



**Kingdom of Saudi Arabia**  
Ministry of Interior  
General Directorate of Civil Defense

# **Regulation of Safety and Protection Requirements in Printing Press**

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## Section 1

**1st: Definitions : The terminologies in this Regulation mean :**

- 1. Printing Press :** is licensed facility to conduct printing works by machines in order to prints texts and pictures on paper or fabric or other materials .
- 2. The Law :** Civil Defense Law issued by the Royal Decree No. 10 and dated 10/5/1406 H and all other relevant regulations.
- 3. Regulation of Inspection, forfeiture, investigation, and penalties :** The Regulation issued by HRH, the Minister of Interior, and the President of the Civil Defense Council to determine the procedures of inspection, forfeiture, and investigation of violations and misuses related to civil defense works and the penalties imposed on them.
- 4. Civil Defense Representative :** The authorized person or persons by the General Directorate of Civil Defense, or one of its centers to carry out inspection, forfeiture, and investigation of violations as per the rules and procedures specified in the relevant Regulation, to ensure the safety of the building, safety equipment, and tools, and to impose the penalty stipulated.
- 5. The Relevant Authority :** The Ministry of Interior, the General Directorate of Civil Defense, and other public authorities involved in the facility's license and activity.
- 6. Specifications :**
  - a) Saudi Standards, issued by the Saudi Standards, Metrology, and Quality Organization, SASO.
  - b) International Standards: in the absence of Saudi Standards, the United States of America Standards , or the Standards of the European Common Market Countries , are to be considered. If the equipment or material is manufactured in other countries( other than US or EU countries ). In that case ,  
the specifications must be based on the manufactured countries' relevant authorities. A document must be submitted to prove the availability of all safety rules in equipment or material used in all cases .

## Section 2

### 2<sup>nd</sup>

The regulations that relate to safety conditions and civil defense requirements without being subject to the rest of other conditions, and requirements that fall within the competence of other relevant authorities.

### 3<sup>rd</sup>

According to Article 20 of the Civil Defense Law, it is not permissible to authorize construction, expansion, restoration or modernization of a printing press before the applicant submits a technical study prepared by one of the offices or technical bodies concerned with safety, alarm and firefighting systems approved by the General Directorate of Civil Defense . As for the printing press existing at the time of issuance this regulation, will give (six months) for the implementation of this regulation and instructions . The competent authorities in the municipalities shall take into account that granting or renewing the license shall be in accordance with the conditions stipulated in the regulations, and the governor of the region may extend for another six months .

### 4<sup>th</sup>

The office that prepared the study responsible to the civil defense and other relevant bodies for accuracy, and for monitoring the implementation of the study . Also , the office commit to submit a final certificate confirming that the facility accordance the instructions and requirements of these regulations. It also be liable with the owner of the printing press and the executing contractor, for any mistakes , failure or negligence .

### 5<sup>th</sup>

The person in charge of the facility is directly responsible for making monthly checks and periodic tests (every three months) for the center and its equipment, and all safety, firefighting , monitoring and Alarm equipment for the center and Fix any malfunction or defect immediately. Also, any mistakes, failure or negligence subject to penalties stipulated by law.

## 6<sup>th</sup>

A safety officer must commit to separate or stop , isolate and evacuate workers from the source of any accident involving a high degree of danger threatening the safety of life and property , and inform civil defense center immediately, to consider the action to be taken. Any negligence ,mistakes, failure or subject to penalties stipulated by law.

## 7<sup>th</sup>

The person responsible for safety in the facility shall assign a register called (safety and firefighting record) according to the application form prepared by Civil Defense. All pages are stamped with the seal of the relevant Civil Defense Center. All the periodic tests and inspections, and maintenance works of the building and the building's electrical and mechanical installations, plus all safety means, control, and firefighting, are recorded in this register. The management of the printing press will keep this record , that the register is at the disposal of civil defense representative at all times to view and write notes in it .

## 8<sup>th</sup>

The person in charge of the printing press may inform civil defense center the date of conducting the periodic tests . In order to agree on a date for civil defense representative to attend and proven by representative in the register.

## 9<sup>th</sup>

All workers in printing press must be trained in safety and ambulance tasks in one of the specialized national institutes that are approved by the General Directorate of Civil Defense that the printing press afford the costs .

## 10<sup>th</sup>

The list of regulations mentioned in the civil defense law and regulations or instructions issued to organize these matters .



The violations of this regulation are detected and investigated in accordance with civil defense law and the regulations or instructions issued by the General Directorate of Civil Defense.

