

**Fire safety requirements for contractors carrying out design,
construction and installation works as well as the operation of
temporary facilities at the main venue of the Russia–Africa Summit and
Economic and Humanitarian Forum in 2023
(ExpoForum Convention and Exhibition Centre)**

St. Petersburg
2023

Fire safety of detailed engineering is approved by *RC Avangard LLC*

1. RC Avangard reviews the detailed engineering submitted to the Technical Directorate, according to the Regulations on permitting contractors to carry out installation, maintenance, and dismantling of temporary facilities at the Event venue, and issues comments that must be remediated.

2. Fire safety must be elaborated in the design documentation for temporary facilities (in the 'Fire safety measures' section and other sections of the design documentation).

3. The certificate authorizing the construction of a temporary facility is issued by the Technical Directorate only after receiving approval from RC Avangard.

4. Fire safety is ensured in the design documentation by applying the fire safety requirements contained in the regulations of the Russian Federation and regulations on fire safety as well as these requirements.

5. Fire safety during construction works shall be ensured by implementing the 'Fire Safety Measures' section of the design documentation and complying with all fire safety requirements contained in the regulations of the Russian Federation (including the requirements of SP 514.1311500.2022 'Temporary buildings and structures for mass events. Fire Safety Requirements' (hereinafter, SP 514.1311500.2022)) as well as these requirements.

6. After the temporary facility is completed, it can only be accepted for operation by the Technical Directorate after a certificate of acceptance for operation for this temporary facility has been submitted by RC Avangard.

7. A certificate from RC Avangard confirming the acceptance of a temporary facility for operation may only be issued after the temporary facility has been inspected by a RC Avangard representative and documentation confirming the performance of fire safety works (fireproofing of combustible construction and decorative materials, installation of fire protection systems, etc.), as well as documents confirming the fire safety training of the employees of the organization that will operate the temporary facility after it is accepted for operation and until its dismantling.

8. The Participant (Exhibitor)/Developer shall provide the Technical Directorate in advance, but no later than 15 business days before the start of installation works, with information about all flammable and explosive materials (indicating quantity for each type) used in the temporary facility and exhibits, so that appropriate approved safety measures can be taken. It is not permitted to bring in these materials and exhibits without the approval of RC Avangard.

9. Welding and other fires hazardous works are allowed only with a permit issued by the head of the contractor or the person responsible for fire safety, approved by RC Avangard, in strict compliance with applicable fire safety requirements.

10. All other issues arising during installation and dismantling and during the Event shall be resolved on site by RC Avangard representatives.

11. The Developer is responsible for fire safety and compliance with fire safety requirements at the temporary facility during installation and dismantling.

12. During the period of the exhibition, the Participant (Exhibitor), together with the Developer constructing the temporary facility, shall be responsible for compliance with fire safety requirements within the limits of their authority related to the operation of the temporary facility.

13. If violations of fire safety requirements are detected during the construction of a temporary facility, as well as during its operation and dismantling, penalties may be imposed on the organizations and persons who allowed such violations in accordance with Russian legislation, including the suspension of the installation and operation of the temporary facility, and, if necessary, the dismantling of the temporary facility.

14. All employees carrying out construction works and further operation of the temporary facility must be instructed in the fire safety requirements against their signature in the instruction log, issued in

accordance with the requirements of the Order No. 806 of the Ministry of the Russian Federation for Civil Defence, Emergencies and Elimination of Consequences of Natural Disasters of 18 November 2021. This fire safety briefing shall be carried out in accordance with the procedure for training fire safety measures by persons engaged in labour or service activities in the organization and trained on fire safety measures according to additional professional programmes in the field of fire safety, or who have secondary vocational and (or) higher education in the Fire Safety specialty or in the Technosphere Safety training programme in the field of fire safety (hereinafter, fire-technical education), or who have passed the procedure of independent qualification assessment, during the period of validity of the certificate of qualification:

- by the head of the organization;
- by a person who, by his position or the nature of the work performed, is responsible for ensuring fire safety at the protected facility in the organization, appointed by the head of the organization;
- an official appointed by the head of the organization responsible for conducting fire safety briefings in the organization;
- by other persons by the decision of the head of the organization.

