

**Checklist for Actuating Devices and Operation of Fire Shutter**

I. REFERENCE

Project ..... F.S.D. Ref. ....  
 Address ..... Location .....  
 .....  
 L.P.C. Ref. .... Maker's Name .....

II. TYPE

Single Steel Rolling Shutter [ ]  
 Double Steel Rolling Shutter [ ]  
 Push-up Type with Lifting Handle [ ]  
 With Mechanical Gearing [ ]

III. INSTALLATION

		Yes	No	Remarks
3.1	Where automatic self-closing devices are fitted, do they cause no interference to the manual opening and closing of the shutter?	[ ]	[ ]	.....
3.2	Where smoke detectors are provided for the actuation of the shutter, are they fitted to both sides of the wall opening?	[ ]	[ ]	.....
3.3	Are smoke detectors installed as far as practicable to the provisions of the L.P.C. rules for A.F.A.?	[ ]	[ ]	.....
3.4	Is permanent nameplate with adequate information provided?	[ ]	[ ]	.....
3.5	Are manual controls provided to both sides of the wall opening?	[ ]	[ ]	.....

IV. SHUTTER OPERATION

4.1	Does the automatic actuation device function satisfactorily?	[ ]	[ ]	.....
4.2	Is secondary source of electricity supply provided?	[ ]	[ ]	.....
4.3	Is the descending speed* of the shutter acceptable?	[ ]	[ ]	.....

\* Descending time shall within 15-60 seconds for shutters in openings in excess of 2.5 m in height; not faster than 8 seconds for other shutters in openings of height within 2.5 m and that the bottom rail of the shutter shall reach the mid-height in not less than half the total descending time of the shutter.



**Checklist for CO<sub>2</sub>/Clean Agent Extinguishing System**

**I. REFERENCE**

Project..... F.S.D. Ref. ....  
 Address ..... Location/Room .....  
 .....

Working/Design Drawing Ref ..... Yes No N/A  
 Is drawing enclosed? [ ] [ ] [ ]  
 Approved Computer Program Ref .....  
 Is program enclosed? [ ] [ ] [ ]  
 Is catalogue enclosed? [ ] [ ] [ ]  
 Is certification for pneumatic test to pipings enclosed? [ ] [ ] [ ]

**II. TYPE OF SYSTEM**

			CO <sub>2</sub>	FM200	NAFSIII
			[ ]	[ ]	[ ]
Total Flooding	[ ]	Local Application	[ ]		
Modular	[ ]	Cylinder	[ ]		
Pre-engineered	[ ]	Engineered	[ ]		
High Pressure	[ ]	Low Pressure	[ ]		
Single Hazard	[ ]	Multiple Hazard	[ ]		
Primary Bank Only	[ ]	With Reserve Bank	[ ]		

**III. PROTECTED AREA**

	Yes	No	Remarks
3.1 Does occupancy tally with approved building plans?	[ ]	[ ]	.....
3.2 Does compartmentation of protected premises tally with approved building plans?	[ ]	[ ]	.....
3.3 Does general layout tally with F.S.I. drawings?	[ ]	[ ]	.....
3.4 Are openings properly sealed or closable automatically during/before agent discharge?	[ ]	[ ]	.....
3.5 Are warning/instruction signs provided at entrance to; and in the case of normally occupied premises, inside the protected area?	[ ]	[ ]	.....
3.6 Does the following components:—			
	Tally with drawings?		If not, whether the as-fitted location/position acceptable?
	Yes	No	Yes No Remarks
3.6.1 Audio Alarm—Bell/Buzzer etc.	[ ]	[ ]	[ ] [ ] .....
3.6.2 Visual Alarm—Light/Strobe etc.	[ ]	[ ]	[ ] [ ] .....
3.6.3 Detector	[ ]	[ ]	[ ] [ ] .....
3.6.4 Manual Release	[ ]	[ ]	[ ] [ ] .....

	Tally with drawings?		If not, whether the as-fitted location/position acceptable?		Remarks
	Yes	No	Yes	No	
3.6.5 Piping	[ ]	[ ]	[ ]	[ ]	.....
3.6.6 Nozzles	[ ]	[ ]	[ ]	[ ]	.....
3.6.7 Agent Container	[ ]	[ ]	[ ]	[ ]	.....
3.6.8 Control/ Indication Panel	[ ]	[ ]	[ ]	[ ]	.....
3.6.9 Ignition/Fuel Source shut down Device	[ ]	[ ]	[ ]	[ ]	.....
3.6.10 Other Mechanical/Electrical/Pneumatic Operating Device	[ ]	[ ]	[ ]	[ ]	.....

IV. THE SYSTEM (STATIC CHECK)

	Yes	No	Remarks
4.1 Are system components approved/listed?	[ ]	[ ]	.....
4.1.1 Actuating Solenoid	[ ]	[ ]	.....
4.1.2 Cylinder Valve Assembly	[ ]	[ ]	.....
4.1.3 Cylinder/Agent Container	[ ]	[ ]	.....
4.1.4 Flexible Hose	[ ]	[ ]	.....
4.1.5 Distributor/Selector Valve	[ ]	[ ]	.....
4.1.6 Pilot Cylinder	[ ]	[ ]	.....
4.1.7 Alarm Bell (For Normal Application)	[ ]	[ ]	.....
4.1.8 Siren/Yodalarm	[ ]	[ ]	.....
4.1.9 Control/Indication Panel	[ ]	[ ]	.....
4.1.10 Remote Manual Release Unit	[ ]	[ ]	.....
4.1.11 Detector	[ ]	[ ]	.....
4.1.12 Discharge Nozzle	[ ]	[ ]	.....
4.2 Is permanent nameplate with adequate information provided to:—			
4.2.1 CO <sub>2</sub> Container?	[ ]	[ ]	.....
4.2.2 FM200 Container?	[ ]	[ ]	.....
4.2.3 NAFSIII Container?	[ ]	[ ]	.....
4.3 Is reliable means of indication provided for the determination of pressure in FM200/NAFSIII container?	[ ]	[ ]	.....
4.4 Does the means of indication account for variation of container pressure with temperature?	[ ]	[ ]	.....
4.5 Is agent of sufficient quantity provided?	[ ]	[ ]	.....
4.6 Is cylinder/container properly mounted/secured?	[ ]	[ ]	.....
4.7 Are markings on nozzles showing make; type and orifice size readily discernible?	[ ]	[ ]	.....
4.8 Are pipings properly installed and secured in accordance with approved guide?	[ ]	[ ]	.....
4.9 Are pipings properly earthed?	[ ]	[ ]	.....

		Yes	No	Remarks
4.10	Are pipings suitably protected against mechanical, chemical, vibration or other damage?	<input type="checkbox"/>	<input type="checkbox"/>	.....
4.11	Are pipings of the approved type provided? (Please indicate the type used):—	<input type="checkbox"/>	<input type="checkbox"/>	.....
4.11.1	For 25-bar or 42-bar system:—			
4.11.1.1	BS 3601 Seamless Schedule 80	<input type="checkbox"/>		
4.11.1.2	ASTM A53	<input type="checkbox"/>		
4.11.1.3	ASTM A106	<input type="checkbox"/>		
4.11.1.4	JIS 3454	<input type="checkbox"/>		
4.11.2	For 25-bar system only:—			
4.11.2.1	BS 1387 Heavy Grade Butt Welded (Up to and including 50 mm nominal pipe size)	<input type="checkbox"/>		
4.11.2.2	BS 3601 Seamless Schedule 40 (Up to and including 100 mm nominal pipe size)	<input type="checkbox"/>		
4.12	Are jointings of approved type provided? (Please indicate the type employed):—	<input type="checkbox"/>	<input type="checkbox"/>	.....
	Screwed Joints	<input type="checkbox"/>		
	Welded Joints	<input type="checkbox"/>		
	Others (Please state)	<input type="checkbox"/>		
	.....			
	.....			
4.13	Is electrical apparatus intrinsically safe or of flame-proof type? (For application in explosive atmosphere only)			
4.13.1	Detector	<input type="checkbox"/>	<input type="checkbox"/>	.....
4.13.2	Fire Alarm Bell/Sounder	<input type="checkbox"/>	<input type="checkbox"/>	.....
4.13.3	Opening/Closing device will not generate sparks	<input type="checkbox"/>	<input type="checkbox"/>	.....
4.13.4	Ventilation shut down device will not generate sparks	<input type="checkbox"/>	<input type="checkbox"/>	.....

V. *DETECTION, ACTUATION & CONTROL SYSTEM (STATIC CHECK)*

5.1	Is the correct type of detector provided? (Please indicate the type employed):— Heat <input type="checkbox"/> Smoke <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
5.2	Is operating alarm/indicator provided? (Please indicate the type provided):— Alarm <input type="checkbox"/> Indication <input type="checkbox"/> Both <input type="checkbox"/> Audio <input type="checkbox"/> Visual <input type="checkbox"/> Olfactory <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
5.3	Do electrical sources i.e. AC & DC provide adequate source of energy for:—			
5.3.1	Detection?	<input type="checkbox"/>	<input type="checkbox"/>	.....
5.3.2	Operating device?	<input type="checkbox"/>	<input type="checkbox"/>	.....

	Yes	No	Remarks
5.4 Is manual control suitably protected against mechanical, weather or environmental damage?	[ ]	[ ]	.....
5.5 Is manual control for actuation easily accessible at all times?	[ ]	[ ]	.....
<b>VI. FUNCTIONAL TEST (DYNAMIC TEST)</b>			
6.1 Does detector operate satisfactorily?	[ ]	[ ]	.....
6.2 If cross-zoning employed, is the zoning of detectors satisfactorily arranged?	[ ]	[ ]	.....
6.3 Does operating alarm/indication function properly?	[ ]	[ ]	.....
6.4 Does actuating solenoid operate satisfactorily?	[ ]	[ ]	.....
6.5 Does selector/distributor valve operate properly?	[ ]	[ ]	.....
6.6 Does the manual control require a force of not more than 178 newtons to secure operation?	[ ]	[ ]	.....
6.7 Does the manual control require a movement of not more than 356 mm to secure operation?	[ ]	[ ]	.....
6.8 Is the shut-down of ventilation system satisfactorily accomplished?	[ ]	[ ]	.....
6.9 If time delay of not more than 30 seconds is incorporated, does it function properly?	[ ]	[ ]	.....
<b>VII. PRACTICAL DISCHARGE TEST (DYNAMIC TEST) (IF REQUIRED)</b>			
By Designed Agent	[ ]		
By Approved Substitute	[ ]		
7.1 Does agent discharge time within the limit specified by F.S.D.?	[ ]	[ ]	.....
7.2 Are pipings securely installed to prevent pipe displacement or hazardous movement during discharge?	[ ]	[ ]	.....
7.3 Is mechanical tightness of pipings and associated equipment in order?	[ ]	[ ]	.....
<b>VIII. REINSTATEMENT OF SYSTEM AFTER DISCHARGE (STATIC CHECK)</b>			
8.1 Is replacement cylinder/container of the correct type with sufficient pressure and content provided?	[ ]	[ ]	.....
8.2 Is cylinder/container properly mounted?	[ ]	[ ]	.....
8.3 Is cylinder/container properly connected?	[ ]	[ ]	.....
8.4 Is control/indication panel properly reset?	[ ]	[ ]	.....
8.5 Is ETL properly replaced/reinstated?	[ ]	[ ]	.....
8.6 Is actuating solenoid properly linked/connected?	[ ]	[ ]	.....

IX. GENERAL COMMENTS & REMARKS

---

---

---

---

---

---

Test witnessed by:—

..... (Signature)

..... (Signature)

..... (Name in block letters)

F.S.I. Contractor's Representative

..... (Name in block letters)

F.S.D. Inspecting Officer

Date .....

Date .....

**Checklist for Emergency Generator Installation**

**I. Reference**

Project: ..... F.S.D. Ref.: .....  
 Address: .....

**II. Installations and Equipment Connected (for record purpose)**

Name of buildings  
 being protected: .....

