


NFPA UPDATES

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Diesel Engines

- **2014 FM Approvals “Position Memo” Issued**
 - **FM Approvals Standard 1333 (Diesel Engine Drivers) updated to align with new NFPA updates**
 - Major Points:
 - diesel engine MFGers are responsible for design of cooling loops
 - high raw water temp and raw water flow alarm sensors may be part of the engine, or part of the cooling loop
-  required with engine MFGers documentation package
- Diesel Engine Re-Exam Status
 - testing complete (all MFGers)
 - finalizing Approval Reports



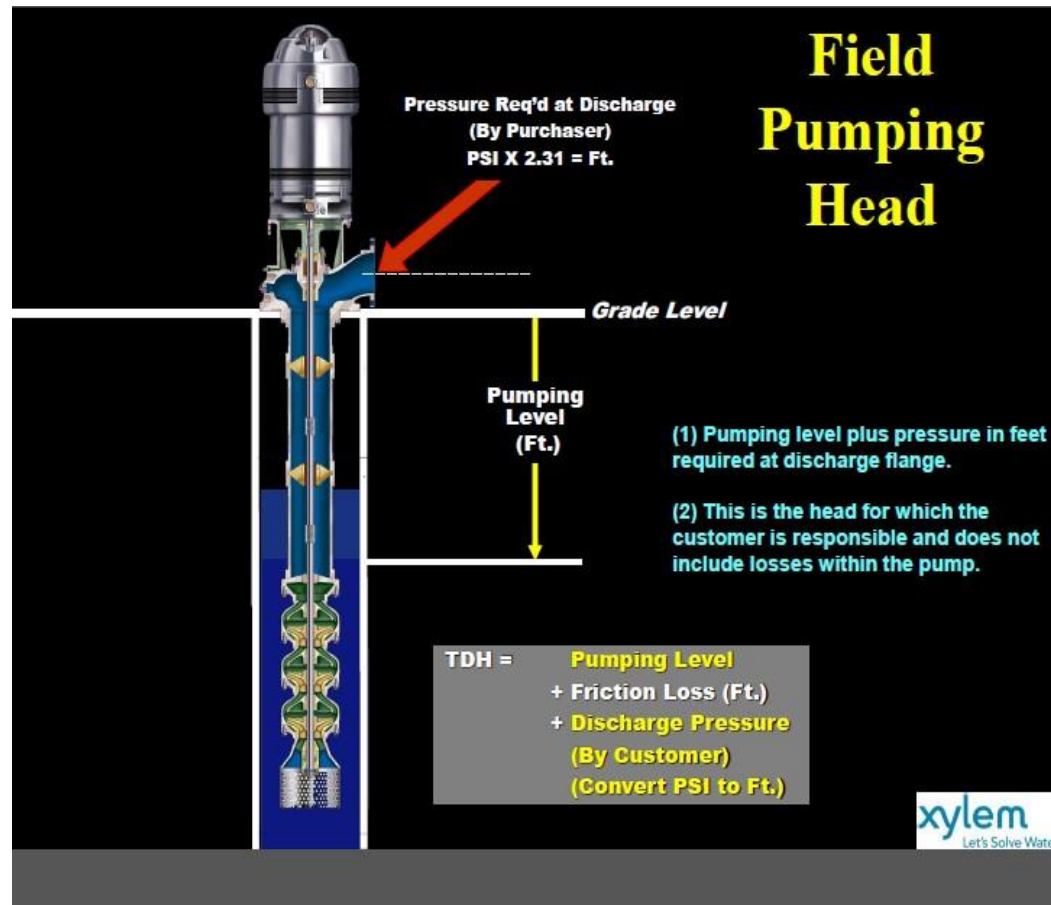
Controllers

- **FM Approvals Standard 1321/1323 (Fire Pump Controllers) updated to harmonize with latest versions of NFPA 20 and FM Standard 1333 for Diesel Engines.**
 - Major Points:
 - issued February 2015
 - resulted in addition of 5 new alarms to fire pump controllers
 - all Re-Exam proposals sent March 2015- drawing review/CDL update
 - verifying controller compatibility to acknowledge new alarm signals
 - ➔ as of April 1, 2015: diesel engine shipments must be compliant with new sensor requirement
 - ➔ as of April 1, 2015: controller MFGers must authorize proposals and issue documentation verifying compliance to accept alarm signals