Persons who have been trained on fire safety measures under additional professional programmes in the field of fire safety, or persons with fire-technical education, or persons who have passed the procedure of independent qualification assessment, during the period of validity of the certificate of qualification, may be involved in conducting fire safety briefings on the basis of a civil contract.

15. All personnel involved in the construction and further operation of the temporary facility must comply with the Fire Safety Regulations of the Russian Federation, SP 514.1311500.2022, and all fire safety requirements contained in the regulations of the Russian Federation and other fire safety regulations, as well as these requirements.

16. All employees involved in the construction and further operation of temporary facilities must know and comply with fire safety measures, be able to act in case of fire and use primary fire extinguishing equipment.

17. Persons responsible for fire safety during the construction and further operation of temporary facilities must be trained in fire safety confirmed by a valid certificate of training.

18. For the construction of temporary buildings non-combustible materials should be used as part of construction and finishing structures.

It is permitted to use materials with fire hazard indicators not higher than G1, B1, RP1 (B2, RP1 for carpet coverings) reached by fire proofing. It is also permitted to use not highly flammable fabrics (according to GOST R 53294) or combustible fabrics subjected to fire proofing until the indicator is reached. If combustible materials by their technical properties cannot be subjected to fire proofing, the use of these materials is permitted if they are protected by autonomous fire extinguishing devices designed to extinguish fires of classes A, B, C, E. In any case, the fire hazard indicators of materials for interior decoration and escape evacuation should not contradict the indicators indicated in tables 28 and 29 of Federal Law 123 (depending on the type of evacuation routes and the purpose of the premises).

19. Suspended ceiling frames must only be made of non-combustible materials. Load-bearing elements of suspended ceilings, with the exception of suspensions, are allowed to be made of combustible materials fire proofed to indicators not higher than G1, B1, RP1.

20. In case of placement of temporary constructions with a height of more than one tier (level) inside existing buildings, the supporting structures must be made of non-combustible materials, and the enclosing structures must be made of materials with a flammability group not higher than G1.

21. To confirm the fire proofing, contractors must submit to RC Avangard certificates of works performed for fire proofing. It is not allowed to use materials previously subject to fire proofing and already used at other events (since a large number of different factors, including humidity, temperature,

mechanical or other impact, and other storage conditions have an impact on retention of fire-retardant properties).

22. Only non-combustible materials (NG – non-combustible) may be used for soundproofing and thermal insulation without the use of insulation made of combustible materials.

23. Fire safety certificates and certificates confirming works performed for material fire proofing and the classification of the materials and their suitability for this purpose, must be provided for each temporary facility.

24. During the construction and installation of temporary facilities, no changes may be made to the space and layout solutions that will result in worse conditions for the safe evacuation of people, or limited access to fire extinguishers, fire hydrants and other fire safety equipment, or reduced coverage of automatic fire protection systems (fire alarm system, fixed automatic fire extinguishing system, smoke exhaust system, alerting and evacuation control system) is reduced. In order to quickly locate emergency exits or fire hydrants of the internal fire water pipeline that may not be visible because of the temporary facilities, temporary signs indicating the nearest way to the emergency exit (flat signs in photoluminescent version or evacuation signs as part of a temporary alert and evacuation control system, mounted with respect for temporary facilities) must be installed (at least 2 m above the floor). Temporary facilities, as well as temporary vertical structures of stages, exhibition structures, as well as advertising and decorative structures of exhibition stands, temporary business networking areas that obstruct stationary light signs of the fire evacuation warning and control system must be equipped with appropriate additional temporary signs of the fire evacuation alert and control system.