	Peak Starting Current (I <sub>L</sub> )	Rated Input Power	Starting Method
(A) Fire service installation			
i. Fixed fire pump	No. × A	No. × kW	
ii. Intermediate booster pump	No. × A	No. × kW	
iii. Transfer pump	No. × A	No. × kW	
iv. Sprinkler pump	No. × A	No. × kW	
v. Fireman’s lift	No. × A	No. × kW	
vi. Fire detection system	No. × A	No. × kW	
vii. Smoke extraction system	No. × A	No. × kW	
viii. Staircase pressurization	No. × A	No. × kW	
ix. Exit sign/emergency lighting	No. × A	No. × kW	
x. Others: .....			
(B) Other equipment (please specify)			Remarks: D.O.L. Star-delta Auto-tx. or others
.....	A	kW	
.....	A	kW	
.....	A	kW	
.....	A	kW	
.....	A	kW	
Estimated maximum simultaneous starting and running load		kW/ kVA	

**III. Emergency Generator Set Details**

	<u>Alternator</u>	<u>Prime Mover</u>
3.1 Make	.....	.....
3.2 Model	.....	.....
3.3 Serial No.	.....	.....
3.4 Rated Capacity	Power ..... kVA Current ..... A	Voltage: 380/220 Power factor ..... Speed: ..... rpm Frequency ..... Hz



**IV. Fuel**

- 4.1 Type:  Diesel  other (please specify) .....
- 4.2 Type of tank:  Built-in  Separate
- 4.3 Separate fuel tank room is provided  Yes  No
- 4.4 Capacity of service tank: ..... litres Capacity of main fuel tank:..... litres
- 4.5 a. Fuel consumption ..... litres/hour rate at full load:
- b. Fuel consumption curve of generator is attached  Yes  No
- c. Time allowed for max. fuel consumption at full load ..... hours
- d. Fuel storage is sufficient for 6 hrs. generator running to support fire service installations  Yes  No
- |  | Yes                      | No                       | N/A                      | Remarks |
|--|--------------------------|--------------------------|--------------------------|---------|
| 4.6 Fuel tank room has been inspected and approved by Regional Office. (N.B.: Supporting document is attached)                     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | .....   |
| 4.7 Surveyor report for fuel tank has been obtained as required by Dangerous Goods Division.                                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | .....   |
| 4.8 DG license for fuel tank room holding more than 2,500 litres diesel has been obtained. (N.B.: Supporting document is attached) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | .....   |

**V. Visual Inspection**

- 5.1 Adequate space (not less than 600 mm) is provided all round emergency generator for maintenance/cleaning.    .....
- 5.2 Air supply and discharge ductworks (if any) are provided free from obstruction.    .....
- 5.3 Air supply and discharge ductworks running in compartment other than emergency generator room are enclosed with proper fire resisting material.    .....
- 5.4 Service fuel tank in generator room is made of 3 mm steel construction and of capacity less than 500 litres.    .....
- 5.5 Generator built-in fuel tank is not greater than 500 litres.    .....
- 5.6 Fuel tank is electrically earthed.    .....

	Yes	No	N/A	Remarks
5.7 A baffle wall of brick-work construction or of 9 mm metal sheet is provided between the side of service tank (if installed) and generator, serving as a screen wall between the two.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
5.8 Fuel refilling pump is connected to essential power supply.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
5.9 A shut off valve is provided on the supply pipe from fuel tank to the service tank of generator.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
5.10 Capacity of battery is capable of starting the generator 4 times consecutively and calculation sheet is enclosed.(capacity: ..... Ah)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
5.11 The batteries are kept in fully charged condition and the trickle charge is operating.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
5.12 Inside emergency generator room,				
5.12.1 door sill of sufficient height is provided to contain the total fuel contents of the service tank (if installed), fuel tank and sump of the generator;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
5.12.2 detailed operation instructions are displayed; and	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
5.12.3 a log book is provided.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
5.13 Integrity of the FRP construction of generator room and the door is intact.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
5.14 The notices “Emergency Generator” and “No Smoking” in 120 mm English and Chinese characters are provided at the entrance to the emergency generator room.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....

**VI. Functional Testing**

6.1 The manual starting facilities of the emergency generator can operate satisfactorily.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
6.2 Upon failure of normal electricity supply, emergency generator:—	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
6.2.1 automatically starts when the duration of power failure exceeds 1 second; and	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
6.2.2 transfers to FS loads within 15 seconds.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
6.3 Emergency generator is capable of restarting upon failure of first attempt in starting.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
6.4 Audible and visual alarms are given locally, and at fire control main panel when the generator starting sequence is locked out due to starting failure.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....

	Yes	No	N/A	Remarks
6.5 After one hour of running test, all instruments, safety devices, etc. indicate "normal" condition.	[ ]	[ ]	[ ]	.....
6.6 The generator set will continue to run after a pre-determined time recommended by manufacturer unless it is stopped manually if the normal power supply has resumed.	[ ]	[ ]	[ ]	.....
6.7 All testing are carried out with the generator room doors kept closed.	[ ]	[ ]	[ ]	.....
6.8 Warning signal is given locally and at fire control main panel when manual/auto selector switch turn to manual position. (N.B. such provision is strongly recommended)	[ ]	[ ]	[ ]	.....
6.9 Remote control valve on supply pipe to the service tank is in good working order.	[ ]	[ ]	[ ]	.....
6.10 All moving parts are effectively and rigidly guarded for safety.	[ ]	[ ]	[ ]	.....
6.11 All hot parts are properly insulated.	[ ]	[ ]	[ ]	.....
6.12 No exhaust leak is detected inside generator room while the generator is running.	[ ]	[ ]	[ ]	.....

**VII. On Load Test**

- 7.1 All loadings as listed in item 2 were connected [ ] Yes [ ] No
- 7.2 Frequency (Hz) .....
- 7.3 Maximum starting current ( $I_{LMAX}$ )  
 R: ..... A      Y: ..... A      B: ..... A
- 7.4 Voltage dip: ..... %      Voltage recovery time: .....seconds
- 7.5 Running Current ( $I_L$ )  
 R: ..... A      Y: ..... A      B: ..... A
- 7.6 Voltage (Volts)  
 R-Y: .....      Y-B: .....      B-R:.....  
 R-N: .....      Y-N: .....      B-N: .....
- 7.7 Engine speed (RPM) .....
- 7.8 Duration of on-load test (Hr.) .....

**VIII. General Comments & Remarks**

---



---



---



---



---

Tested by:

Signature: .....

Full name of  
installation engineer: .....

Name of  
FSI contractor: .....

Company Chop: .....

Date: .....

Witnessed by:

Signature: .....

Full name of  
design engineer: .....

Name of  
Design consultant: .....

Company Chop: .....

Date: .....

## Checklist for Inspection of Fire Detection and Alarm System

### I. Reference

Project: ..... F.S.D. Ref : .....

Address: .....

Type of building: Domestic/Industrial/Godown/Commercial/Office/Composite/Hotel/Hospital/

Others with/without basement .....

### II. Type of Equipment

#### 2.1 Alarm Annunciation Panel

Manufacturer/model no. of  
alarm annunciation panel:

(Main panel) .....

(Sub-panel/repeater panel, if any) .....

F.S.D. approved type : Yes/No

Type : Conventional type [ ]  
Addressable type [ ]

#### 2.2 Power Supplies

2.2.1 Mains supply : Supply Voltage/Phase/Hz .....

2.2.2 Emergency generator : Rating of generator (kVA) .....

: Fuel oil supply capacity  
(Litres of oil) .....

2.2.3 Standby battery : Type of batteries .....

: Capacity of batteries (Ahr) .....

: Backup period for fire  
services (hr) .....

#### 2.3 Detectors

2.3.1 Heat detector : Manufacturer/model no. : .....

: F.S.D. approved type : Yes/No

: Type : Fixed temperature [ ]  
Rate-of-rise temperature [ ]  
Combination [ ]  
Linear cable [ ]  
Others [ ]

(please specify .....)

- 2.3.2 Smoke detector : Manufacturer/model no. : .....
- : F.S.D. approved type : Yes/No
- : Type : Ionization [ ]  
 Optical [ ]  
 Point [ ]  
 Aspirating [ ]  
 Others [ ]  
 (please specify .....)
- 2.3.3 Flame detector : Manufacturer/model no. : .....
- : F.S.D. approved type : Yes/No
- : Type : Infra-red [ ]  
 Ultra-violet [ ]  
 Others [ ]  
 (please specify .....)
- 2.3.4 Others : Manufacturer/model no. : .....
- : F.S.D. approved type : Yes/No
- : Type : .....
- 2.4 Manual Call Points
- Manufacturer/model no. : .....
- F.S.D. approved type : Yes/No
- Type : Breakglass type [ ]  
 Others [ ]  
 (please specify .....)
- 2.5 Alarm Sounders
- Manufacturer/model no. : .....
- F.S.D. approved type : Yes/No
- 2.6 Visual Fire Alarm Lamps
- Manufacturer/model no. : .....
- F.S.D. approved type ( only for those lamps  
 integrated with alarm sounders ) : Yes/No
- 2.7 Fire Resistant Cables
- Manufacturer/model no. : .....
- Type : BS 6387 Cat. AWX, AWY or AWZ [ ]  
 BS 6387 Cat. BWX, BWY or BWZ [ ]  
 BS 6387 Cat. CWX, CWY or CWZ [ ]  
 BS 6387 Cat. SWX, SWY or SWZ [ ]  
 MICS cable to BS 6207 [ ]  
 Others with F.S.D.'s acceptance letter [ ]  
 (please specify .....)



		Yes	No	N/A	Remark	Ref.					
						LPC	BS	CL			
<b>IV. Visual Inspection</b>											
4.1	<u>General</u>										
4.1.1	All fire detection and equipment are conformed to F.S.D.'s requirements.	[ ]	[ ]	[ ]	.....	2		1/2002, 2.2			
4.1.2	All individual components of a fire alarm system are mutually compatible.	[ ]	[ ]	[ ]	.....		6.7	1/2002, 2.5			
4.1.3	Operating instructions showing the fault indication or correct action that should be taken in the event of a fire are provided adjacent to the alarm annunciation panel.	[ ]	[ ]	[ ]	.....		23.1				
4.1.4	Diagrammatic representation of the building, showing at least the building entrances, the circulation areas, the escape routes and the division of zones is provided on or adjacent to the alarm annunciation panel.	[ ]	[ ]	[ ]	.....		15.4.3				
4.1.5	As-fitted zoning schedule is provided adjacent to the alarm annunciation panel.	[ ]	[ ]	[ ]	.....		23.1				
4.1.6	Log book is provided adjacent to the alarm annunciation panel.	[ ]	[ ]	[ ]	.....		23.1				
4.2	<u>Detectors</u>										
4.2.1	Appropriate types of detectors are provided in areas as indicated on the approved building plans.	[ ]	[ ]	[ ]	.....	Code					
4.2.2	Locations of detectors tally with stamped FSI plans.	[ ]	[ ]	[ ]	.....	Code					
4.2.3	Detection zonings are properly labelled at the alarm annunciation panel.	[ ]	[ ]	[ ]	.....	Code					
4.2.4	In the floor where sleeping risk exists (e.g. hotel, hospital, etc.) :										
	(a) heat detector should be used in kitchen.	[ ]	[ ]	[ ]	.....	Code					
	(b) smoke detector should be used in other areas except sprinkler protected toilets, bathrooms and staircases.	[ ]	[ ]	[ ]	.....	Code					
4.2.5	Detectors are provided to entire basement (except car parking area, strong room & safe deposit vault).	[ ]	[ ]	[ ]	.....	Code					
4.2.6	Intrinsically safe detector is used in the environment which may have the presence of explosive or flammable gas.	[ ]	[ ]	[ ]	.....	Code					
4.2.7	The aggregate floor area covered by any single detection loop circuit is $\leq 10,000 \text{ m}^2$ calculated on those portions of the premises installed with fire detectors.	[ ]	[ ]	[ ]	.....	6(d)		1/2002, 2.4			
4.2.8	The aggregate floor area covered by a single detection zone is $\leq 2,000 \text{ m}^2$ calculated on those portions of the premises installed with fire detectors.	[ ]	[ ]	[ ]	.....		7.2(a)				