### **Section 3**

#### **12<sup>th</sup> Technical Requirements of Safety and Protection**

Location and Buildings :

1. The location must meet the licensing requirements issued by the Ministry of Media set out in the Law of Printed Materials and Publication and other requirements set by pertinent authorities. Pertinent authorities must verify that all the conditions and requirements have been met before they issue a license.
2. Buildings and structures must meet Saudi standard specifications and the requirements of the Ministry of Municipal and Rural Affairs and its branches. Walls, ceilings, floors and partitions must be made of non-flammable materials whereas doors must be fire-proof or made of metal.
3. The building must have a lightening protection system.
4. Only the licensed activity may be practiced at the location. Other activities are prohibited.
5. Ensure that a floor is protected against leaks or must be double sloped to prevent leaking liquid and inks from reaching it.
6. Passageways must be clear of anything that might block them or prevent the quick movements of persons using them. Doors must have big-size knobs that open easily, besides doors must be kept wide open during work hours.
7. Each printing press must have an emergency exit.
8. Exits of dangerous places within a printing press must easily open outwards towards the exit.
9. Building Management Systems (BMS) must be installed in large buildings to control all devices inside buildings and automatically identify any malfunction.



### **13<sup>th</sup> Safety Conditions of Printing Press's Divisions**

#### **1. Administrative Division:**

- a) The administrative division of a printing press must be separated from other divisions and have a fireproof door that gives 30 minutes maximum of fire resistance.
- b) The division must have a multi-purpose or Haloalkane extinguisher placed near the door from inside or outside.

#### **2. Printing and Production Division:**

- a) Printing machines must be placed next to one another on the same row or parallel rows in a way that does not obstruct entry and exist during an evacuation.
- b) Each printing press must have at least a Haloalkane extinguisher (1301) that is ready to be used.
- c) There must be good ventilation that removes stale air and replaces it with fresh air. A hood with automatic ventilation must be placed over ink containers to draw vapors out towards the highest point in a building.
- d) The space between an offset machine and another must not be less than two meters.

#### **3. Binding Division:**

- a) The amount of bookbinding work must not exceed the amount of a day's work.
- b) Glue used for bookbinding must be stored in a separate way after end of work hours.

#### **4. Photomechanical and Production Division:**

- a) The division must be separated from other divisions from other divisions and have a fireproof door that gives 30 minutes maximum of fire resistance.
- b) The division must have ventilation outside not inside a building.
- c) Employees must wear clothes and face masks indicated in the Labor Safety Section.

#### **5. Storages rooms:**

- a) A paper storage room must be separated from printing and production division and a fireproof door must separate them that gives 30 minutes maximum of fire resistance.



- b) The door must be locked automatically when the fire alarm goes off at a temperature less than 100 Celsius.
- c) Paper packets must be stacked on top of one another with a divider placed between each layer to prevent falling.
- d) A storage room must have an automatic sprinkler system.
- e) Storage and safety conditions and requirements must be implemented as per the Safety Regulation of Storages Facilities issued by the Civil Defense.

## **14<sup>th</sup> Protection against Dangers of Printing Machines and their Doctor Blades**

1. Printing machines' knives or doctor blades have always been a leading cause of accidents in a printing press. Therefore, they must have appropriate safety features and be properly guarded to prevent access of fingers to doctor blades or when using a binding machine and the like. Electronic physical barriers are preferred.
2. Ensure there is proper ventilation around printing machines to prevent fires, especially in areas where emission of lead or chemical vapors occur.
3. Floors and foot pedals surrounding printing and cutting machines must be anti-slippery to avoid risks of falling. Any barriers or protrusions erected around these machines must be painted in white and black so that they can be seen easily.
4. Printing press must have foldable platform trolleys or small forklifts to transport large amounts of paper boxes from storage to printing machines and on to the preparation workshop. The specifications of these machines and forklifts must be considered. Electric forklifts should be used in closed areas .



## **15<sup>th</sup> Conditions that must be met for storing chemical materials used in printing presses**

1. Chemical materials must be kept away from any machines and be placed in a separate area.
2. Chemical materials must be stored in their original containers or containers that are easy for employees to recognize.
3. Chemical materials must be kept at a temperature of 25 Celsius.
4. Humidity must be 10 % or less.
5. Chemical materials must be kept away from water and rains.
6. All oxidized materials must be stored with partitions in between and separated from one another.
7. Natural and mechanical ventilation must be provided to ensure that the clean air is flowing throughout the place and that vapors and gases do not accumulate.
8. Shelves must be installed where devices will be kept and stacked in parallel rows next to each other in a way that prevents them from falling and facilitates movement.
9. Printing materials and inks must be stored in perforated metal cabinets for proper ventilation and kept in a special room.

## **16<sup>th</sup> Electrical safety**

1. All electrical equipment and installations must be designed under the supervision of specialized technical authorities and as per the specifications of the Saudi Standards, Metrology and Quality Organization (SASO).
2. Electrical appliances and equipment of printing presses must provide protection against fire hazards arising from the flammability and explosiveness of fumes, gases and dust.
3. All electrical equipment and metal parts must be grounded as per relevant technical specifications.
4. A general circuit breaker and auxiliary circuit breakers must be installed to supply all electrical sub-panels and other services, for disconnection and protection in the event of malfunctions.





