



Informal Interpretation Report Number 5619



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Edition 2004

Section 716.5.4.1

Question:

Is it the intent of section 716.5.4.1 to provide smoke dampers at all penetrations of corridors required to have smoke and draft control doors regardless of whether openings serving corridor are served from a separate branch and protected with a fire/smoke damper. Comment: A duct main penetrates and is routed within a 1 hr. rated corridor required to have smoke and draft control doors. Duct main has multiple branches which serve rooms located along corridor. Each branch penetration is protected with a fire damper. Prior to duct main entering boundaries of corridor, a separate, dedicated duct branch connected to main, is routed into corridor to serve corridor diffusers. If a fire/smoke damper is installed at corridor penetration of dedicated duct serving corridor, and duct is constructed of minimum required thickness, do smoke dampers need to be installed at each of the other main duct branch penetrations serving the rooms? Seems overkill to install smoke dampers at all penetrations, not to mention very costly. Would not smoke damper at branch serving corridor protect openings in corridor and meet intent of code?

Answer

As described, IF there is only one branch duct penetrating the corridor wall which is feeding/open to the corridor, and IF the other ducts (without openings in the corridor) are constructed of steel not less than 0.019-inch (0.48 mm) in thickness, then this is the only duct not meeting the exception to the requirement for the smoke damper. The one smoke damper in the branch serving the corridor would effectively isolate and prevent the corridor from communicating with the adjacent spaces and the intent of the code would be satisfied, provided the corridor is NOT an exit passageway.

Commentary:

This exception is prescriptive, it must be applied as written. See, FMC, 607.5.4 Corridors/smoke barriers, Exception #3. Smoke dampers are not required in corridor

penetrations where the duct is constructed of steel not less than 0.019 inch in thickness and there are no openings serving the corridor and the corridor in question is not considered an exit passageway.

Exit passageways and exit enclosures are required to have an independent ventilation system. This is also covered in the Mechanical Code section 401.4 - Exits. This also assumes the doors within the corridor meet the requirements of 715.3.3.

Notice:

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