	Yes	No	N/A	Remark	Ref.		
					LPC	BS	CL
4.2.9 Remote indicator lamps are provided to show visually the position of the fire detection signal for search distance > 30 m.	[ ]	[ ]	[ ]	.....		7.2(b)	
4.2.10 Remote indicator lamps outside doors (near door exit) are provided for detectors installed inside rooms if doors are likely to be locked.	[ ]	[ ]	[ ]	.....		7.2(b)	
4.2.11 If the building consists of more than one storey, a single zone design is adopted for the total floor area is $\leq 300 \text{ m}^2$ .	[ ]	[ ]	[ ]	.....		7.2(c)	
4.2.12 As the total floor area of the building is > 300 m <sup>2</sup> , all zones are restricted to a single storey, except that :  (a) if the total floor area of a fire compartment is $\leq 300 \text{ m}^2$ , and any communication with other fire compartments is only at the lowest level of the building, then that fire compartment is considered as a single zone even though there may be more than one storey within it; and  (b) if detectors or call points are fitted in stairwells, lightwells, liftwells and other flue-like structures extending beyond one floor but within one fire compartment, then the volume of the well or shaft should be considered as one or more separate zones.	[ ]	[ ]	[ ]	.....		7.2(d)	
4.3 <u>Alarm Sounders</u>							
4.3.1 An alarm sander (weatherproof type) is installed at the external/outside of the building (near the main entrance).	[ ]	[ ]	[ ]	.....		9.1	
4.3.2 An alarm sander is provided near the control and indicating equipment.	[ ]	[ ]	[ ]	.....		9.2	
4.3.3 One alarm sander is provided at each hose reel point.	[ ]	[ ]	[ ]	.....	Code extent		
4.3.4 All alarm sander cases are painted in red colour and clearly marked 'FIRE ALARM' '火警' in white color. The height of all the English and Chinese wordings shall not be less than 10 mm and 15 mm respectively.	[ ]	[ ]	[ ]	.....		9.1	1/2002, 2.16
4.3.5 A clearly labelled facility is available at or near the alarm annunciation panel for starting or restarting the fire alarm sounders. Operation of this facility is not dependent on the state of any silencing device.	[ ]	[ ]	[ ]	.....		9.1	
4.3.6 For sounders used for simple ring circuits, the distribution wiring to each sander circuit should be protected against overload due to short circuit by a fuse or similar device.	[ ]	[ ]	[ ]	.....		6.6.4	
4.4 <u>Manual Call Points</u>							
4.4.1 Zoning of manual call points is at least one zone per floor or storey.	[ ]	[ ]	[ ]	.....		7.2(f)	1/2002, 2.12

	Yes	No	N/A	Remark	Ref.		
					LPC	BS	CL
4.4.2							
One manual call point is located at each of the following equipment/location.							
(a) hose reel point;	[ ]	[ ]	[ ]	.....			
(b) adjacent to all storey exits;							
(c) adjacent to all exits to open air.							1/2002, 2.23
4.4.3							
The travel distance for finding a manual call point is $\leq$ 30 m.	[ ]	[ ]	[ ]	.....			
4.4.4							
Manual call points are fixed at a height of about 1.2m above the finished floor level.	[ ]	[ ]	[ ]	.....			
4.5							
<u>Visual Fire Alarm Signals</u>							
4.5.1							
VFA signal lamps are labelled 'FIRE ALARM' '火警'. The height of English and Chinese characters is not less than 10 mm and 15 mm, respectively.	[ ]	[ ]	[ ]	.....			4/2001, Pt. I, Para. 4
4.5.2							
Visual alarm signal is in the form of red flashing light.	[ ]	[ ]	[ ]	.....			4/2001, Pt. I, Para. 4
4.5.3							
Each compartment is provided with at least one VFA signal lamp.	[ ]	[ ]	[ ]	.....			4/2001, Pt. I, Para. 4
4.5.4							
Areas to be covered by VFA are in full compliance with the approved building plans.	[ ]	[ ]	[ ]	.....			4/2001, Pt. I, Para. 4
4.5.5							
The design of the VFA system conforms to :							
(a) Section 4 – 4, NFPA 72 : 1999, or	[ ]	[ ]	[ ]	.....			
(b) Clause 9.7, BS 5839 : Part 1 : 1988.	[ ]	[ ]	[ ]	.....			4/2001, Pt. I, Para. 4
4.6							
<u>Time Related Systems and Transmission Delay Units</u>							
4.6.1							
Time related system and/or transmission delay unit are/is provided.	[ ]	[ ]	[ ]	.....			4/2001
4.6.2							
Time related system and/or transmission delay unit are/is approved by F.S.D..	[ ]	[ ]	[ ]	.....			1/2002, 2.33
4.6.3							
An indicator light is provided on or adjacent to the control and indicating equipment showing the working or silent hours state of the system.	[ ]	[ ]	[ ]	.....			14.6
4.6.4							
A manual override switch is provided on or adjacent to the control equipment for de-activating the time related system when the building is unoccupied.	[ ]	[ ]	[ ]	.....			14.6
4.7							
<u>Control and Indicating Equipment</u>							
4.7.1							
The alarm annunciation panel is located in an area on the ground floor and in the immediate vicinity of the building entrance easily to be accessed by the F.S.D. or in the building's Fire Control Centre/Room.	[ ]	[ ]	[ ]	.....			15.3.2
4.7.2							
Repeater panels are provided at different entrances or other points of entry to be used by the F.S.D. in accordance with the approved building plans.	[ ]	[ ]	[ ]	.....			15.3.2

		Yes	No	N/A	Remark	Ref.
						LPC BS CL
4.7.3	Where the control and indicating equipment is installed in a severe weather environment, a weatherproof protective enclosure with adequate ventilation is provided to protect it from being damaged by high humidity and water.	[ ]	[ ]	[ ]	.....	15.3.7 1/2002, 2.41
4.7.4	All the alarm indications are displayed in both Chinese and English so that the origin of the alarm position in relation to this building can be easily, quickly and unambiguously identified.	[ ]	[ ]	[ ]	.....	15.4.1 1/2002, 2.42
4.7.5	The method of indication of the origin of alarms is by means of :					
	(a) a display of letters and/or numbers.					
	(b) a permanent mimic diagram.					
	(c) a display of a mimic diagram on a visual display unit (VDU) and (a) or (b) above or a second VDU or a printer.	[ ]	[ ]	[ ]	.....	
	(d) by other suitable means. (please specify .....	[ ]	[ ]	[ ]	.....	
		[ ]	[ ]	[ ]	.....	15.4.3
4.7.6	The operation of all manual controls and isolating devices should be limited to authorized personnel. It may be provided by restricting access to the equipment by means of the following : -					
	(a) the use of a lock.	[ ]	[ ]	[ ]	.....	
	(b) a key-operated switch.	[ ]	[ ]	[ ]	.....	
	(c) in a disciplined environment, by the use of a list of authorized personnel.	[ ]	[ ]	[ ]	.....	
	(d) other acceptable means. (please specify .....	[ ]	[ ]	[ ]	.....	
						15.5
4.7.7	No silencing switch device is installed as a single component. This device is incorporated in either the main fire services control panel or a repeater panel.	[ ]	[ ]	[ ]	.....	9.11
4.8	<u>Power Supplies</u>					
4.8.1	Permanent electricity supply is connected.	[ ]	[ ]	[ ]	.....	Code
4.8.2	Battery powered standby supply is connected.	[ ]	[ ]	[ ]	.....	Code
4.8.3	Battery power supply is provided. (Voltage:..... DC volts:..... Ahr:.....)	[ ]	[ ]	[ ]	.....	Code
4.8.4	The battery charger is capable of recharging the batteries from fully discharged to fully charged within 24 hours.	[ ]	[ ]	[ ]	.....	16.3.2.1
4.8.5	Connections to the mains supply is via an isolating protective device (e.g. an isolating switch-fuse) reserved solely for all the fire service installations.	[ ]	[ ]	[ ]	.....	16.2 1/2002, 2.44

	Yes	No	N/A	Remark	Ref.		
					LPC	BS	CL
4.8.6				Every isolator, switch and protective device that can supply for the fire alarm system is properly labelled as appropriate :			
				(a) 'FIRE ALARM' '火警警報'; (b) 'FIRE ALARM DO NOT SWITCH OFF' '火警警報切勿切斷電源'; or (c) 'WARNING: THIS SWITCH ALSO CONTROLS THE SUPPLY TO THE FIRE ALARM SYSTEM' '警告: 此電掣乃供應火警警報系統電源'.			
				All warning labels are engraved in white letter/ character with red colour background. The height of all the English and Chinese wordings is not less than 10 mm and 15 mm respectively.	[ ]	[ ]	[ ]
				.....		16.2	1/2002, 2.45
4.8.7				Normal and standby battery supplies can each be capable of supplying the maximum alarm load irrespective of the condition of the other supply.	[ ]	[ ]	[ ]
				.....		16.4.1	
4.8.8				Power supply equipment for multiple occupancy buildings is sited in an area of common access.	[ ]	[ ]	[ ]
				.....		16.7.3	
4.9				<u>Cables, Wiring and Other Interconnections</u>			
4.9.1				Cables used for the interconnections between VFA signaling devices, sounders, control and indicating equipment and power supplies are suitable for prolonged operation during a fire or can resist fire for at least 30 minutes.	[ ]	[ ]	[ ]
				.....		9.7 & 17.2	
4.9.2				Cables requiring prolonged operation during a fire should be:			
				(a) MICS cable complying with BS6207; or (b) complying with BS6387, meeting with the requirements for Cat. AWX or SWX; or (c) embedded in the structure of the building and protected by the equivalent of at least 12 mm of plaster; or (d) separated from any significant fire risk by a wall, partition or floor having at least 30 minutes fire resistance; or (e) by other acceptable means as stipulated in relevant F.S.D. Circular Letters.	[ ]	[ ]	[ ]
				.....		17.4.2	3/2002
4.9.3				Cables other than MICS cable complying with BS 6207 or sheathed steel-wire-armoured cable complying with BS 6346 or BS 5467 should be mechanically protected if :			
				(a) they are not monitored; or (b) they are less than 2.25 m above the floor; or (c) physical damage or rodent attack is likely.	[ ]	[ ]	[ ]
				.....		17.5.2	

	Yes	No	N/A	Remark	Ref.		
					LPC	BS	CL
4.9.4 Mechanical protection is provided to the cables by one of the following methods :							
(a) installation in conduit, ducting or trunking;				.....			
(b) by laying the cable in a channel;				.....			
(c) using MICS cable complying with BS 6207 or sheathed steel-wire-armoured cable complying with BS 6346 or BS 5467.	[ ]	[ ]	[ ]	.....		17.5.2	
4.9.5 Conductors carrying fire alarm power or signals are separated from conductors used for other systems by one or more of the followings :							
(a) installation in conduit, ducting, trunking or a channel reserved for fire alarm conductors;	[ ]	[ ]	[ ]	.....			
(b) a mechanically strong, rigid and continuous partition of non-combustible material;	[ ]	[ ]	[ ]	.....			
(c) mounting at a distance of at least 300 mm from conductors of other systems;	[ ]	[ ]	[ ]	.....			
(d) wiring in cables complying with BS 7629;	[ ]	[ ]	[ ]	.....			
(e) wiring in MICS cable with an insulating sheath or barrier. The exposed-to-touch rating of the TEE Wiring Regulations should not be exceeded.	[ ]	[ ]	[ ]	.....		17.10	
4.9.6 For cable which should be segregated from cables of other services but is not enclosed in ducting, trunking or a channel reserved for fire alarm circuits, it is suitably marked or labelled at intervals not exceeding 2 m to indicate its function and the need for segregation.	[ ]	[ ]	[ ]	.....		17.10	
4.9.7 DTL is mechanically protected in accordance with the methods mentioned in item 4.9.4 above.	[ ]	[ ]	[ ]	.....		17.11	
4.9.8 Cabling and wiring installation is in accordance with the latest edition of the EE Code.	[ ]	[ ]	[ ]	.....		24.4.1	1/2002, 2.53
4.9.9 Any joint in a cable is enclosed in a suitable and accessible junction box labelled 'FIRE ALARM' '火警警報' engraved in white letter/character with red colour background. The height of all the English and Chinese wordings is not less than 10 mm and 15 mm respectively to avoid confusion with other services.	[ ]	[ ]	[ ]	.....		17.9 & 24.4.3	1/2002, 2.54

## V Testing

### 5.1 Detectors

5.1.1 Upon actuation of any detector in the building, the correct audio/ visual warning device for the fire alarm and detection system is initiated.	[ ]	[ ]	[ ]	.....		26.5	
5.1.2 The sensitivity of all heat/smoke/flame detectors is correctly adjusted/ set and checked in full accordance with the manufacturer's recommendations.	[ ]	[ ]	[ ]	.....		Code	
5.1.3 The zoning of detectors is correct.	[ ]	[ ]	[ ]	.....		Code	

