IS 636:2018 Non-Percolating Flexible Fire Fighting Delivery Hose — Specification

Firefighters need the right hoses to tackle various scenario, from urban and structural firefighting to wildland and industrial applications. In urban firefighting, high-pressure water delivery and industrial settings where contamination or seepage must be avoided, non -percolating hoses are commonly used. These hoses are designed to prevent water seepage through the hose wall and are typically lined with rubber or other waterproof material, making them suitable for delivering water or foam without leakage.

Recognizing the need for high-quality non-percolating hoses, BIS first published an Indian Standard for non-percolating flexible firefighting delivery hoses (IS 636) in 1958. It has since been revised in 1962, 1979, 1988 and most recently in 2018 to reflect advancements in manufacturing and testing technologies.

The current standard categorizes hoses based on their pressure-bearing capacity and construction, with types typically ranging from Type 1 to Type 3, each suited to different firefighting needs. The standard is applicable for hoses that are intended for working pressures not exceeding 15 kgf/cm^2 and comes in nominal sizes of 38 mm, 50 mm, 63 mm and 70 mm. The standard covers requirements for:

- **Materials and Construction**: Hoses must be made from materials that resist liquid absorption, provide flexibility and ensure water resistance and durability.
- **Pressure Capacity**: Specifies minimum burst pressure, working pressure and proof pressure for each hose type to ensure reliability during firefighting operations.
- **Resistance Properties**: Specifies resistance to heat, abrasion, oil, ozone and hot surfaces to withstand during challenging firefighting conditions.
- **Dimensions and Length**: Establishes nominal sizes and lengths to standardize hose fittings and ensure compatibility with firefighting equipment.

IS 636:2018 also outlines testing methods to ensure compliance with standard, including tests for hot surface resistance, pressure loss, hydrostatic burst pressure and kink resistance. These tests ensure that the hoses can withstand rigorous use and maintain integrity under pressure.

By setting these specifications, IS 636:2018 ensures that non-percolating flexible fire hoses meet safety, quality, and performance requirements essential for firefighting applications, promoting reliability and safety for firefighting teams and equipment.