25. If installed solid ceilings and other structures will separate new temporary spaces (rooms, halls, areas, stands, etc.) inside pavilions and premises of the EXPOFORUM Convention and Exhibition Centre or obstruct automatic fire protection systems located above, the spaces under these ceilings and structures must be protected with additional automatic fire protection systems depending on the requirements of the fire safety standards (including: fire alarms and/or fire extinguishers (including autonomous type)). The specified additional automatic fire protection systems may be omitted if the ceiling or other structure is perforated (evenly distributed over the area of the structure; with no less than 40 per cent of the area of the ceiling or other structure perforated; minimal dimension of each perforation hole in any cross-section shall not be less than 10 mm, and the thickness of the ceiling or other structure shall not exceed three times the minimal mesh size of the perforation holes).

26. If the distance from the ceiling to the top of temporary walls, partitions, exhibition and other structures is 0.6 m or less and temporary partitions, exhibition and other structures prevent the operation of stationary automatic fire extinguishing equipment, additional autonomous fire extinguishing equipment must be provided (designed to extinguish fires of A, B, C, E classes).

27. If the distance from the ceiling to the top of temporary walls, partitions, exhibition and other structures is 1 m or less, additional automatic fire extinguishing equipment (including stand-alone equipment) must be provided.

28. Temporary vertical structures of stages, exhibition structures, as well as advertising and decorative structures of exhibition stands, temporary business networking areas that prevent the operation of existing fixed fire protection systems installed in the existing (permanent) building and structure (e.g. continuous fire detectors) are equipped with additional fire alarm systems, which must be installed in view of ensuring the fire alarm within temporary structures as well as in adjacent spaces, if the existing fire protection system is obstructed by these structures.

29. EXIT light signs should be installed in all halls (regardless of the number of people in them), as well as in rooms with a simultaneous stay of 50 or more people. The signs should be installed over evacuation exits from the halls and premises, over evacuation exits from the floors of the building leading directly outside or to a safe zone.

30. Evacuation signs should be installed at a height of at least 2 m indicating the direction of movement in corridors longer than 50 m. At the same time, fire safety evacuation signs should be installed along the length of the corridors at a distance of no more than 25 m from each other, as well as in the places where the corridors turn.

31. The structures of stairs, ramps, steps and bridges must comply with the requirements of labour and fire safety. All stairs, elevated platforms, zones must have railings. If the height of a stair is more than 45 cm, fences with railings should be provided. If the width of a stair is more than 1.5 m, railings should be provided on both sides, and if the width is 2.4 m or more – middle railings should be provided. Stair fences, like railings, must be solid, equipped with handrails and designed to handle loads of at least 0.3 kN/m. The height of stair fences of the third type (outdoor open according to Federal Law No. 123 ‘Technical regulations on fire safety requirements’), terraces, operated roofs should be at least 1.2 m. The height of fences inside the building, including stairs and ramps, should be at least 0.9 m. If there is a gap between stair flights and ramps of more than 0.3 m, a difference in floor marks of more than 1 m (except for the edge of a stage facing the auditorium) and in rooms with a possible stay of children, the height of a fence should be at least 1.2 m. The height of a porch fence when climbing three steps or more and is more than 0.45 m from the sidewalk level should be at least 0.9 m.

32. The width of stair flights and landings should be at least 1.2 m (1.35 m – if stairs lead to any floor, except the first, with a stay of more than 200 people), in other cases, it is allowed to reduce the width to 1.2 m (for stairs leading to single workplaces or intended for evacuation of no more than 5 people, the width of stair flights and landings should be at least 0.7 m).

33. The slope of stairs on evacuation routes should be no more than 1:2; the width of a tread – not less than 25 cm; the height of a step – not more than 22 cm and not less than 5 cm. The construction of spiral, curved, etc. stairs is prohibited (except for the cases provided in clause 4.3.6 of SP 1.13130.2020).

