Safety and Health Requirements for Laundry Operations

Background

Laundries whether as stand alone facilities or as a component of a larger establishment such as a hotel, pose special safety and waste disposal problems. This guideline outlines the Public Health and Safety Departmental protection and safety requirements for laundries.

Guidelines

1. Machinery Layout:

1.1. The laundry machine shall be installed in such a manner that there is a free moving space between machines.

1.2. The boiler shall be located outside the laundry, leaving a minimum of 3 metres space between laundry operational area and boiler room. Alternatively the boiler room can be separated by a block wall from other operational areas.

2. Cleanliness

2.1. The premises shall be clean and free from accumulation of dirt or refuse.

2.2. The floor of every workroom shall be cleaned at least once in every week by washing using disinfectant or by some other effective method.

2.3. Where a floor is liable to become wet in the course of any process an effective means of drainage shall be provided and maintained.

3. Collection and Disposal of Waste

3.1. Laundry waste must not be discharged to soakaway systems. Waste can be collected and discharged under a trade waste agreement to the sewage system or treated on-site and recycled.

3.2. Permission must be obtained from the Public Health and Safety Department for disposal of waste water.
3.3 Equipment and practices which minimize the generation of wastewater will save both raw water and disposal costs.

3.4. Empty chemical containers shall be punctured on the premises so that the drum is not suitable for reuse by outsiders.

4. Fumes/Vapours

4.1. Every laundry which uses chemicals for bleaching shall employ effective measures to prevent the inhalation and accumulation of vapours in any workroom.

4.2. Exhaust arrangements must be built into every machine or provided as an additional appliance to ensure fumes/vapours are taken out of the work area.

5. Ventilation

5.1. Effective and suitable provision shall be made in every workroom for securing and maintaining adequate ventilation by circulation of fresh air.

5.2. Effective steps shall be taken by means of a fan or otherwise to regulate the temperature in every ironing room and to carry away the steam in every washing room.

6. Flooring

6.1. All floors, steps, passages and gangways shall be of:
   a. Sound construction and properly maintained.
   b. Non-slip and be impervious to water
   c. Free from obstruction and substances likely to cause persons to slip.

7. Aisles/Passageways/Work area:

7.1. All aisles/ passageways shall be free from obstructions.

7.2. Clothes washed/unwashed shall be stored in trolley baskets. No loose clothes shall be kept on floor.

8. Drains

8.1. As most of the operations involve the presence of water, the proper collection and drainage of this water is a major safety consideration.
a. The floor/ground around and under all machines shall be so laid or finished as to provide non-slippery impervious surface.

b. The outlet from the machines shall be properly drained into gutter/drain line. The drain line shall be covered at the same floor level without any difference in surface profile.

9. **Machines**

All laundry machines shall be installed:

9.1. Leaving a gap of minimum of 1 metre from adjacent machines and from the permanent fixture/wall.

9.2. The aisle or gangway of 1 m. shall be maintained.

9.3. Proper electrical isolation switches for each machine shall be provided and easily accessible.

9.4. ELCB shall be provided in all electrical circuits.

9.5. All pulleys and belt drives shall be securely guarded and maintained.

9.6. The centrifuge/hydro extractor/drier commonly used in all laundry operations shall be provided with interlocking devices that will physically prevent the lids from being opened whilst the rotating drum or baskets are in motion under power and also prevent the starting of the drums or baskets under power while the lids are open.

9.7. The centrifuge machines shall not be operated at a speed in excess of the manufacturer’s rating.

9.8. All centrifuge machines shall be provided with effective braking arrangements for brining the cage/drum or basket to rest within a reasonable short period of time after the power to drive the motor is cut off. Interlocking devices that will physically prevent the lids from being opened whilst the rotating drum or baskets are in motion under power and also prevent the starting of the drums or baskets under power while the lids are open.

9.9. The drums or baskets shall be thoroughly examined by competent person once in every 12 months to check their balance and in case balance at high speed is not observed, effective steps shall be taken to restore their balance before recommissioning the machine.
9.10. Dry cleaning machines shall not be used with chemicals which pose a fire hazard. The safety precautions specified by the manufacturers and in the chemical, material safety data sheets, shall be followed strictly.

