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Proposed Change 1690

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| Code Reference(s): | NPC20 Div.A 1.4.1.2. (first printing) |
| Subject: | Defined Terms |
| Title: | Condensate Drainage |
| Description: | The proposed change introduces the defined term "condensate drainage system" in the NPC and revises the definitions of the terms "clear-water waste" and "drainage system" to address condensate drainage. |
| Related Proposed Change(s): | PCF 1692, PCF 1959, PCF 2014 |

This change could potentially affect the following topic areas:

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|---|---|
| <input checked="" type="checkbox"/> Division A | <input checked="" type="checkbox"/> Division B |
| <input type="checkbox"/> Division C | <input checked="" type="checkbox"/> Design and Construction |
| <input checked="" type="checkbox"/> Building operations | <input checked="" type="checkbox"/> Housing |
| <input checked="" type="checkbox"/> Small Buildings | <input checked="" type="checkbox"/> Large Buildings |
| <input type="checkbox"/> Fire Protection | <input type="checkbox"/> Occupant safety in use |
| <input type="checkbox"/> Accessibility | <input type="checkbox"/> Structural Requirements |
| <input type="checkbox"/> Building Envelope | <input type="checkbox"/> Energy Efficiency |
| <input checked="" type="checkbox"/> Heating, Ventilating and Air Conditioning | <input checked="" type="checkbox"/> Plumbing |
| | <input type="checkbox"/> Construction and Demolition Sites |

Problem

"Condensate drainage system" is not a defined term in the National Plumbing Code of Canada (NPC) 2020. "Clear-water waste" and "drainage system" are defined terms, but their definitions need revision to provide more clarity about their application related to condensate drainage.

The NPC dictates the connection methods for the part of the pipe or tube connecting the condensation drain pan to a building's plumbing drainage system. However, as heat recovery ventilators and evaporators include such pipes and tubes, it may be assumed that the pipe or tube is not part of a plumbing installation, but rather is part of a heating, ventilation and air-conditioning (HVAC) installation.

The definitions related to condensate drainage in the NPC need to be revised to ensure that the installation of these pipes and tubes is regulated and, therefore, always carried out according to best practices. Otherwise, problems of leaks, odours, blockages and mould may occur.

Improper installation can also contribute to the spread of fire or the release of smoke, where the Code user has not complied with regulations governing the non-combustibility of building components. Improper installation affects the health of occupants as well as the building structure.

Justification

Including the definition of “condensate drainage system” in the NPC would facilitate the inclusion of these systems within the scope of a plumbing system and support subsequent Code changes to incorporate prescriptive requirements for condensate drains.

This proposed change provides clarity to Code users by providing guidance on how to approach condensation evacuation. This proposed change would also ensure that the installation is completed correctly by the necessary tradespersons (plumbers) and that the minimum requirements for materials, slopes, diameters, and protection against odours for tubing would be easily identifiable and appropriate for the location of the installation.

PROPOSED CHANGE

[1.4.1.2.] 1.4.1.2. Defined Terms

- [1] 1)** The words and terms in italics in this Code shall have the following meanings (an asterisk (*) following a defined word or term indicates that the definition for that word or term is taken from the NBC):

Clear-water waste means waste water with impurity levels that will not be harmful to health and may include cooling water ~~or~~ condensate drainage from heating (including neutralized condensate from a combustion process), refrigeration and air-conditioning equipment and cooled condensate from steam heating systems, but does not include *storm water*. (See Note A-1.4.1.2.(1).)

Condensate drainage system means a drainage system that conducts condensate.

Drainage system means an assembly of pipes, fittings, fixtures, traps and appurtenances that is used to convey *sewage, clear-water waste or storm water* to a public sewer or a *private sewage disposal system* or a condensate drainage system, but does not include *subsoil drainage pipes*. (See Figure A-1.4.1.2.(1)-F in Note A-1.4.1.2.(1).)

Impact analysis

This proposed change has been identified as low impact since condensate drains are currently required to be installed as part of plumbing systems; this proposed definition is intended to clarify application.

Evacuating condensation is necessary, the cost and impact of doing so incorrectly may sometimes be the same as or more than that of a correctly installed system. Therefore, there is no cost impact as this proposed change ensures that the minimum requirements are clearly defined in order to be met.

Correct installation may even cost less than having to address future issues caused by incorrect insulation.

Enforcement implications

This proposed change should assist in the clarification of scope for plumbing drainage systems.

Additional training or resources required for enforcement officials (authorities having jurisdiction) are not expected as a result of the proposed change.

Who is affected

Designers, installers, suppliers, regulators and owners.