

FIRE PUMPS



FLS_A6	FIRE PUMPS	
	Fire and Life Safety (FLS) Requirements Annex_A6	Revisions_2021
Item	Provisions	Notes
1.0	Certifications and QCD Approvals	
1.1	Fire pump equipment must be listed and certified by a 3rd party. The certification must be based on a scheme which includes continual surveillance of the manufacturing plant where the fire pumps are manufactured and assembled. Where fire pumps are assembled at a different plant to where they are manufactured then the assembly plant must also be included within the certification and surveillance scheme.	
1.2	Fire pump equipment relied upon for satisfaction of fire safety requirements and regulations must be submitted to the QCD for review and approval. On approval a QCD certificate for the fire pump will be issued to the submitting party.	
2.0	Applications Fire pumps must be provided for all buildings and structures where firefighting systems are required and installed to ensure adequate flows of water at the minimum required pressures are maintained for the duration of the firefighting operations.	
3.0	Installations	
3.1	All fire pumps installations must be designed to operate under the conditions of loss of primary power source and mechanical failure.	
3.2	A fire pump installation comprising a duty electric motor driven pump with a standby diesel engine driven pump is deemed to satisfy this requirement.	
3.3	All fire pump configurations are subject to review and specific approval from the QCD is required.	
4.0	All equipment associated with pump installations must be approved by QCD.	
5.0	All fire pumps must be capable of providing at least 150% of the required minimum firefighting water flow at not less than 65% of the minimum pressure required.	
6.0	Flow meter	
6.1	A listed approved flow meter must be provided for each fire pump installation. The flow meter must be installed in accordance with the manufacturer's recommendations and within the listing limitations.	
6.2	The measurable flow range of the meter must be at least 200% of the minimum required flow.	



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6.3	The flow meter must be installed such that its indicator/dial/gauge can be easily seen and read without the aid of step ladders, scaffolding or other lifting equipment.	
6.4	The flow meter must be a permanent installation and must not be removed after initial testing and setting into operation of the system.	
7.0	Pump Performance Curves A performance curve showing the pumps delivery flows and pressure together with the system demand curve must be provided for each installation. The intersection must be the design delivery of the pump system.	
8.0	Fire Pump Room	
8.1	Fire pumps must be enclosed in their own dedicated pump room.	
8.2	Maintain 0.8 meter working spaces inside the fire pump room.	
8.3	Least side dimension shall be 3 meters (4 meters in basement).	
8.4	Minimum vertical clearance shall be 2.6 meters.	
8.5	Add note in life safety plan stating that it's necessity to submit the modification plan in case of increase the size of the pump	
8.6	In high rise buildings, the fire pumps' room enclosure must have a 2-hours fire resistance rating and 1.5-hour openings protection (doors, windows and penetrations).	
8.7	Indoor fire pump room enclosures must have not less than 2-hours fire resistance rating and 1.5-hour openings protection (doors, windows and penetrations).	
8.8	In other than high-rise buildings, the fire pumps' room enclosure must have a 1 hour fire resistance rating for throughout sprinkler protected both building and the fire pump room	
8.9	A separate fire pump building that is physically separated of at least 15.3 m away from any buildings or fire exposures and complying with the required protection for outdoor installations, shall not be required to be within a fire resistance rated enclosures.	
8.10	Sprinkler required in fire pump buildings or rooms enclosing diesel engine pump drivers and day tanks.	
9.0	Ventilation	
9.1	Where located within a building, a separate and dedicated ventilation system must be provided for the fire pump room.	
9.2	The ventilation system must draw fresh air directly from outside the building.	



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9.3	Exhaust fans must be rated for hot gasses at 250°C for 2 hours.	
9.4	Power supplies for the exhaust fans must be from the Class 1 central emergency generator through fire rated cables having a minimum 2 hour fire resistance rating.	
10.0	Access and Location.	
10.1	Safe direct access from outside the building must be provided for the fire pump room.	
10.2	Exhaust fans must be rated for hot gasses at 250°C for 2 hours.	
10.3	Designated access within 3m from the fire pump room door, provided the access (stair) is protected and discharge directly to the building external.	
10.4	Add a marker indicating the location of the pump in the building and how to access to it.	
10.5	Fire pump room shall be located where safe and direct access from the building external can be achieved. When in basement, the fire pump room shall be located not lower than one (1) basement depth.	