34. Floor slopes on routes must be performed at least with 3 steps or through a ramp with a slope of no more than 1:6. If there is a need to provide wheelchair access for a temporary facility, it is required to provide a ramp with a slope of no more than 1:12 in compliance with the provisions of SP 59.13330.2020.

35. The width of doors (or doorways) must be at least 0.8 m in the light (at least 1.2 m in the light – for rooms with a stay of 50 or more people, for rooms with a stay of more than 15 people belonging to low-mobility groups of M2–M4, for rooms with a stay of more than 5 people belonging to the low-mobility groups of NM and NT), and the height is at least 1.9 m in the light.

36. For a stay of people belonging to the M4 mobility group, the width of an evacuation exit should be at least 0.9 m in the light (clause 9.3.3 of SP 1.13130.2020).

37. Thresholds in doorways should be no more than 50 mm high; doorways provided on evacuation routes for low-mobility people belonging to the M4 mobility group should not have thresholds more than 1.4 cm high.

38. 38. The width of horizontal sections of evacuation routes and ramps should be at least:

- 1.2 m – for corridors and other evacuation routes by which more than 50 people can be evacuated, as well as for evacuation routes by which more than 15 people of the M2, M3 groups can be evacuated, or intended for the evacuation of people belonging to the M4 group;
- 0.7 m – for passages to single workplaces;
- 1 m – in all other cases.

39. The height of horizontal sections of evacuation routes in the light should be at least 2 m.

40. When laying exposed circuits, one must ensure that there is no risk of mechanical damage to the circuits. All connections and branches of wires and cables must be made by welding, soldering, crimping or special clamps. The conductors of wires and cables must be reliably insulated at connections and taps.

41. Electric lights should be used to illuminate stands in fire-hazardous premises. The use of electric lights with a degree of protection that complies with the Electrical Installations Regulations is permitted. The distance from lights to combustible or slow-burning objects and materials must be at least 50 cm.

42. All staff involved in the construction and further operation of temporary facilities should ensure that thermal imaging monitoring of temporary electrical networks, electrical equipment, electrical wiring and electrical equipment installed in the temporary facilities is possible, in order to in a timely manner detect areas where latent emergency heating may occur and potentially lead to fire, and to take measures to disconnect or replace identified fire hazardous areas.

43. The placement of temporary buildings outside should be provided in accordance with the requirements of SP 514.1311500.2022, SP 4.13130 'Fire protection systems. Limiting the spread of fire at protected facilities. Requirements for space planning and structural solutions' (hereinafter – SP 4.13130) and SP 8.13130 'Fire protection systems. Outdoor firefighting water supply. Fire safety requirements.' It is allowed to reduce distances from temporary buildings and structures to existing buildings of I–III degrees of fire resistance and C0–C1 classes of structural fire hazard, provided that the calculated confirmation of the possibility of safe evacuation of people in accordance with the requirements of clause 7.1.7 of SP 1.13130 is provided and temporary buildings and structures are equipped with automatic fire extinguishing installations of modular type or autonomous fire extinguishing devices (except for powder installations and devices) designed to extinguish fires of classes A, B, C, E. Firefighting distances to temporary buildings and structures are not normalized (provided that the required driveways and entrances for fire equipment are provided) if the wall of an existing building facing the temporary building (structure) is type I firefighting.

44. It is allowed to place temporary buildings and structures at a distance less than those indicated in SP 4.13130 without carrying out a calculated check of the fire risk value, provided that the total area of these temporary buildings and structures (including the undeveloped area between them) does not exceed the indicators established in SP 514.1311500.2022, approved according to the worst indicators (depending on the degree of fire resistance, class of constructive fire hazard, height, class of functional fire hazard and other characteristics given in SP 514.1311500.2022).

45. If it is not possible to comply with the values of regulatory distances, it is necessary to provide development and implementation of a set of measures to ensure fire safety, taking into account forced deviations from the requirements of regulatory documents related to the technology of ensuring the event.