## **17<sup>th</sup> Ventilation and air conditioning systems**

1. Natural and mechanical ventilation and air extractors must be installed to ensure flow of clean air throughout the place and prevent accumulation of vapors, gases or dust.
2. The design, installation and maintenance of these systems must conform to the specifications of the Saudi Standards, Metrology and Quality Organization (SASO).

## **18<sup>th</sup> Fire escape methods and plan**

1. Sufficient means of escape must be provided inside each building to allow evacuation in cases of emergency within three minutes at most.
2. Sufficient number of exits must be provided according to the capacity of the building, with a minimum of two exits, one is the main door while the other is an emergency exit.
3. The distance from any point in the building to the nearest escape exit must not exceed 20 meters.
4. The emergency exits are designated to be used in the event of an emergency when the building is evacuated because occupants are exposed to danger. Emergency lights must be installed.
5. Exits of non-ground floors must lead to protected stairs then to final exits that lead to the outside of the building where there is security, safety and open air.
6. Each section of the building must be provided with an emergency door equipped with a cross bar that opens to the outside to allow for the rapid evacuation of employees and other people. Lighted arrows and Arabic and English signs must indicate the emergency door.

## **19<sup>th</sup> Preventive safety instructions**

1. The building must be well designed to remove dust from the printing presses.
2. Exhaust systems must be used to prevent harmful compounds from forming on printing machines and devices.



3. Workers in large warehouses and printing presses must be provided with effective respirators, hand gloves and special costumes.
4. If a dangerous permeable substance touches the skin or causes allergy, wash hands immediately with antiseptic soap and water.
5. The workers in the printing presses must take advanced safety training in addition to continuous training courses on safety – firefighting – and first aid.
6. Printing presses may not be within the range of petrol stations.
7. Smoking is strictly prohibited in all sections of a printing press.

## **20<sup>th</sup> Firefighting equipment, supplies and alarms**

1. A facility must enable its occupants to implement fire-fighting measures by using appropriate manual extinguishers (dry chemical carbon dioxide powder) that can properly respond to potential hazards.
2. The extinguishers must conform to the technical specifications of the Saudi Standards, Metrology and Quality Organization (SASO).
3. Fire extinguishers must be placed in clear, easily visible and accessible locations.
4. Each extinguisher must have a label showing instructions of use and the date of the last filling and maintenance.
5. A printing press must be equipped with fire alarm and early detection devices.
6. A printing press must have a constant pressure water extinguishing network to allow immediate intervention in the event of a fire.
7. The site must have a sufficient number of fire reels, provided that they cover all parts of a printing press.
8. The reels must have an ejector that operates in three conditions: (close, shower, straight line).
9. The owner of the printing press and the person in charge of safety must have the network inspected by specialized technicians (twice a year) to ensure that the reels are not leaking and that they are in good condition and ready for use.



10. The owner of the printing press must ensure that the inspection is carried out by a trained and specialized engineer and record this in the safety record.
11. Six-kilogram fire extinguishers must be placed near the machines and paper warehouses and must be commensurate with and able to deal with the existing danger.
12. The agency responsible for printing presses must submit a technical study that includes a complete plan for firefighting alarm and evacuation equipment in addition to other safety conditions.
13. The opinion of the pertinent department within the Civil Defense, which is in charge for the printing press, must be sought regarding whether the proposed safety equipment, fire and alarm systems are suitable based on the plans submitted to the said department.

## **21<sup>st</sup> Protection against the dangers of acids and inks**

1. In addition to providing good ventilation throughout the printing press, oils, grease, inks, or drying and cleaning materials must not be left around or on the machines, and the containers for these materials must be tightly closed.
2. To protect workers against poisoning by lead fumes and infection with skin diseases and various allergic diseases caused by inks, dyes, and other chemicals, appropriate protective clothing must be used, especially the following:
  - a) Protective masks from ash, dust, gases and chemical fumes
  - b) Protective gloves from extreme heat and spills.
  - c) Safety shoes to protect feet during loading and unloading.
  - d) Safety glasses to protect eyes from glowing lighting or dangerous liquids.
3. The printing press must have workers perform periodic medical examinations.
4. The printing press must be provided with a first aid kit that has first-aid medicines and treatment materials.



## 22<sup>nd</sup> Cleaning

1. The printing press must be kept clean and free of oils and grease. If anything happens, sawdust or dry sand must be used to get rid of oils and grease.
2. The dirty pieces of cloth having grease or oil must be placed in a metal box that closes automatically and kept there disposed of completely.
3. Printing presses must be provided with suction devices that are fixed on the printing machines from which paper ends “edges” come out. The suction pipes are connected to the production room.









