Fire Protection Air Supply Codes & Standards - 2025 Updates Reference Guide

01 Air Supplies

NFPA 13

- **8.2.7.5.2** - Where an air compressor is dedicated for the sprinkler system, **the air compressor shall be listed for fire protection.**

Look for this

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- **8.2.10.2** – The nitrogen generator shall be capable of supplying and maintaining at least 98 percent nitrogen concentration throughout the system **at a minimum leakage rate of 1.5 psi (0.1 bar) per hour.**

NFPA 25 existing system allowable leak rate.*

DID YOU KNOW? **Nitrogen's Inability to Reach 98% Purity Throughout Systems**

Recent studies by Summit Fire Consulting, published in Sprinkler Age, reveal significant challenges in achieving consistent nitrogen purity in sprinkler systems using nitrogen generators.

Tests with various purge methods showed that even after eight weeks, the highest average purity was 97.3%, with many areas failing to reach 95% or even ambient levels, falling short of the 98% industry standard.

02 Supervisory Air for Dry Standpipe Systems

NFPA 14 (2024 Edition)

- **8.3.2.1.1** – All dry standpipe system piping shall be supervised with supervisory air.
- **8.3.2.2.5.1** – The compressed air supply shall be from a source available at all times.
- **8.3.2.2.5.2** – The air supply shall have a capacity capable of restoring normal air pressure in the system within 30 minutes.

03 Vapor Corrosion Inhibitors

NFPA 13

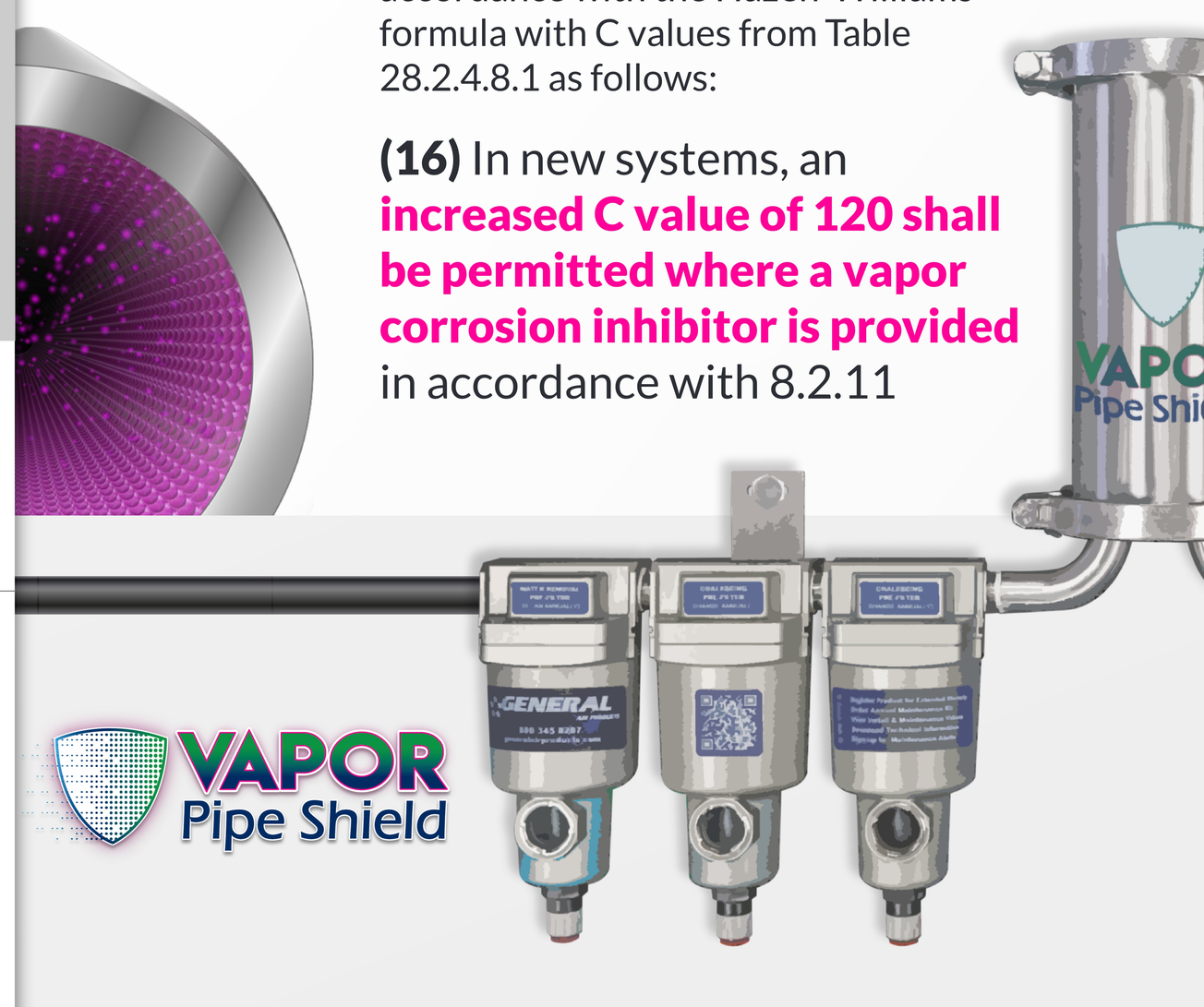
- **8.2.11.1** – The vapor corrosion inhibitor shall be from a listed assembly permanently installed in accordance with the manufacturer's instructions.
- **8.2.11.2** – The vapor corrosion inhibitor equipment shall be maintained in accordance with Chapter 32 and the manufacturer's instructions.
- **8.2.11.3** – A means of verifying vapor concentration shall be provided for each system.
- **16.4.2.5** – Where conditions are found or are know to exist that contribute to unusual corrosive properties, the owner(s) shall notify the sprinkler system installer and a plan shall be developed to treat the system using at least one of the following methods:

  (7) Use a listed vapor corrosion inhibitor delivery system sized and installed in accordance with the manufacturer's instructions.

Allowance for use of 120 C-Value

- **28.2.4.8.1**– Pipe friction loss shall be calculated in accordance with the Hazen-Williams formula with C values from Table 28.2.4.8.1 as follows:

  (16) In new systems, an **increased C value of 120 shall be permitted where a vapor corrosion inhibitor is provided** in accordance with 8.2.11



VAPOR Pipe Shield

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