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**Server Room Protection** 



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### INTRODUCTION

This brochure is intended to cover major exposures and control measures available to mitigate hazards of server room. A data processing center / server room is described as an area where computers are located, and these computers require considerations for special power, process cooling, environmental controls and access control. These days servers are used not only by IT and IT enabled companies, but also by many manufacturing and service companies like banks or companies who have computerized production or operation systems. A server room is usually permanently unmanned, except for some sporadic and short-term assignments. Most of the time these server rooms are unoccupied in the building behind the glass doors on shelves housing electronic equipments with numerous data cables or wires criss-crossing.

Minimum Requirements for Server Rooms.

#### CONSTRUCTION

- The data center must be located in a fire resistive, noncombustible, or tilt-up construction. {Walls RCC structure/ solid masonry with fire resistance of not less than two hours} and {Floor and Roof RCC slabs / floor and roof assemblies with fire resistance rating of not less than two hours}
- The materials in the data center and storage rooms must be constructed of and contain materials (e.g. curtains, carpeting, furniture, or fixtures) with a flame spread rating less than 25.

### **CUT-OFFS**

 All rooms containing hardware, software, data, and support operations, etc. must be segregated from surrounding occupancies by a minimum 1-½ hour fire resistance rated cut-off.

### LOCATION

- The Server room must be located at grade level (permanent flooring) or above.
   Basement locations should be avoided as they are considered to be with inadequate protection.
- Access to all areas of data processing and support operations must be restricted.

# **HOUSEKEEPING**

 There should not be unusual sources of ignition, flammable liquids, flammable gases, or accumulations of papers etc inside server room.

### **FIRE DETECTION**

- A smoke detection system in the Server room is required and must be connected to acceptable detection devices that includes:
  - In the room: smoke detection of the lonization, photoelectric or projected beam types
  - Below the (raised) floor: Smoke detection of the Ionization, photoelectric or projected beam types if being used as an air plenum, or where the floor is of combustible construction.

### **AUTOMATIC SUPPRESSION SYSTEMS**

- All centers must have fixed automatic fire suppression systems, which includes:
  - A sprinkler system design installed of NFPA standards. Wet or pre-action systems are acceptable with pre-action preferred. A dry pipe system is not acceptable.
  - A clean agent fire suppression system as listed in NFPA 2001, in the EDP room and below the floor in rooms not exceeding 25,000 square feet. The manufacturer and sales representative should be consulted in determining the most suitable agent.

### LIQUID DETECTION

- All centers must have a system of water detection and/or floor devices, supervised locally. Water Detection Devices: There are two detection systems available: spot and strip type.
- Proper Floor Design consists of sloped floors leading to drains. The floor should be partitioned off with gutters to guide water into the drains.

### **BATTERY PANEL**

- With a back-up battery power in place, be aware of hydrogen generation from banks of wet cell batteries. Provide hydrogen detection and room ventilation where hydrogen is generated.
- Use dry cell batteries as they do not present the same exposures as wet cell batteries and so the need to isolate these UPS supplies is not essential.

## **BUSINESS CONTINUITY**

The cost of damaged equipment might pale in comparison to the loss of business due to server downtime following an accident. The server needs to be up and running 24X7 by organizations. By the partial or total loss of this equipment, an entire operation of vital nature could be temporarily paralyzed.

- Data Back Up: Data back up is a must. Back-up copies must be segregated in a
  protected environment (fire resistive safe, vault, room or remote site). There
  must be at least one current back-up copy.
- Two sets of Back Up: The more prudent businessman will make two sets of back-up and alternately update the sets. This procedure reduces the risk of damaging a back-up in an emergency and having no alternate source of information
- Disaster Recovery Plan (DRP): There shall be plan of action documented with training to IT team in case of major fire in server room. It shall include name and contact details of incident controllers, ready reckoner for immediate procurement of software and hardware, if possible alternate facility.

HDFC ERGO can assist you in handling the fire risk of your server rooms. Our Risk Consulting Service can offer you a Server Room Risk Review™ where our engineers can visit your server rooms. They will review your security systems and processes and offer suggestions on managing the risk. Based on this review, you could get further advice from our specialists for insuring these risks under our suite of policies designed keeping our clients' requirements in mind.