	Yes	No	N/A	Remark	Ref.		
					LPC	BS	CL
5.2 <u>Alarm Sounders</u>							
5.2.1 Upon the actuation of the detector, alarm should be given by alarm sounder installed at the building external near the entrance.	[ ]	[ ]	[ ]	.....		9.2	
5.2.2 Background noise (N) likely to persist for a period longer than 30 seconds. ..... dB(A) .....						9.4.1	1/2002, 2.19
5.2.3 For domestic building, the minimum sound level of alarm sounders is measured at 3 m from the inside of the main entrance door with all doors shut off at all flats and the result is, ..... dB(A) which is :  (a) $\geq 60$ dB(A); and (b) $\geq [5 \text{ dB(A)} + \dots \dots \dots \text{ dB(A)}]$ (background noise, N at item 5.2.2) = ..... dB(A)	[ ]	[ ]	[ ]	.....		9.4.1	1/2002, 2.19
5.2.4 For building other than domestic building, the minimum sound level of alarm sounders is measured at 3 m from the inside of the main entrance door with all doors shut off at all rooms/ premises and the result is, ..... dB(A) which is :  (a) $\geq 65$ dB(A); and (b) $\geq [5 \text{ dB(A)} + \dots \dots \dots \text{ dB(A)}]$ (background noise, N at item 5.2.2) = ..... dB(A)	[ ]	[ ]	[ ]	.....		9.4.1	1/2002, 2.19
5.2.5 The primary sounders should meet the required sound level when the machine noise ceases and the secondary sounders are out of service.	[ ]	[ ]	[ ]	.....		9.4.5(a)	
5.2.6 Where secondary sounders are installed, the primary sounders in those parts of the premises without noisy machines are distinctly audible at all times when operated.	[ ]	[ ]	[ ]	.....		9.4.5(b)	
5.2.7 Failure of the power supply to the secondary sounders is either :  (a) resulted in silencing of the noisy machines; or (b) in the giving of an audible and visible fault warning at the control and indicating equipment.	[ ]	[ ]	[ ]	.....		9.4.5(c)	
5.2.8 Sounding sequence of alarm sounder operation complies with requirements stipulated in F.S.D. Circular Letter No. 4/96, Part VIII. Item 4.	[ ]	[ ]	[ ]	.....		9.5	1/2002, 2.20
5.3 <u>Manual Call Points</u>							
5.3.1 The zoning of manual call points is correct.	[ ]	[ ]	[ ]	.....	Code		
5.3.2 Upon actuation of any manual call point in the building, the fixed fire pump comes into operation regardless of the zoning of the manual call point.	[ ]	[ ]	[ ]	.....	Code 5.14(b)		

		Yes	No	N/A	Remark	Ref.		
						LPC	BS	CL
5.3.3	Upon actuation of any manual call point in the building, the correct audio/ visual warning device for the fire alarm and detection system is initiated.	[ ]	[ ]	[ ]	.....	Code		
5.3.4	The delay between operation of a call point and the giving of the general alarm is $\leq$ 3 seconds.	[ ]	[ ]	[ ]	.....		10.1	
5.4	<u>Visual Fire Alarm Signals</u>							
5.4.1	The power supply of the VFA system is from :							
	(a) DC supply source with back-up supply by battery; or	[ ]	[ ]	[ ]	.....			
	(b) AC supply source with secondary supply from emergency generator; or	[ ]	[ ]	[ ]	.....			
	(c) AC supply source with secondary AC supply from the main electricity supply obtained from before the consumer side main power supply switch.	[ ]	[ ]	[ ]	.....			4/2001, Para. 4(ii)
5.4.2	All VFA flashing light is visible to normal eyesight in the required protected areas when the fire alarm system is actuated.	[ ]	[ ]	[ ]	.....			4/2001, Para. 4(iv)(b)
5.4.3	VFA signal is clearly distinguishable from any other non-fire services visual signals used in the premises.	[ ]	[ ]	[ ]	.....		9.7	
5.5	<u>Time Related Systems and Transmission Delay Units</u>							
5.5.1	Repeated switch operations to delay the automatic changeover to more sensitive state should not extend > 6 minutes after the last operation of the switch.	[ ]	[ ]	[ ]	.....		14.6	1/2002, 2.34
5.5.2	The alarm is automatically transmitted to FSCC after a fixed delay period $\leq$ 1 minute, unless a manual override operation has been carried out.	[ ]	[ ]	[ ]	.....		14.7	1/2002, 2.38
5.5.3	Automatic transmission of alarm to FSCC/Chubb Centre or remote manned center is delayed for an initial period $\leq$ 1 minute.	[ ]	[ ]	[ ]	.....			4/2001, Pt. II
5.5.4	Transmission of alarm is further delayed for a period $\leq$ 5 minutes after the manual operation is performed at the control equipment.	[ ]	[ ]	[ ]	.....			4/2001, Pt. II
5.5.5	During any delay period, a manual operation at the control panel or the operation of a manual call point causes the immediate sounding of the fire alarm and transmission of the alarm.	[ ]	[ ]	[ ]	.....			4/2001, Pt. II
5.5.6	The sounding of the fire alarm and transmission of the alarm is not delayed or prevented by the operation of a manual call point or the actuation of a sprinkler flow switch at any time.	[ ]	[ ]	[ ]	.....			4/2001, Pt. II
5.5.7	The manual override switch is only capable of de-activating the system from the time related system but cannot re-activate the system again.	[ ]	[ ]	[ ]	.....		14.6	

	Yes	No	N/A	Remark	Ref.		
					LPC	BS	CL
5.5.8 The system is not capable of permitting the action of the manual override switch to be temporarily or permanently cancelled by any automatic function.	[ ]	[ ]	[ ]	.....		14.6	
5.6 <u>Control and Indicating Equipment</u>							
5.6.1 Audio, visual alarms for the fire detection and alarm system, signals for system/ detector/ manual call point/ sounder fault and signals to all the ancillary equipment are given correctly at the control and indicating equipment.	[ ]	[ ]	[ ]	.....		26.5	
5.6.2 DTL to the FSCC/Chubb Centre is functioning properly. (please state DTL no.: .....)	[ ]	[ ]	[ ]	.....			
5.6.3 The following panel functions and switches are working properly :							
(a) alarm silence and reset switches.	[ ]	[ ]	[ ]	.....			
(b) normal supply and standby battery supply.	[ ]	[ ]	[ ]	.....			
(c) Power on/failure indicator.	[ ]	[ ]	[ ]	.....			
(d) DTL failure indicator.	[ ]	[ ]	[ ]	.....			
(e) zone alarm/fault indicator.	[ ]	[ ]	[ ]	.....			
5.6.4 Two simultaneous faults should not remove fire alarm protection from an aggregate area greater than 10,000 m <sup>2</sup> calculated on those portions of the premises installed with fire detectors.	[ ]	[ ]	[ ]	.....		6.6.2	1/2002, 2.8
5.6.5 Removal of a detector is causing a 'fault' signal to be generated at the control equipment.	[ ]	[ ]	[ ]	.....		6.6.2	
5.6.6 A facility/provision is provided so that individual detector can be tested without either sounding an alarm or requiring the complete system to be disabled to prevent such an alarm.	[ ]	[ ]	[ ]	.....		6.6.2	1/2002, 2.9
5.6.7 The operation of a silencing device :							
(a) requires a manual operation;	[ ]	[ ]	[ ]	.....			
(b) causes an audible signal to be given in the control and indicating equipment with a distinctive sound different from any alarm and control sounder;	[ ]	[ ]	[ ]	.....			
(c) should not cancel any visual signal of the alarm at the control equipment;	[ ]	[ ]	[ ]	.....			
(d) should not prevent the proper receipts of alarm from any zones(s) not already providing an alarm;	[ ]	[ ]	[ ]	.....			
(e) should not prevent the correct operation of any control for starting or restarting the alarm sounders;	[ ]	[ ]	[ ]	.....			
(f) should not prevent the transmission of an alarm to a remote manned centre.	[ ]	[ ]	[ ]	.....			9.6.2 & 9.11
5.6.8 A fault warning signal is generated at the control and indicating equipment when any sounder is disconnected.	[ ]	[ ]	[ ]	.....		6.6.3	
5.6.9 A fault warning is given in the event of failure on microprocessors for program controlled system.	[ ]	[ ]	[ ]	.....		6.9(d)	



	Yes	No	N/A	Remark	Ref.		
					LPC	BS	CL
5.6.10 The operation of microprocessors for program controlled system is automatically reset after the system has been restarted.	[ ]	[ ]	[ ]	.....		6.9(d)	
5.6.11 Following reinitialization, repair of any fault, or restoration of any power supply failure, all program controlled systems should be capable of :  (a) sounding a general alarm within 30 seconds; and (b) within a further period of 10 minutes of attaining normal operating conditions without further manual intervention. (Remark: The silencing of any fault warning is not regarded as manual intervention)	[ ]	[ ]	[ ]	.....		6.9(f)	
5.6.12 The audible indications of the control and indicating equipment are easily heard in its vicinity.	[ ]	[ ]	[ ]	.....		15.3.4	
5.7 <u>Power Supplies</u>							
5.7.1 Both the normal supply and the standby supply is capable of continually supplying the largest load under normal, fire and fault conditions.	[ ]	[ ]	[ ]	.....		16.1	
5.7.2 A green lamp when lit indicates normal condition of power supply.	[ ]	[ ]	[ ]	.....		16.1	
5.7.3 For systems supervised at intervals of $\leq 12$ hours, or that having a link over which a warning of failure of the normal supply can be given to a remote manned centre, the battery supply is capable of maintaining the system in operation for at least 24 hours, after which sufficient capacity should remain to provide an evacuation alarm in all zones for at least 30 minutes.	[ ]	[ ]	[ ]	.....		16.5.1.2	
5.7.4 For systems not supervised, the battery supply is capable of automatically maintaining the system in normal operation for a period of not less than 24 hours after the detection of a fault in the normal supply and the initiation of remedial action.	[ ]	[ ]	[ ]	.....		16.5.1.3	
5.7.5 For unoccupied building with systems not supervised for periods $> 24$ hours, facilities are provided to give protection for a period of at least 24 hours after reoccupation, with sufficient capacity at the end of that time to sound an evacuation alarm in all zones for at least 30 minutes.	[ ]	[ ]	[ ]	.....		16.5.1.3	
5.7.6 For systems backed up by standby generators, the battery supply is capable of maintaining operation for a period of not less than 6 hours, after which sufficient capacity should remain to provide an evacuation alarm in all zones for at least 30 minutes.	[ ]	[ ]	[ ]	.....		16.5.1.4	

	Yes	No	N/A	Remark	Ref.		
					LPC	BS	CL
5.8	<u>Cables, Wiring and Other Interconnections</u>						
5.8.1	[ ]	[ ]	[ ]	.....		26.3	
					EECoP, 21B(6)		
5.8.2						26.3	
5.8.3	[ ]	[ ]	[ ]	.....		26.4	1/2002, 2.58

## VI Documentation

6.1	The following equipment list and catalogues are provided.						
	[ ]	[ ]	[ ]	.....			
	[ ]	[ ]	[ ]	.....			
	[ ]	[ ]	[ ]	.....			
	[ ]	[ ]	[ ]	.....			
	[ ]	[ ]	[ ]	.....			
	[ ]	[ ]	[ ]	.....			
6.2	F.S.D. approval/acceptance letters for the following equipment are provided.						
	[ ]	[ ]	[ ]	.....			
	[ ]	[ ]	[ ]	.....			
	[ ]	[ ]	[ ]	.....			
	[ ]	[ ]	[ ]	.....			
	[ ]	[ ]	[ ]	.....			
	[ ]	[ ]	[ ]	.....			
6.3	Test certificates on fire properties or F.S.D.'s prior acceptance letters for all the fire resistant cables used are provided.						1/2002, 3.16
6.4	Noise measurement (including background noise) records for alarm sounders are provided.						
6.5	Calculation showing the required battery capacity is provided.						
6.6	Letter certifying the completion of the DTL to the FSCC/Chubb Centre is provided.						
6.7	Confirmation or certification on the compatibility is given by the manufacturers of the fire alarm system for all individual components of a fire alarm system such as fire detectors, alarm devices, manual call points, power supplies, interfacing equipment, remote indication and control panels.					6.7	1/2002, 2.5
6.8	F.S.D. approval letter on Time Related System/Transmission Delay Unit is provided.						4/2001

		Yes	No	N/A	Remark	Ref.		
						LPC	BS	CL
6.9	A method of test recommended by the supplier to predict the failure of the battery during the intervals between routine tests is provided.	[ ]	[ ]	[ ]	.....		16.3.2.1	
6.10	As-fitted fire service installation drawings including the followings are provided :  (a) schematic power supply and distribution diagrams and layout plans showing the types, size and routing of all power supply cables, fire resistant cables and wiring for the fire alarm and detection system; (b) wiring diagrams and layout plans of all junction boxes and distribution boards; (c) floor layout plans showing the location of each fire detection zone, detectors and detector types, manual call points, VFA signal lamps, alarm sounders, alarm annunciation panel and repeater panels.	[ ]	[ ]	[ ]	.....		26.1	

**VII Measuring and Testing Instrument/ Equipment Calibration ( Optional for record only )**

7.1 Calibration certificates showing that the following (please specify) testing and measuring instruments or equipment have been calibrated in the past 12 months are provided.

