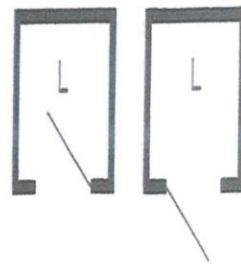
SINGLE DOOR



Right Hand Frame

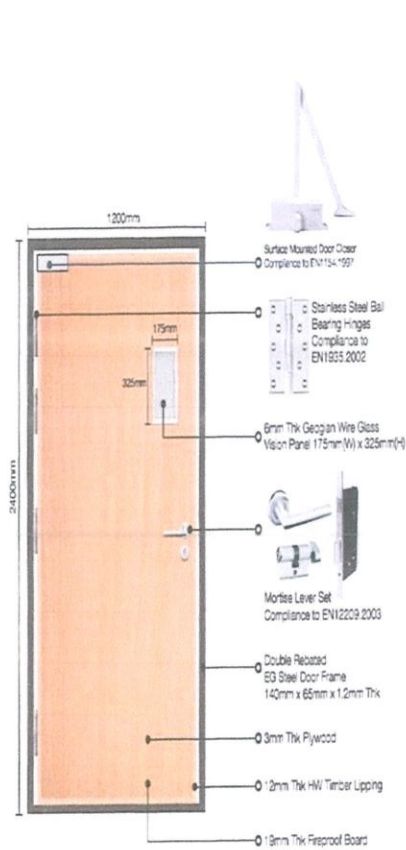


Left Hand Frame



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

Maximum Size 1200mm x 2400mm
 Model : GERE[®]or MFKL/SL/1H/8MM/GERE



**DOUBLE LEAF ONE HOUR FIRE RATED DOOR WITH
 ELECTRO GALVANIZED METAL DOOR FRAME**

Maximum Size 2400mm x 2400mm
 Model : GERE[®]or DL/1HR/8MM/MF

