

BC BUILDING CODE INTERPRETATION COMMITTEE
AIBC, APEGBC, BOABC, POABC

File No: 98- 0148

INTERPRETATION

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Interpretation Date: May 16, 2006

Building Code Edition: BC Building Code 1998

Subject: Sump Pump Discharge Piping

Keywords: Pressure sewer, forcemain, sump pump discharge

Building Code Reference(s): 7.2.1.6.(1), 7.4.4.2.(1), 7.4.10.3.(1)(2),
Tables 7.4.10.6.B & C, 7.4.10.9.

Question:

1. What type of pipe should be used for the discharge piping or forcemain from a sump pump?
2. Is the piping in question #1 permitted to be used both inside and outside a building?
3. Should the requirements of Sentence 7.4.4.2.(1) be considered when selecting the piping for this application?

Interpretation:

1. Sentence 7.2.1.6.(1) states that "Piping, fittings and joints used in pressure sewer, forcemain or sump pump discharge applications shall be capable of withstanding at least one and one-half times the maximum potential pressure." Since Part 7 contains no other references to assist in the selection of piping for this application, it must be assumed that piping that has a suitable pressure rating and is available in an appropriate size may be considered as follows:
 - (a) The discharge pipe and fittings from a sewage or storm sewer sump pump to the connection point of the appropriate gravity system must be capable of withstanding the maximum head pressure created by the pump multiplied by one and one-half. A common example would be a pump with a 30 ft head that creates approximately 13 PSI pressure times 1½ equals 19.5 PSI. This portion of the installation would therefore require approved pressure pipe and fittings such as copper tube (ASTM B88), PVC (CSA B137.3), CPVC (CSA B137.6) or other approved pressure pipe systems.
 - (b) Where the outlet piping of a SEWAGE pump connects to a branch or building drain serving other fixtures the GPM of the sewage pump must be converted to fixture units in accordance with Sentence 7.4.10.3.(1) and sized to Table 7.4.10.6.B for branches or 7.4.10.6.C for building drains/sewers to ensure no adverse effect on the gravity system.
 - (c) Connection of a STORM pump forcemain to a gravity storm system must have the pump GPM converted to litres in accordance with Sentence 7.4.10.3.(2) and sized to Table 7.4.10.9. to ensure no adverse effect on the gravity system.


R.J. Light, Committee Chair

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2. Yes.

The piping in question #1 may be accepted in a pressure sewer located both inside and outside a building. It should be noted that the piping permitted above must only be used for the pressure sewer portion and must adapt to an approved drainage system piping at the point of connection to a gravity drainage system. It should also be noted that combustible piping may only be used where permitted.

3. No.

The requirements of Sentence 7.4.4.2.(1) regarding the discharge of wastes above 75°C need not be considered as cooling of the wastes to a temperature below 75°C must occur within a sump or other method of cooling prior to discharging to a drainage system. It should also be noted that typical temperatures and pressures encountered in pressure sewer systems fall within the acceptable temperature/pressure ratings for PVC pressure pipe and fittings (CSA B137.3).



R. J. Light, Committee Chair