	Type	Model No.	Serial No.	Yes	No	N/A	Remark
(a)	.....	.....	.....	[ ]	[ ]	[ ]	.....
(b)	.....	.....	.....	[ ]	[ ]	[ ]	.....
(c)	.....	.....	.....	[ ]	[ ]	[ ]	.....
(d)	.....	.....	.....	[ ]	[ ]	[ ]	.....
(e)	.....	.....	.....	[ ]	[ ]	[ ]	.....
(f)	.....	.....	.....	[ ]	[ ]	[ ]	.....
(g)	.....	.....	.....	[ ]	[ ]	[ ]	.....

Test witnessed by:

Signature : .....

Name of Responsible Engineer : .....

Name of FSI Contractor : .....

Company Chop : .....

Registration No. : RCI / ..... Date: .....

Abbreviations :

The following abbreviations shall be used in this checklist.

AC	- Alternating Current
Ahr	- Ampere-hour
BS	- BS 5839 : Part 1 : 1988 – Fire Detection and Alarm Systems for Buildings, Part 1. Code of Practice for System Design, Installation and Servicing
Cat	- Category
cd	- Candela
CL	- F.S.D. Circular Letter No.
dB(A)	- Decibel (A-weighted)
DC	- Direct Current
DTL	- Direct Telephone Line
EE Code	- Code of Practice for the Electricity (Wiring) Regulations issued by Electrical and Mechanical Services Department
FSCC	- Fire Services Communication Centre
Code	- Codes of Practice for Minimum Fire Service Installations and Equipment and Inspection, Testing and Maintenance of Installations and Equipment issued by Hong Kong Fire Services Department
FSI	- Fire Service Installation
ft	- Foot(Feet)
Hz	- Hertz
F.S.D.	- Hong Kong Fire Services Department
IEE	- The Institution of Electrical Engineers
in	- Inch(es)
KVA	- Kilo-Volt-Ampere
LPC	- Loss Prevention Council Rules for Automatic Fire Detection and Alarm Installations for the Protection of Property (Schedule for the use of BS 5839:Part 1:1988)
m	- Metre(s)
MICS	- Mineral-Insulated Copper-Sheathed
MΩ	- Megaohm(s)
N/A	- Not Applicable
NFPA 72 or NFPA	- NFPA 72 : National Fire Alarm Code, 1999 Edition
RAM	- Random Access Memory
Ref or ref	- Reference(s)

VFA	- Visual Fire Alarm
<	- Less than
≤	- Less than/equal to
>	- More than
≥	- More than/equal to



**Checklist for Fire Hydrant and Hose Reel Installations**

**I. REFERENCE**

Project: ..... F.S.D. Ref.: .....  
 Type of Building: \*Domestic/Industrial/Godown/Others  
 Address: .....  
 F.S.I. Drawing Ref. ....  
 The date of initial building plan submission to Building Authority .....  
 \*Delete whichever not applicable.

	Yes	No	N/A	Remarks
<b>II. F.S.I. DRAWINGS AGAINST BUILDING PLANS</b>				
F.S.D. File Ref. ....				
2.1 Check nos. and locations of:				
2.1.1 Fire service inlets	[ ]	[ ]	[ ]	.....
2.1.2 Fire hydrants and hose reels	[ ]	[ ]	[ ]	.....
2.1.3 Fixed fire pumps	[ ]	[ ]	[ ]	.....
2.1.4 Intermediate booster pumps	[ ]	[ ]	[ ]	.....
2.1.5 Water tank and capacity	[ ]	[ ]	[ ]	.....
<b>III. PLUMBING LINE DIAGRAM</b>				
3.1 CHECK:				
3.1.1 Pippings are suitably connected to the fire pumps, fire hydrants, hose reels and fire service inlets.	[ ]	[ ]	[ ]	.....
3.1.2 Size of the rising mains are correct.	[ ]	[ ]	[ ]	.....
3.1.3 Size of the inter-connection header pipe(s) for fire service inlets is correct.	[ ]	[ ]	[ ]	.....
3.1.4 By-pass pippings for intermediate booster pumps.	[ ]	[ ]	[ ]	.....
3.1.5 F.S. appliance to be provided by F.S.D. to test the system. (to be confirmed by F.S.D.)	[ ]	[ ]	[ ]	.....
<b>IV. ON SITE INSPECTION</b>				
4.1 FIRE HYDRANT				
4.1.1 Outlets are of: Male round thread [ ] or Female instantaneous [ ]				
4.1.2 Adaptable to F.S.D. equipment.	[ ]	[ ]	[ ]	.....
4.1.3 Individually controlled by wheel operated screw valve designed to open by counter-clockwise rotation.	[ ]	[ ]	[ ]	.....
4.1.4 The direction of opening engraved in both English and Chinese on the wheel of the valve.	[ ]	[ ]	[ ]	.....
4.1.5 Not less than 800 mm nor more than 1200 mm above finished floor level.	[ ]	[ ]	[ ]	.....

	Yes	No	N/A	Remarks
4.1.6 Prominently sited [ ] or Recessed [ ]				
4.1.7 All round clearance to permit free use.	[ ]	[ ]	[ ]	.....
4.1.8 Not obstructing any door opening, or any exit route.	[ ]	[ ]	[ ]	.....
4.1.9 Not to be concealed by the leaves of an adjacent door when that door is opened.	[ ]	[ ]	[ ]	.....
4.1.10 Water supply is fed:				
By Gravity [ ]	.....			
From fixed fire pump [ ]	.....			
4.2 HOSE REEL				
4.2.1 The drum is not less than 150 mm in diameter.	[ ]	[ ]	[ ]	.....
4.2.2 Internal bore of tubing is not less than 19 mm diameter.	[ ]	[ ]	[ ]	.....
4.2.3 Length of hose reel is not exceeding 30 metres in length.	[ ]	[ ]	[ ]	.....
4.2.4 Every part of the building can be reached by a nozzle.	[ ]	[ ]	[ ]	.....
4.2.5 Capable of projecting a 6-metre jet.	[ ]	[ ]	[ ]	.....
4.2.6 Orifice of nozzle is 4.5 mm.	[ ]	[ ]	[ ]	.....
4.2.7 Nozzle is fitted with simple two-way on/off valve and the valve is not spring loaded.	[ ]	[ ]	[ ]	.....
4.2.8 Control valves are of gate type or of simple two-way ball type.	[ ]	[ ]	[ ]	.....
4.2.9 Gate valves are closed by clockwise rotation.	[ ]	[ ]	[ ]	.....
4.2.10 Rising mains and associated pipework are not less than 40 mm nominal bore.	[ ]	[ ]	[ ]	.....
4.2.11 Pipes feeding individual hose reel are not less than 25 mm nominal bore.	[ ]	[ ]	[ ]	.....
4.2.12 Control valves are adjacent to the nozzles.	[ ]	[ ]	[ ]	.....
4.2.13 Nozzle and control valves are not more than 1 350 mm from the finished floor level.	[ ]	[ ]	[ ]	.....
4.2.14 Suitable guide ring is provided to permit easy withdrawal of the hose reel tubing.	[ ]	[ ]	[ ]	.....
4.2.15 An operation instruction is affixed prominently adjacent to each hose reel.	[ ]	[ ]	[ ]	.....
4.2.16 The notice is clearly marked with the standard wordings in English and Chinese characters of at least 5 mm high in red letters on white background or vice versa.	[ ]	[ ]	[ ]	.....
4.2.17 Manual fire alarm call points are sited at a prominent position near the hose reels.	[ ]	[ ]	[ ]	.....



	Yes	No	N/A	Remarks
4.2.18 The manual fire alarm call points are not more than 1 200 mm above the finished floor level.	[ ]	[ ]	[ ]	.....
4.2.19 Upon actuation of any manual fire alarm call point in the building, the fixed fire pump shall come into operation regardless of the zoning of the fire alarm call point.	[ ]	[ ]	[ ]	.....
4.2.20 Door fitted to the hose reel cabinet.	[ ]	[ ]	[ ]	.....
4.2.20.1 Such doors cause no undue obstruction and no interference with any exit point when in open position.	[ ]	[ ]	[ ]	.....
4.2.20.2 Such doors cause no obstruction to the hose being run out in either directions.	[ ]	[ ]	[ ]	.....
4.2.20.3 Such doors bear the words "FIRE HOSE REEL" (消防喉轆) of at least 50 mm high.	[ ]	[ ]	[ ]	.....
4.2.20.4 No locking device is fitted to such doors.	[ ]	[ ]	[ ]	.....
4.2.20.5 Control valves and nozzles are sited in a discernible and accessible position of not more than 500 mm from the surface of the doors.	[ ]	[ ]	[ ]	.....
4.2.20.6 Operation instruction notice is affixed immediately below the words "FIRE HOSE REEL" on the outer surface of the door.	[ ]	[ ]	[ ]	.....
4.2.21 Hose reel of swinging cradle type.	[ ]	[ ]	[ ]	.....
4.2.21.1 When not in use the outer face of the reel is flush with the wall.	[ ]	[ ]	[ ]	.....
4.2.21.2 When required for use the cradle can be swung freely into the corridor or passage.	[ ]	[ ]	[ ]	.....
4.2.21.3 Striker provided inside the cabinet.	[ ]	[ ]	[ ]	.....
4.3 SUPPLY TANK				
4.3.1 Correct location and adequate capacity of water tank.	[ ]	[ ]	[ ]	.....
4.3.2 Refilling system is in efficient working order.	[ ]	[ ]	[ ]	.....
4.3.3 Fire Service Completion Advice issued.	[ ]	[ ]	[ ]	.....
4.4 FIXED FIRE PUMP				
4.4.1 Mode of power for driving the pump is:				
4.4.1.1 Electricity [ ] or .....				
4.4.2 Secondary power supply provided.	[ ]	[ ]	[ ]	.....
4.4.2.1 If no, diesel engine driven standby pump provided.	[ ]	[ ]	[ ]	.....

	Yes	No	N/A	Remarks
4.4.3 Where the motive power for any pump is not electricity, alternative means of starting the pump manually, in addition to manual fire alarm call points, are provided.	[ ]	[ ]	[ ]	.....
4.4.4 Starting instructions for diesel driven pump are prominently displayed in the pump room.	[ ]	[ ]	[ ]	.....
4.4.5 No automatic means of stopping the pump, other than by switching off at the pump control installed near the pump.	[ ]	[ ]	[ ]	.....
4.4.6 Manual fire alarm call points are wired for starting the pump.	[ ]	[ ]	[ ]	.....
4.4.7 The pumps are duplicated for duty and standby use.	[ ]	[ ]	[ ]	.....
4.4.8 The fire pump starters are wired through a selector switch for duty and standby pump selection.	[ ]	[ ]	[ ]	.....
4.4.9 The standby pump is energized within 15 seconds upon failure of the duty pump.	[ ]	[ ]	[ ]	.....
4.4.10 The motor/engine for the pump is rated to give 20% more power in addition to the hydraulic power required for the rated flow of the system.	[ ]	[ ]	[ ]	.....
4.4.11 Pumps are permanently primed.	[ ]	[ ]	[ ]	.....
4.4.12 Non-return valve(s) are provided to prevent water backflow into the water tank.	[ ]	[ ]	[ ]	.....
4.4.13 The status of each fire pump comprising “Power Supply On”, “Pump Running” and “Pump Failed” are monitored and displayed at the pump control panel in the pump room.	[ ]	[ ]	[ ]	.....
4.4.14 Such signals are repeated to: Fire control room [ ] or A status panel at the main entrance of the building [ ]	[ ]	[ ]	[ ]	.....
4.4.15 All fire pumps are housed in suitable enclosures and designed solely for accommodating pumps for fire service installations.	[ ]	[ ]	[ ]	.....
4.4.16 Pump enclosures are laid clear of any exit or normal communication routes through the premises.	[ ]	[ ]	[ ]	.....
4.4.17 Pump enclosures are clearly marked in English and Chinese characters.	[ ]	[ ]	[ ]	.....

