

Appendix A: The questions of the checklist of this study

Question	Q code
Water transmission and sewage collection network	
Is the nozzle pressure connected to the fire extinguishing system in accordance with the standards?	Q_1
Is the water supply volume right?	Q_2
Have water storage tank for firefighting network and its isolation been properly done?	Q_3
Is there weekly plan for water evacuation of hydrant valves in cold seasons to prevent water freezing inside the valves?	Q_4
Is the pressure of valves adequate appropriate for fire extinguishing operations?	Q_5
Is there any plan to specify fire hydrants?	Q_6
Are there enough fire hydrants installed around warehouses and high-risk areas (with the probability of large fires)?	Q_7
Has any standing hydrant predicted and installed in at the commercial, residential, and industrial entrance?	Q_8
Is the distance between the hydrant valves right?	Q_9
Have hydrant valves been selected according to high-risk areas?	Q_10
Are the neighboring buildings equipped with compression systems for the water required for firefighting?	Q_11
Is the nozzle pressure of fire extinguishing system connected to the occupants' branch standard?	Q_12
Is the firefighting water tank prepared separately?	Q_13
Are the ramifications for obtaining the water of firefighting correct?	Q_14
Has the fire water network been implemented in the building?	Q_15
Electricity transmission and distribution network	
Is any chimney and plumbing, including water, gas, heating, etc., passing through the allocated space for the branching?	Q_16
Is there any entanglement between the trees and the power grid (high voltage cables on poles)?	Q_17
Are the specifications of the electrical posts (including regional electricity distribution companies or the length of the beam, the beam normal strength, manufacturer and manufacturing date) clearly engraved on them?	Q_18
Do the safety power switches used in warehouses have dust-proof metal enclosures and are they equipped with fuses proportional to the power consumption?	Q_19
Is the wiring of warehouses encapsulated inside steel pipes or are electricity elbows or boxes and other facilities made of metal?	Q_20
Are the security power switches in warehouses installed in the proper location?	Q_21
Has any unethical and illegal power been extracted from poles?	Q_22
Have different types of channels or repairable risers been used for the output circuits (branch to the consumer)?	Q_23
Have corrugated plastic pipes been used in the wiring of surface electrical boxes? (they should not be used).	Q_24
Are the wires twisted together for creating electrical connections and has electrical tape been used to insulate the junction? (it is forbidden)	Q_25

Question	Q code
Has the surface wiring been carried out using multiple earthing wires (such as rubber seals) and closed nails or conventional nails? (it is strictly prohibited)	Q_26
Has the path of output circuits (consumer division) been selected in such a way that the heating of other facilities, such as hot water pipes, boilers or chimneys, etc., cannot have an adverse effect on the circuit?	Q_27
Fire protection systems	
Is the fire alarm system checked each month?	Q_28
Is there any notebook in which the dates the fire alarm system is tested can be written down?	Q_29
Have the fire detection and fire alarm system announcing the municipal system (Fire Department) been predicted and launched in the warehouse?	Q_30
Are all indoor areas covered with fire alarm systems? (in accordance with acceptable standards of Fire Department)	Q_31
Have detection signs and fire alarm systems been installed in the right and visible place?	Q_32
Are fire extinguishers apropos of each fire is used?	Q_33
Are the used extinguisher quickly replaced?	Q_34
Are there hand-held extinguishers in the stairwells of multi-storey buildings?	Q_35
Is there easy access to fire extinguishers?	Q_36
Are the valves and water hoses of fireboxes smoothly operative?	Q_37
Do capsules have an expiry date and charge?	Q_38
Are the locations of fire extinguishers marked with specific figures?	Q_39
Are the buildings with four and more floors and dangerous buildings equipped with an approved auto sprinkler network?	Q_40
Is there any predetermined plan to fight a fire?	Q_41
Do people know how to use fire extinguishers and deal with extinguishing operations?	Q_42
Is firefighting plan installed in the workplace?	Q_43
Is Panel of Application Guide set next to the device?	Q_44
Passageways and access points	
Are there any other ways to exit from the buildings in case of the non-usability of the main pathway?	Q_45
Has the maximum discharge capacity been predicted for horizontal sliding doors and revolving doors? (50 people)	Q_46
Is the text notification on banning the use of elevators during a fire attached in the cabin and in front of the elevator?	Q_47
Is the height of each stair 10 cm at least and 18 cm at most?	Q_48
Is the direction sign of the floors attached in all the floors and appropriate positions?	Q_49
Are the exits designed, built and maintained in places where there are free exit routes from all the points of the building and at all times?	Q_50
Have the exit routes in risky warehouses been predicted in appropriate locations with different directions?	Q_51
Is there any impasse in dangerous sections?	Q_52
Have two separate and distant exit paths been predicted in each section of high buildings?	Q_53

Question	Q code
Can the doors located at exit paths be easily and immediately opened from inside the building?	Q_54
Is the corridor of stairs in such a way that can prevent the spread of fire, smoke and toxic gases from one floor to another floor?	Q_55
Do the exits enjoy sufficient light?	Q_56
Is the building equipped with escape stairs?	Q_57
Are the exit signs clearly visible?	Q_58
Are the passageways and exit routes unobstructed and free of any blocking devices?	Q_59
Is it possible to access and establish fire trucks in the area of building?	Q_60
Do the fire lifters around the building have the capability of performing operations?	Q_61
Buildings	
Is the warehouse site free of any accumulation of combustible and unnecessary materials?	Q_62
Is the warehouse protected and cared by guards 24 h a day?	Q_63
Are the warehouses equipped with fire alarm systems?	Q_64
Is the warehouse equipped with natural ventilation (or anti-explosion artificial ventilation)?	Q_65
Is the main switchboard of the warehouse next to the main door and outside the warehouse?	Q_66
Is the water system for firefighting in warehouses equipped with pumping system along with automatic relay with emergency power generator?	Q_67
Are there some shelves in the warehouse for equipment, raw materials and so on?	Q_68
Is inside the warehouse blocked and striated with some marks such as color line drawing so that goods are not picked in front of the warehouse's door?	Q_69
Are the goods inside the warehouses arranged on pallets?	Q_70
Has the location of warehouse selected in such a way that the possibility of spread of fire from the outside does not exist (or is less possible)?	Q_71
Are there any firefighting centers in the area?	Q_72
Has firefighting plan been installed in commercial environments?	Q_73
Is any sign on which firefighting information has been written installed in the warehouse?	Q_74
Have organized and educated groups been predicted among occupants for firefighting?	Q_75