46. Diesel generator set (hereinafter, DGS) must be installed in accordance with Table 1.

Table 1

Type of DGS	Degree of fire resistance and structural fire hazard class of the building from which the distance to the DGS is determined		
	I–IV, C0	II–III, C1–C3	IV–V, C1–C3
Covered (in a metal cover) or open	24	30	36
Container (with container fire resistance rating of at least EI45 and container structural fire hazard class of at least K0)	Not regulated (Subject to compliance with other requirements)		
Container (with container fire resistance rating less than EI45 and container structural fire hazard class less than K0)	20	25	30

Comments:

1. *The distances from the DGS to fire hydrant manholes and to firefighter accesses must be at least 5 m.*

2. *The use of petrol generator sets is not permitted.*

47. Fuel tanks in the DGS shall only be made of non-combustible materials.

48. No diesel fuel storage unit with a total volume of more than 5 cubic metres are allowed as part of a temporary facility.

49. No parking areas for cars or other vehicles are allowed in fire lanes. Parking areas must be provided at a distance of at least:

- 5 m – from fire hydrant manholes and to firefighter accesses.
- 10 m – from existing buildings of the EXPOFORUM Convention and Exhibition Centre.
- 15 m – from temporary buildings and facilities.

When placing parking lots, it is necessary to take into account the need to comply with the requirements for driveways and entrances of fire equipment given in section 8 of SP 4.13130.2013 and SP 514.131150.2022.

50. When laying cable lines on the ground surface in places with a possibility of mechanical impact, including from vehicles and other machinery, protective structures must be provided to ensure the safety of the cable lines.

51. Open overhead laying of cable lines must be carried out in accordance with Electrical Installations Regulations or, in the case of cable bridges, on the structures of these bridges, which must be made of non-combustible materials.

52. The distance from the ground surface or ground covering to the bottom of the structures of cable bridges must be at least 3.5 m and at least 6 m for the passages of fire-fighting vehicles; the width of passages under cable bridges must be at least 3.5 m.

53. The area of temporary buildings and facilities depending on the degree of their fire resistance, structural fire hazard class, height, functional fire hazard class and other characteristics must not exceed the values established in SP 514.131150.2022.

54. For outdoor temporary public facilities with an area of more than 800 sq. m the installation of automatic fire extinguishing systems is required.

55. Materials for enclosing structures of tent buildings and facilities with an area of more than 500 sq. m materials should not belong to the G4 group of combustibility, VZ of flammability and T4 for toxicity of combustion products. The use of tent materials with a combustibility group above G1 as enclosing structures of temporary facilities when they are placed inside existing buildings and facilities is not allowed. Cables and ropes that ensure the stability of tent structures with an area of more than 500 sq. m must be made of non-combustible materials.

56. Temporary buildings and facilities, as well as existing (permanent) buildings and facilities (with 10 or more people in them), should be provided with evacuation plans (photoluminescent ones) with text instructions (in Russian and English), reflecting the actual layout at the time of the event.

57. When constructing and setting up temporary facilities, all facilities shall be equipped with emergency fire extinguishing equipment, while events shall provide primary fire extinguishing equipment in accordance with the Fire Prevention Regulations of the Russian Federation (FPR RF) (with at least one fire extinguisher per room and per open area of each temporary facility).

58. The demonstration of operating models and installations using flammable liquids or combustible gases is not allowed in temporary facilities. Installation and demonstration of exhibits and processes associated with the possibility of fire (welding and soldering work, other types of work involving open flames, flammable solvents, etc.) shall be subject to approval from RC Avangard, the organizer and the event venue.

59. Painting with flammable paints is prohibited.

60. No fireworks, sparklers, firecrackers or other pyrotechnics may be used at the Event venue.

61. Smoking is prohibited in buildings, facilities and outdoor areas outside designated smoking areas.

62. All other issues arising during the installation, dismantling and event period are resolved on site by representatives of RC Avangard.