	Yes	No	N/A	Remarks
4.4.18 Pumps enclosures are suitably locked to prevent unauthorized tampering of the pumps.	[ ]	[ ]	[ ]	.....
4.4.19 Flow rate and pressure tested in accordance with Figure No. .... in ANNEX I.	[ ]	[ ]	[ ]	.....
Floor level of tested hydrant .....				
Flow(l/min): .....				
Pressure (Kpa): .....				
4.4.20 Running and static pressure at any hydrant outlet not exceeding 850 Kpa.	[ ]	[ ]	[ ]	.....
4.5 INTERMEDIATE BOOSTER PUMP	[ ]	[ ]	[ ]	.....
4.5.1 Height between the topmost hydrant and the lowest F.S. inlet (m): .....				
4.5.2 No. of rising main: .....				
4.5.3 Required aggregate flow (l/min):.....				
4.5.4 The pumps are duplicated for duty and standby use.	[ ]	[ ]	[ ]	.....
4.5.5 The standby pump is energized within 15 seconds upon failure of the duty pump.	[ ]	[ ]	[ ]	.....
4.5.6 Intermediate booster pump arrangements:—				
4.5.6.1 One set consisting of duty and standby to feed all rising mains in the same system.	[ ]	[ ]	[ ]	.....
4.5.6.2 Two/three pumps of same capacity using sequential starting as duty pumps with one standby to achieve required flow and pressure within 30 seconds.	[ ]	[ ]	[ ]	.....
4.5.7 The motors driving the pumps are rated to give 20% more power in addition to the hydraulic power required for the rated flow.	[ ]	[ ]	[ ]	.....
4.5.8 All pumps are permanently primed and electrically driven.	[ ]	[ ]	[ ]	.....
4.5.9 Pump continues to run irrespective of power interruption when start button is activated.	[ ]	[ ]	[ ]	.....
4.5.10 Start/stop push buttons with pump running indication light and buzzer provided adjacent to the fire service inlet.	[ ]	[ ]	[ ]	.....
4.5.11 The status of each fire pump comprising “Power Supply On”, “Pump Running” and “Pump Failed” are monitored and displayed at the pump control panels in the pump enclosures.	[ ]	[ ]	[ ]	.....

	Yes	No	N/A	Remarks
4.5.12 Such signals are repeated to:	[ ]	[ ]	[ ]	.....
Fire control room [ ] or				
A status panel at the main entrance of the building [ ]				
4.5.13 All fire pumps are housed in suitable enclosures and designed solely for accommodating pumps for fire service installations.	[ ]	[ ]	[ ]	.....
4.5.14 Pump enclosures are suitably locked and laid clear of any exit or normal communication routes through the premises.	[ ]	[ ]	[ ]	.....
4.5.15 Pump enclosures are clearly marked in English and Chinese characters.	[ ]	[ ]	[ ]	.....
4.5.16 The intermediate booster pump utilized as the fixed fire pump.	[ ]	[ ]	[ ]	.....
4.5.17 Flow rate and pressure tested in accordance with Figure No. .... in ANNEX I. Floor level of tested hydrant: ..... Flow (l/min):..... Pressure (Kpa): .....	[ ]	[ ]	[ ]	.....
4.5.18 Running and static pressure at any hydrant outlet not exceeding 850 Kpa.	[ ]	[ ]	[ ]	.....
4.6 RISING MAIN				
4.6.1 The nominal bore of the rising main, in the case of industrial/godown buildings: Not less than 100 mm	[ ]	[ ]	[ ]	.....
Each rising main supplies two hydrant outlets per floor	[ ]	[ ]	[ ]	.....
4.6.2 The nominal bore of the rising main in other types of buildings: Not less than 80 mm	[ ]	[ ]	[ ]	.....
Each rising main supplies one hydrant outlet per floor	[ ]	[ ]	[ ]	.....
4.6.3 Provision of by-pass for intermediate booster pump.	[ ]	[ ]	[ ]	.....
4.6.4 All rising and down-coming mains are permanently primed.	[ ]	[ ]	[ ]	.....
4.6.5 Suitable air relief valves provided.	[ ]	[ ]	[ ]	.....
4.6.6 Each rising main is connected to a fire service inlet.	[ ]	[ ]	[ ]	.....
4.6.7 Header pipe(s) provided to connect the fire service inlets to the rising mains.	[ ]	[ ]	[ ]	.....

	Yes	No	N/A	Remarks
4.6.8 The diameter of the header pipe is:— For industrial/godown buildings not less than 150 mm nominal bore	[ ]	[ ]	[ ]	.....
For other buildings not less than 100 mm nominal bore	[ ]	[ ]	[ ]	.....
4.6.9 For godown/industrial buildings, a rising main provided for each staircase with a fire service inlet.	[ ]	[ ]	[ ]	.....
4.6.10 Number and location of fire service inlets are conforming to latest approved building plan.	[ ]	[ ]	[ ]	.....
<b>4.7 FIRE SERVICE INLET</b>				
4.7.1 Suitably enclosed and protected.	[ ]	[ ]	[ ]	.....
4.7.2 Readily accessible by Fire Services personnel.	[ ]	[ ]	[ ]	.....
4.7.3 Not less than 600 mm nor more than 1 000 mm above ground level.	[ ]	[ ]	[ ]	.....
4.7.4 A non-return valve provided for each inlet.	[ ]	[ ]	[ ]	.....
4.7.5 Each inlet is affixed with a metal identification plate raised or engraved with English and Chinese characters.	[ ]	[ ]	[ ]	.....
4.7.6 The frontage of each inlet enclosure is clearly and permanently indicated in English and Chinese characters “F.S. Inlet” (消防入水掣) of not less than 50 mm high.	[ ]	[ ]	[ ]	.....

V. GENERAL COMMENTS & REMARKS

---



---



---



---



---



---

Test witnessed by:—

..... (Signature)

..... (Signature)

..... (Name in block letters)

F.S.I. Contractor’s Representative

..... (Name in block letters)

F.S.D. Inspecting Officer

Date .....

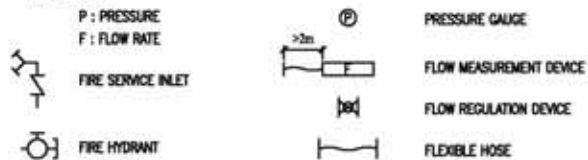
Date .....

## ANNEX I – FIGURES FOR EQUIPMENT ARRANGEMENT FOR TESTING OF FIRE PUMPS

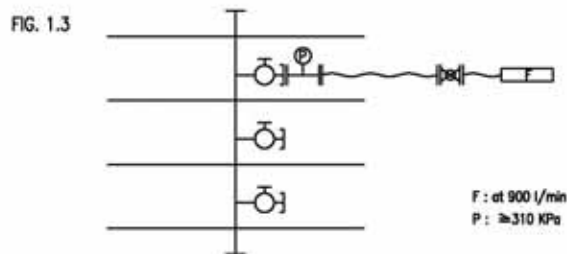
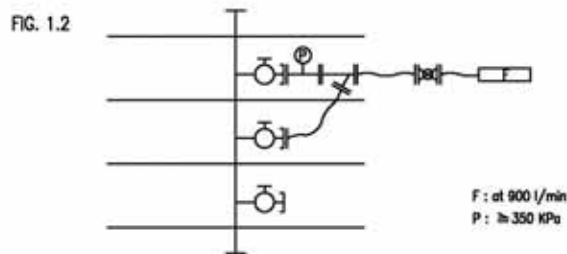
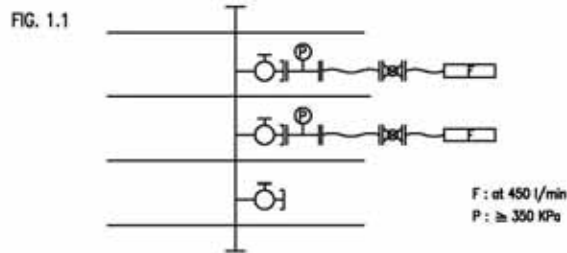
**GENERAL NOTES : -**

- (i) THE FLOW MEASURING DEVICE(S) MAY BE PLACED AT ROOF LEVEL FOR CONVENIENT DISCHARGE OF WATER.
- (ii) ALL HYDRANTS UNDER TEST SHALL BE FULLY OPENED.
- (iii) THE PRESSURE GAUGE SHALL BE SITUATED ADJACENT TO THE HYDRANT OUTLET UNDER TEST.

**LEGEND :**

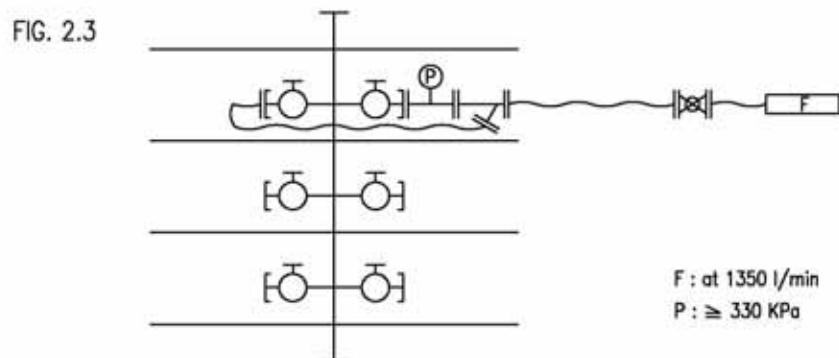
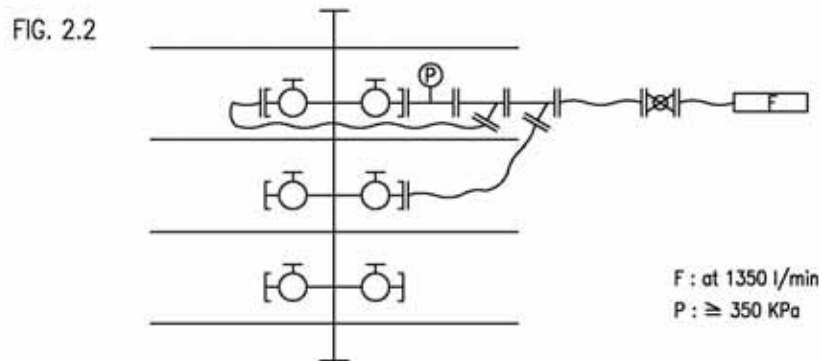
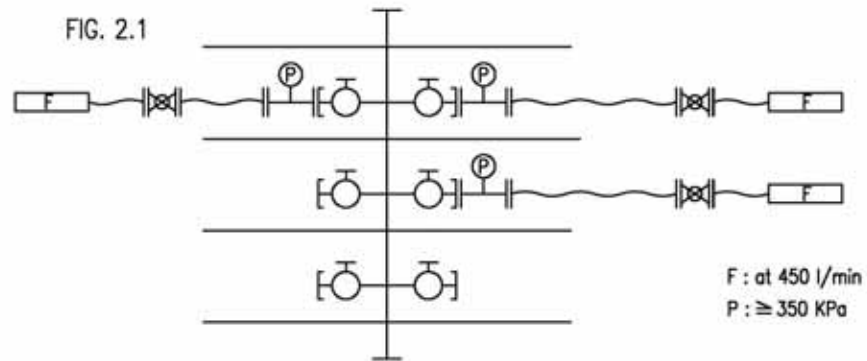


**1. FIXED FIRE PUMP** (BUILDINGS OTHER THAN INDUSTRIAL/ GODOWN – i.e. 900 l/min)  
(ANY OF THE FOLLOWING ARRANGEMENTS SHALL BE FOLLOWED)



## 2. FIXED FIRE PUMP (INDUSTRIAL / GODOWN BUILDINGS)

(ANY OF THE FOLLOWING ARRANGEMENTS SHALL BE FOLLOWED)



3. INTERMEDIATE BOOSTER PUMP (BUILDINGS OTHER THAN INDUSTRIAL/ GODOWN)

FIG. 3.1 DOMESTIC AND OTHER BUILDINGS WITH SINGLE RISING MAIN (900 l/min)  
TESTING EQUIPMENT TO BE ARRANGED IN ACCORDANCE WITH (1)

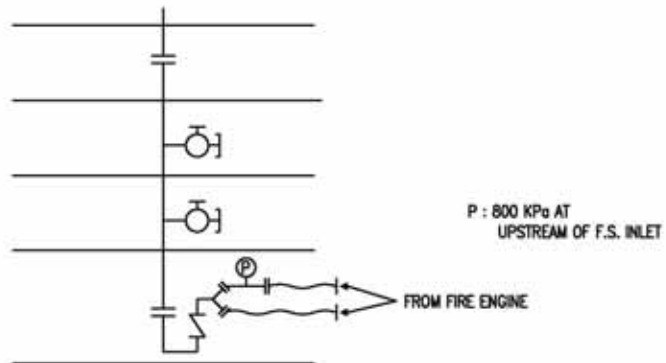
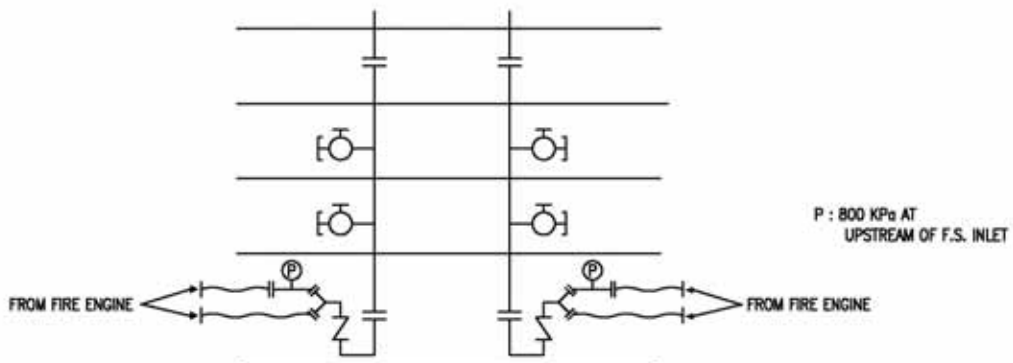