9.11. The vent from dry cleaning machines shall be exhausted from the laundry through a separate duct.

9.12. Calendering machines / rollers used for pressing long sheets:
   a. The nip at the in-running side of the rolls shall be provided with a guard extending across the entire length of the nip and arranged to prevent fingers of workers from being pulled in between the rolls and between the guard and the rolls and so constructed that the cloth can be fed into rolls safely.
   b. Additional stop bars / switches shall be provided for emergency stop.

9.13. Laundry Washer, Tumbler
Each drying tumbler or cloth tumbler and washing machines shall be equipped with an interlocking arrangement which will:
   a. prevent the power operation of the inside cylinder when the outer door or the case or shell is open.
   b. Prevent the outdoor on the case or shell being opened without shutting off the power and the cylinder coming to a stop.

   a. All electrical irons shall be provided with proper electrical arrangements consisting of 3 core cables connected to proper earthing and 3 pin plug.
   b. The hot iron when not in use on the ironing table shall be kept on a fire resistant top surface. The contact of hot iron with iron table cloth material should be avoided.

9.15. Where washing is done in single tub domestic type washing machines and rinsed in water tanks constructed in the premises.
   a. The open tanks shall be of good construction with impervious inner surface to permit thorough cleaning. The size shall not be more than 1 M³. The height of the tank from the finished outside floor level should not be less than 1 meter.
   b. Proper water inlets and drain outlets shall be provided.
10. **Boilers and Steam Lines**

10.1. Boilers used in a premises shall be:

   a. Properly designed on sound engineering practice.
   b. Good construction, sound material and adequate strength and free from defects.
   c. Properly maintained in safe condition.

10.2. Boilers shall be equipped with:

   a. Safety valve and set to operate at a pressure not exceeding the maximum permissible working pressure.
   b. Pressure gauge
   c. Stop valve or valves
   d. Drain valve for discharge
   e. Water level gauge

10.3. Boilers should be tested and certified by competent person once in 12 months.

10.4. Steam lines shall be insulated properly by lagging from the boiler to the machine.

10.5. The built in steam boilers provided in some steam pressing machines should be provided with safety valves, pressure and temperature gauges.

11. **Diesel Storage**

   Bulk diesel storage tank shall be located 6 metres from the boiler room. Service tank connected to the boiler burner can be located inside boiler room.

12. **Colour Coding of Lines**

   The proper colour coding of water, steam, diesel or gas lines used for boilers shall be followed.

13. **Storage of Chemicals**

   13.1. Chemicals used in laundry services shall be stored in a separate room identifying them as corrosive, flammable and incompatible chemicals. Precautions in handling chemicals as given in the material safety data sheet shall be followed.
13.2 Bleaches shall be separated from all other chemicals and from any rags, grease or other combustible materials.

13.3. The chemicals drum / containers shall be properly labeled.

14. Fire Extinguishers
14.1 CO₂ or Dry chemical fire extinguishers shall be placed in position.

15. First Aid
15.1. A first aid box or cupboard with prescribed medicines/equipment shall be maintained.
15.2. An eye-wash fountain shall be installed in the chemical area.

16. Personnel
16.1. All employees shall be trained in the safe working procedures for each machine and operation.
16.2. All employees shall be provided with:
   a. Coverall
   b. Safety shoes/ boot , apron, gloves, goggles depending upon the type of operation.

17 Small and existing source exemptions

17.1 The Public Health and Safety Department shall determine which of the requirements of this guideline shall apply to small and existing laundries having regard to their size and nature of work.

17.2 A small laundry will usually be a shop-front laundary located in a commercial zone. But this definition may be extended to other sources at the descretion of the Public Health and Safety Department.

FURTHER INFORMATION AND APPLICATIONS REFER TO PUBLIC HEALTH AND SAFETY DEPARTMENT
TEL: 2064244 FAX: 2270160.