New Definitions

- **3.3.38 No Flow (Churn, Shutoff)** The condition of zero flow when the fire pump is running but the only water passing through the pump is a small flow that is discharged through the pump circulation relief valve or supplies the cooling for a diesel engine driver.
- **3.3.41 Peak Load** As it pertains to acceptance testing in this standard, the maximum power required to drive the pump at any flow rate up to 150 % of rated capacity.
- **3.3.42.2 Net Pressure (Differential Pressure)** For vertical turbine fire pumps, the total pressure at the fire pump discharge flange plus the total suction lift. For other fire pumps, the total pressure at the fire pump discharge flange minus the total pressure at the fire pump suction flange.





Sprinkler Requirements in Pump Room

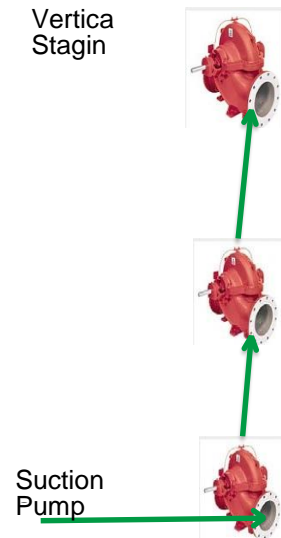
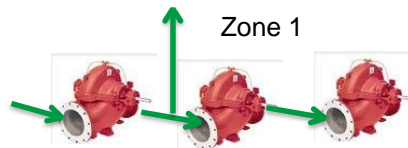
- **4.13.1.3 Fire Pump Buildings or Rooms with Diesel Engines**
Fire Pump buildings or rooms enclosing diesel engine pump drivers and day tanks shall be protected with an automatic sprinkler system installed in accordance with NFPA 13 as an Extra Hazard Group 2 occupancy.
- **4.13.1.4 Fire Pump Buildings or Rooms with Electric Drivers** For buildings that are required to be sprinkled, fire pump buildings or rooms enclosing electric fire pump drivers shall be protected with an automatic sprinkler system installed in accordance with NFPA 13 an Ordinary Hazard Group 1 occupancy.



Fire Pumps for High Rise Buildings

A building where the floor of an occupiable story is greater than 75' above the lowest level of fire department vehicle access.

- Except as permitted by 4.20.2.2 all pumps that are a part of a series fire pump unit shall be located within the same fire pump room:
 - Shall be arranged so all pumps can be manually stopped or started from all fire pump rooms.
 - Suction and discharge pressures for all pumps shall be displayed in all pump rooms.
 - Alarms and signals shall annunciate in all other pump rooms
 - Interconnect control wiring shall comply with 4.20.2.7 & 8
 - Pump room communication system shall comply with 4.20.2.9 & 10.
- **5.5 Auxiliary Power** where electric motor driven fire pumps (s) are used a reliable emergency source of power or a back-up diesel fire pump shall be provided.



Multistage Multiport Pumps

2016 NFPA 20





Multistage Multiport Pumps

4.15.4.2 For multistage multiport pumps, a bypass shall be installed between the pump suction and the first outlet port and between sequential outlet ports wherever the bypass can provide pressure that is of material value without the impeller.

10.5.2.1.1.2 For multistage multiport pumps, a dedicated pressure switch or sensor shall be provided for each discharge port as part of the controller.

10.5.2.1.1.3 For multistage multiport pumps, a dedicated pressure recorder shall be provided for each discharge port and shall be part of the controller.



Annex C Controller Connectivity

- Annex covers considerations relating to the access of fire pump controllers, access methods, security considerations, accessible information, connecting to the internet.
- Remote supervision, monitoring (components for failure/replacements, reliability analysis. No remote operation nor remote changing of control settings are permitted.

Please do not hesitate to contact either Steve or myself with any questions that you might have relating to the information provided.

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