FIG. 3.2 OTHER BUILDINGS WITH TWO OR MORE RISING MAINS (1800 l/min)  
TWO SETS OF RISING MAIN SHALL BE TESTED SIMULTANEOUSLY IN ACCORDANCE WITH (1)





4. INTERMEDIATE BOOSTER PUMP (INDUSTRIAL / GODOWN BUILDINGS)

FIG. 4.1 SINGLE RISING MAIN (1350 l/min)  
 TESTING EQUIPMENT TO BE ARRANGED IN ACCORDANCE WITH (2)

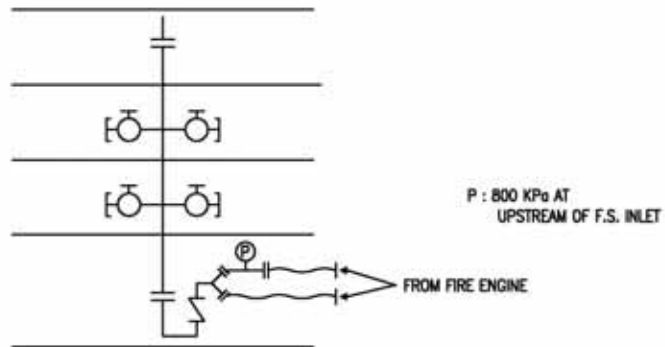
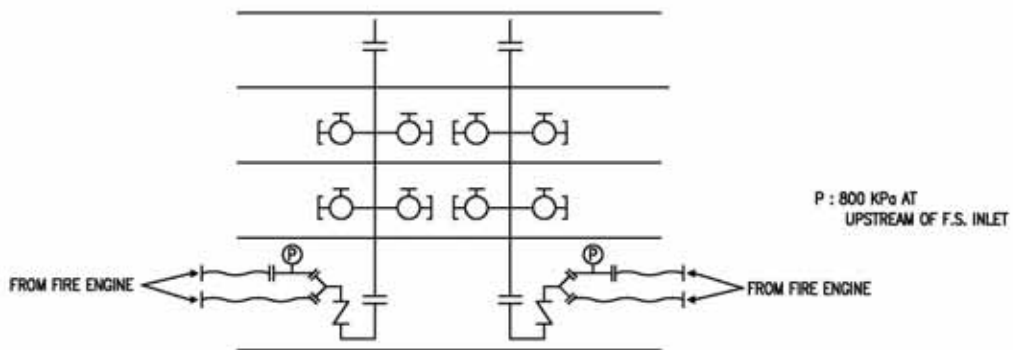


FIG. 4.2 TWO OR MORE RISING MAINS (2700 l/min)  
 TWO SETS OF RISING MAIN SHALL BE  
 TESTED SIMULTANEOUSLY IN ACCORDANCE WITH (2)



### Minimum Fire Resisting Cable Requirements for Fire Service Installations

Item	Type of Fire Service Installations	Minimum Cable Requirements
1.	Audio/visual advisory systems	Power supply cables to conform with: (a) BS 6387 Cat. AWX or SWX; or (b) BS 6207 or BS EN 60702; or (c) Other international standards acceptable to the Director of Fire Services.
2.	Automatic fixed installations (other than sprinkler systems) using water	
3.	Deluge systems	
4.	Drencher systems	
5.	Fire alarm systems	
6.	Fire hydrant/hose reel systems	
7.	Fixed foam systems	
8.	Ring main systems with fixed pumps	
9.	Water spray systems	
10.	Emergency generators	Power supply cables (from emergency generator to main switchboard) to conform with: (a) BS 6387 Cat. CWZ; or (b) BS 6207 or BS EN 60702; or (c) Other international standards acceptable to the Director of Fire Services.
11.	Fireman's lifts	Power supply cables (from the main switchboard to the main switch for lift power circuit and car lighting etc., in the lift machine room) to conform with: (a) BS 6387 Cat. CWZ; or (b) BS 6207 or BS EN 60702; or (c) Other international standards acceptable to the Director of Fire Services.
12.	Pressurization of staircases	Power supply cables to conform with: (a) BS 6387 Cat. CWZ; or (b) BS 6207 or BS EN 60702; or (c) Other international standards acceptable to the Director of Fire Services.

Item	Type of Fire Service Installations	Minimum Cable Requirements
13.	Smoke extraction systems	<p>Power supply cables to conform with:</p> <p>(a) BS 6387 Cat. CWZ; or</p> <p>(b) BS 6207 or BS EN 60702; or</p> <p>(c) Other international standards acceptable to the Director of Fire Services.</p> <hr/> <p>Control cables to conform with:</p> <p>(a) BS 6387 Cat. AWX or SWX; or</p> <p>(b) BS 6207 or BS EN 60702; or</p> <p>(c) Other international standards acceptable to the Director of Fire Services.</p>

Remarks:

Cables under any of the following conditions may be exempted from the above minimum requirements: -

- (a) Cables installed and terminated in switch/plant room;
- (b) Cables inside concealed metallic or PVC conduits which are embedded by plaster/concrete to a depth of at least 12 mm;
- (c) Cables inside underground cable ducts or reinforced concrete cable trenches;
- (d) Cables embedded in the soil to a depth of at least 300 mm;
- (e) Cables within fire resisting cable ducts and are not mixed with other services (e.g. switchgear, etc); the fire resistance of cable ducts to be not less than that of the building compartment.

For official use:-  
 fax to FSI Division  
 fax to Fire Station

To: **FSCC**  
 消防通訊中心  
**Fire Services Department**  
 消防處

Date  
 日期

Fax No.: 2311 0066  
 傳真號碼

FSD File No. : \_\_\_\_\_  
 消防處檔案編號 (If known 如果知道)

**Notification to FSD on the occasion building FSI is shut down for works**

**Part I 第一部 樓宇消防裝置因工程而暫停操作**

**Building Name :** \_\_\_\_\_  
 樓宇名稱

**Building Address :** \_\_\_\_\_  
 樓宇地址

( Hong Kong / 香港 / New Territories 新界 )

**Incorporated Owners (I.O.):** YES / NO \_\_\_\_\_  
 業主立案法團 有 / 沒有

**I.O. Tel. No. :** \_\_\_\_\_  
 業主立案法團電話

**Reason for shut down of FSI**  
 關閉消防裝置的原因

Fire Hydrant / Hose Reel System  
 消防栓/喉轆系統

Street Fire Hydrant (Private Use)  
 街上消防栓(私用)

Drencher System  
 滅火系統

Manual Fire Alarm System  
 火警警報系統

Automatic Sprinkler System  
 花灑系統

Water Spray System  
 噴水系統

Fire Detection System (AFA)  
 火警偵測系統

**Brief description of the works:** \_\_\_\_\_  
 工程簡述

**Date commenced :** \_\_\_\_\_ **Estimated Completion Date :** \_\_\_\_\_  
 開始日期 預計完工日期

**Name of FSI / Works Contractor :** \_\_\_\_\_  
 消防 / 工程承辦商名稱

**Registration No. (FSI Contractor only) :** \_\_\_\_\_  
 承辦商編號(祇適用於消防承辦商)

**Contact Tel. No. :** \_\_\_\_\_ (Office 寫字樓)  
 聯絡電話

\_\_\_\_\_ (Mobile phone 手提電話/pager 傳呼機)

(\* To be completed upon completion of works then fax to FSCC of FSD again)

**Part II 第二部 在正式完工時請填寫此欄,然後再傳真到消防處通訊中心**

**\* ACTUAL COMPLETION DATE :**  
 正式完工日期

\_\_\_\_\_

Signature & Company chop  
 簽名及公司印

**Deleted.**  
**See FSD Circular Letter No. 3/2008**

## **Notes on Fire Extinguishers and Fire Blankets (Suitability and Maintenance)**

### **I. CARBON DIOXIDE TYPE EXTINGUISHERS**

Use:

On electrical fires, flammable liquids, delicate equipment, important documents, or fires in confined spaces.

Note:

Vapours will asphyxiate. Withdraw to open air after use.

Maintenance:

This type of extinguisher should be examined every 12 months and the following maintenance carried out :-

- (i) The total weight should be checked against that recorded when the extinguisher was put into service. If a loss of weight of more than 10 per cent is detected, the extinguisher should be discharged and returned to the suppliers for examination, test and recharging.
- (ii) The body of the extinguisher should be examined and, if there are signs of damage or extensive external corrosion, the extinguisher should be discharged and returned to suppliers for examination, test and recharging.
- (iii) The discharge horn and hose should be checked to see that it moves freely and should be replaced if damaged is detected.
- (iv) Hydraulic pressure test should be carried out every five years on the cylinder in accordance with the manufacturers' instructions. Extreme care should be exercised when preparing and conducting the test.
- (v) Unserviceable extinguisher should be discharged prior to disposal.

## II. WATER TYPE EXTINGUISHERS

Use:

On fires involving woods, textiles and paper.

Never:

On fires involving electrical or flammable liquids or metals.

Maintenance:

This type of extinguisher should be examined every 12 months and the following maintenance carried out :-

(GAS-CARTRIDGE TYPE)

- (i) The vent holes in the cap should be checked for cleanliness and free from obstruction.
- (ii) Remove the headcap to check the liquid level. The liquid should be topped up as necessary.
- (iii) The nozzle, strainer and internal discharge tube should be checked for cleanliness and free from obstruction. Defective items shall be replaced.
- (iv) The gas cartridge should be weighed and the weight checked against that marked on the cartridge. The cartridge should be renewed if a loss of more than 10 per cent of the contents is recorded.
- (v) No corrosion, damage or rust should be visible either externally or internally. Special attention should be paid to the concealed parts of the container.
- (vi) Before the headcap is replaced and while the gas cartridge is unscrewed therefrom, the plunger or other operating device should be checked to see that it operates freely. The washer should be examined and replaced if necessary. The cap should then be tightly screwed to the container to form a gas-tight joint.
- (vii) Test 50 per cent of extinguishers by discharge every year in rotation so that all extinguishers are tested by discharge every two years. Should any extinguisher fail in the test, all cartridges in the remainder should be replaced. Extreme care should be exercised during preparing and conducting discharge test. Prior to discharging, the container should be ensured in good condition such as no corrosion, damage or rust should be visible externally or internally on any part of the container; otherwise hydraulic pressure test should then be carried out to confirm the container structurally sound. Should there be doubt about the condition of the container, hydraulic pressure test shall be conducted instead.
- (viii) Corroded parts should be cleaned up and refinished after the hydraulic pressure test.
- (ix) Hydraulic pressure test should be carried out every five years on the container in accordance with the manufacturers' instructions. Extreme care should be exercised when preparing and conducting the test.

- (x) Before carrying out hydraulic pressure test, remove the headcap, disconnect the gas cartridge and clear the contents. Never empty the contents by discharging the extinguisher.
- (xi) Also, before disposal of unserviceable fire extinguisher, remove the headcap, disconnect the gas cartridge and clear the contents. Never empty the contents by discharging the extinguisher.

(STORED-PRESSURE TYPE)

- (i) The pressure indicating device should be checked to see the correct pressure is being maintained within the extinguisher body.
- (ii) The nozzle or branch-pipe (if fitted) and the pressure releasing valve in the cap should be checked for cleanliness and free from obstruction. Defective items shall be replaced.
- (iii) No corrosion, damage or rust should be visible externally on any part of the container. Special attention should be paid to the concealed parts of the container.
- (iv) Test 50 per cent of extinguishers by discharge every year in rotation so that all extinguishers are tested by discharge every two years. Should any extinguisher fail in the test, all extinguishers should be overhauled and recharged.
- (v) Prior to recharging, the container should be ensured in good condition such as no corrosion, damage or rust was noted; otherwise hydraulic pressure test should be conducted to confirm the container structurally sound.
- (vi) Hydraulic pressure test should be carried out every five years on the container in accordance with the manufacturers' instructions. Extreme care should be exercised when preparing and conducting the test.
- (vii) Unserviceable extinguisher should be discharged prior to disposal.

### III. DRY POWDER TYPE EXTINGUISHERS

Use:

On most fires, flammable liquids, metal fires or electrical fires.

