

Fire System Specification

1. General

- **Location:** Queen Alia International Airport – 26L GP – SOUTH RUNWAY
- **Room Volume:** 32 cubic meters
- **System Type:** Clean Agent Fire Suppression System (FM-200)
- **Design Standard:** In accordance with NFPA 2001 – Standard on Clean Agent Fire Extinguishing Systems

2. System Requirements

2.1 Fire Suppression Agent

- **Agent:** FM-200
- **Concentration:** 7% (by volume)
- **System Type:** Total Flooding System

2.2 Components

- **FM-200 Cylinders:** Sized according to hydraulic calculations to achieve required agent concentration (7%) in 25.36 m³ room volume.
- **Cylinder Pressure**
- **Release Mechanism**
- **Pressure Gauge**
- **Discharge Nozzles**
- **Mounting Brackets**
- **Gas Releasing Control Panel (Kite Mark, Advanced U.K)**
- **Smoke Detectors**
- **Sounder with Flasher and 6" Alarm Bell**

3. Agent Quantity:

- **Design concentration:** 7% by volume
- **Room volume:** 32 m³
- **System Type:** Total Flooding System

4. Hydraulic Calculation:

- Detailed hydraulic calculation shall be provided including:
 - Agent flow rate
 - Nozzle orifice sizing
 - Piping layout and sizes
 - Pressure loss analysis
- Calculation software or manual method must comply with NFPA 2001.

5. Documentation and Drawings

- **Design Drawings:** To include layout of electrical room, cylinder location, piping layout, nozzle placement, and control panel
- **Hydraulic Calculation Report:** Including room hazard analysis, agent quantity determination, flow calculations, and discharge times
- **Manufacturer Data Sheets:** For FM-200 cylinders, nozzles, control panel, and other accessories
- **Certifications:** All components to be UL or FM approved and comply with NFPA standards. Warranty : one year