Maintenance:

This type of extinguisher should be examined every 12 months and the following maintenance carried out :-

(GAS-CARTRIDGE TYPE)

- (i) The vent holes in the cap should be checked for cleanliness and free from obstruction.
- (ii) The extinguisher should be weighed to check that it contains the correct weight of powder. The weight when fully charged should be recorded at the time of charging. If the weight is found to have dropped by more than 10 per cent, the dry powder should be replaced by a fresh charge. Care should be taken not to mix different types of dry powder because they could react with one another.
- (iii) The powder should be agitated to ensure it is free from caking.
- (iv) Remove the headcap to check the condition of powder. The chemical should be renewed if it is not in good condition.
- (v) The nozzle and discharge control (if fitted) should be checked for cleanliness and free from obstruction. Defective items shall be replaced.
- (vi) The gas cartridge should be weighed and the weight checked against that marked on the cartridge. The cartridge should be renewed if a loss of more than 10 per cent of the contents is recorded.
- (vii) No corrosion, damage or rust should be visible either externally or internally. Special attention should be paid to the concealed parts of the container.
- (viii) Before the headcap is replaced and while the gas cartridge is unscrewed therefrom, the plunger or other operating device should be checked to see that it operates freely. The washer should be examined and replaced if necessary. The cap should then be tightly screwed to the container to form a gas-tight joint.
- (ix) Test 50 per cent of extinguishers by discharge every year in rotation so that all extinguishers are tested by discharge every two years. Should any extinguisher fail in the test, all cartridges in the remainder should be replaced. Extreme care should be exercised during preparing and conducting discharge test. Prior to discharging, the container should be ensured in good condition such as no corrosion, damage or rust should be visible externally or internally on any part of the container; otherwise hydraulic pressure test should then be carried out to confirm the container structurally sound. Should there be doubt about the condition of the container, hydraulic pressure test shall be conducted instead.
- (x) Corroded parts should be cleaned up and refinished after the hydraulic pressure test.



- (xi) Hydraulic pressure test should be carried out every five years on the container in accordance with the manufacturers' instructions. Extreme care should be exercised when preparing and conducting the test.
- (xii) Before carrying out hydraulic pressure test, remove the headcap, disconnect the gas cartridge and the dry powder should be collected for subsequent re-cycling/disposal. Never empty the contents by discharging the extinguisher.
- (xiii) Also, before disposal of unserviceable fire extinguisher, remove the headcap, disconnect the gas cartridge and the dry powder should be collected for subsequent re-cycling/disposal. Never empty the contents by discharging the extinguisher.

(STORED-PRESSURE TYPE)

- (i) The extinguisher should be weighed to check it contains the correct weight of powder. If the weight is found to have dropped by more than 10 per cent, the dry powder should be replaced by a fresh charge. Care should be taken not to mix different types of dry powder because they could react with one another.
- (ii) The pressure indicating device should be checked to see the correct pressure is being maintained within the extinguisher body.
- (iii) The nozzle or branch-pipe (if fitted) and the pressure releasing valve in the cap should be checked for cleanliness and free from obstruction. Defective items shall be replaced.
- (iv) No corrosion, damage or rust should be visible externally on any part of the container. Special attention should be paid to the concealed parts of the container.
- (v) Test 50 per cent of extinguishers by discharge every year in rotation so that all extinguishers are tested by discharge every two years. The dry powder should be discharged to an enclosure for collection and subsequent re-cycling/disposal. Should any extinguisher fail in the test, all extinguishers should be overhauled and recharged.
- (vi) Prior to recharging, the container should be ensured in good condition such as no corrosion, damage or rust was noted; otherwise hydraulic pressure test should be conducted to confirm the container structurally sound.
- (vii) Hydraulic pressure test should be carried out every five years on the container in accordance with the manufacturers' instructions. Extreme care should be exercised when preparing and conducting the test.
- (viii) Unserviceable extinguisher should be discharged prior to disposal. The dry powder should be discharged to an enclosure for collection and subsequent re-cycling/disposal.

NOTE:

- (a) Dry powder extinguishers must be thoroughly dry internally before they are recharged.
- (b) Advice should be obtained from the Fire Services Department as to the possible reaction between the powder or expellant and the material to protected.

#### **IV. CLEAN AGENT FIRE EXTINGUISHERS**

Use:

On electrical fires, flammable liquids, delicate equipment, important documents.

Maintenance:

This type of extinguisher should be examined every 12 months and the following maintenance carried out :-

(PORTABLE TYPE)

- (i) The pressure indicating device should be checked to see the correct pressure is being maintained within the extinguisher body.
- (ii) The extinguisher should be weighed to check against the total weight record when it is put into service. If a loss of weight of more than 10 per cent is detected, the extinguisher should be discharged to a closed recycling system and returned to the supplier for examination, test and recharging.
- (iii) The nozzle or branch-pipe (if fitted) and the pressure releasing valve in the cap should be checked for cleanliness and free from obstruction. Defective items shall be replaced.
- (iv) No corrosion, damage or rust should be visible externally on any part of the container. Special attention should be paid to the concealed parts of the container.
- (v) If there are signs of damage or external corrosion, the extinguisher should be discharged to a closed recycling system and returned to the suppliers for examination, test and recharging.
- (vi) Hydraulic pressure test should be carried out every five years on the container in accordance with the manufacturers' instructions. Extreme care should be exercised when preparing and conducting the test.
- (vii) Unserviceable extinguisher should be discharged to a closed recycling system prior to disposal.

(FIXED SPRAYER UNIT)

- (i) The pressure indicating device (if fitted) should be checked to see the correct pressure is being maintained within the extinguisher body.
- (ii) The extinguisher should be weighed to check against the total weight record when it is put into service. If a loss of weight of more than 10 per cent is detected, the extinguisher should be discharged to a closed recycling system and returned to the supplier for examination, test and recharging.
- (iii) The deflector and the sensing element should be checked and cleaned.
- (iv) No corrosion, damage or rust should be visible externally on any part of the container. Special attention should be paid to the concealed parts of the container.

- (v) If there are signs of damage or external corrosion, the extinguisher should be discharged to a closed recycling system and returned to the suppliers for examination, test and recharging.
- (vi) Hydraulic pressure test should be carried out every five years on the container in accordance with the manufacturers' instructions. Extreme care should be exercised when preparing and conducting the test.
- (vii) Unserviceable extinguisher should be discharged to a closed recycling system prior to disposal.

## V. FOAM (CHEMICAL) TYPE EXTINGUISHERS

Use:

On fires involving flammable liquids.

Never:

On electrical fires.

Maintenance:

This type of extinguisher should be examined every 12 months and the following maintenance carried out :-

- (i) The nozzle and the vent holes in the cap should be checked for cleanliness and free from obstruction.
- (ii) Remove the headcap to check the liquid levels in the body and in the inner container. Any slight loss may be made up with water; otherwise a new charge should be used.
- (iii) No corrosion, damage or rust should be visible either externally or internally. Special attention should be paid to the concealed parts of the container.
- (iv) Before the headcap is replaced, the plunger, the headcap lever for the sealing device or other operating device should be checked to see that it operates freely. The washer should be replaced if necessary and the cap should then be tightly screwed to the container to form a gas-tight joint.
- (v) Test 50 per cent of extinguishers by discharge every year in rotation so that all extinguishers are tested by discharge every two years. Should any extinguisher fail in the test, all should be tested by discharge. Extreme care should be exercised during preparing and conducting discharge test. Prior to discharging, the container should be ensured in good condition such as no corrosion, damage or rust should be visible externally or internally on any part of the container; otherwise hydraulic pressure test should then be carried out to confirm the container structurally sound. Should there be doubt in the condition of the container, hydraulic pressure test shall be conducted instead.
- (vi) Corroded parts should be cleaned up and refinished after the hydraulic pressure test.
- (vii) Hydraulic pressure test should be carried out every five years on the outer container in accordance with the manufacturers' instructions; the inner container should be examined to ensure it is in good condition and not leaking. Extreme care should be exercised when preparing and conducting the test.
- (viii) Before carrying out hydraulic pressure test, remove the headcap and clear the contents. Never empty the contents by discharging the extinguisher.
- (ix) Also, before disposal of unserviceable extinguisher, remove the headcap and clear the contents. Never empty the contents by discharging the extinguisher.

NOTE:

Inverted type chemical foam extinguishers have ceased production and not permitted for sale. However, products already sold may continued to be used.

## VI. FOAM (MECHANICAL) TYPE EXTINGUISHERS

Use:

On fires involving flammable liquids.

Never:

On electrical fires.

Maintenance:

This type of extinguisher should be examined every 12 months and the following maintenance carried out :-

(GAS-CARTRIDGE TYPE)

- (i) The vent holes in the cap should be checked for cleanliness and free from obstruction.
- (ii) Remove the headcap to check the liquid level. If the liquid level was found to have dropped by more than 10 per cent, the foam concentrate or foam solution as appropriate should be replaced by a fresh charge.
- (iii) The branchpipe, strainer and internal discharge tube should be checked for cleanliness and free from obstruction. Defective items shall be replaced.
- (iv) The gas cartridge should be weighed and the weight checked against that marked on the cartridge. The cartridge should be renewed if a loss of more than 10 per cent of the contents is recorded.
- (v) No corrosion, damage or rust should be visible either externally or internally. Special attention should be paid to the concealed parts of the container.
- (vi) Before the headcap is replaced and while the gas cartridge is unscrewed therefrom, the plunger or other operating device should be checked to see that it operates freely. The washer should be examined and replaced if necessary. The cap should then be tightly screwed to the container to form a gas-tight joint.
- (vii) Test 50 per cent of extinguishers by discharge every year in rotation so that all extinguishers are tested by discharge every two years. Should any extinguisher fail in the test, all cartridges in the remainder should be replaced. Extreme care should be exercised during preparing and conducting discharge test. Prior to discharging, the container should be ensured in good condition such as no corrosion, damage or rust should be visible externally or internally on any part of the container; otherwise hydraulic pressure test should then be carried out to confirm the container structurally sound. Should there be doubt about the condition of the container, hydraulic pressure test shall be conducted instead.
- (viii) Corroded parts should be cleaned up and refinished after the hydraulic pressure test.
- (ix) Hydraulic pressure test should be carried out every five years on the container in accordance with the manufacturers' instructions. Extreme care should be exercised when preparing and conducting the test.

- (x) Before carrying out hydraulic pressure test, remove the headcap, disconnect the gas cartridge and clear the contents. Never empty the contents by discharging the extinguisher.
- (xi) Also, before disposal of unserviceable fire extinguisher, remove the headcap, disconnect the gas cartridge and clear the contents. Never empty the contents by discharging the extinguisher.

(STORED-PRESSURE TYPE)

- (i) The pressure indicating device should be checked to see the correct pressure is being maintained within the extinguisher body.
- (ii) The nozzle or branch-pipe (if fitted) and the pressure releasing valve in the cap should be checked for cleanliness and free from obstruction. Defective items shall be replaced.
- (iii) No corrosion, damage or rust should be visible externally on any part of the container. Special attention should be paid to the concealed parts of the container.
- (iv) Test 50 per cent of extinguishers by discharge every year in rotation so that all extinguishers are tested by discharge every two years. Should any extinguisher failed in the test, all extinguishers should be overhauled and recharged.
- (v) Prior to recharging, the container should be ensured in good condition such as no corrosion, damage or rust was noted; otherwise hydraulic pressure test should be conducted to confirm the container structurally sound.
- (vi) Hydraulic pressure test should be carried out every five years on the container in accordance with the manufacturers' instructions. Extreme care should be exercised when preparing and conducting the test.
- (vii) Unserviceable extinguisher should be discharged prior to disposal.

## VII. FIRE BLANKETS

Use:

On fires involving flammable liquids, such as small fires in the kitchen and laboratory.

Method For Use:

Drape the blanket over the flames to seal off air. Switch off heat and leave in position until cool.

Maintenance:

This blanket should be examined every 12 months or after use in fire. The following maintenance should be carried out :-

- (i) Check for any deterioration.
- (ii) Cleaning in accordance with the manufacturer's instructions as when necessary.
- (iii) If manufacturer's instructions are not available, fire blanket can be washed (soak overnight in detergent, gently hand rinse in warm water). Do not machine wash or dry clean.

REMARKS:

- (i) Fire blankets are classified into two categories, namely:-  
"Heavy Duty" fire blankets (BS 7944:1999); and  
"Light Duty" fire blankets (BS EN 1869:1997)
- (ii) Only "Heavy Duty" and "reusable" fire blankets will be approved as a Fire Services Standard Requirement.
- (iii) "Light Duty" fire blankets may be accepted for use on a private basis and should be disposed of after use.

**VIII. SAMPLE MAINTENANCE LABEL (保養標籤樣本)**

