Training Firefighters on Nozzle Usage

FIRE ACADEMIES are where most of us receive formalized nozzle training. We can debate if it was good or bad later. The one thing nozzle training needs to be is up to date. Nozzle training must keep up with nozzle technology and also nozzle usage to develop a department best practice. These things change and must stay as fluid as the water we disperse through our nozzles. Fire departments need to create simple, easy-to-follow instructions on how all the fire attack pieces come together for the engine crew. To teach outdated methods without dated ideas hurts training and steals potential expertise from your firefighters.

Fire departments need to combine nozzle training along with hoseline management, so crews understand how each element depends on the other. Nozzle firefighters lay claim to fire extinguishment for the tour or call. They must know the capability of all nozzles in the department's inventory. They must check the serviceability of the nozzles on their engines. Departments must develop guidelines on how to examine their nozzles and how and when to place them out of service. Some functional checks include examining threaded connections, making sure the teeth of the fog nozzle are intact and the nozzle can move through its settings; looking at the waterway to make sure the valve doesn't protrude into the waterway; and keeping everything clean. Don't forget to add water to see the flow.

Departments need to keep pace with new technology, especially nozzle technology, because it changes often. When it does, pay attention and see what it's about by examining it. HEN® Nozzles recently came out with a solid stream pattern nozzle that takes the traditional solid stream and adjusts it into a solid linear stream. This is all accomplished using a standard shutoff and a smooth bore nozzle. The solid linear stream is called a BLADE™ and its width is adjustable from wide to narrow and everything in between. Like the classic instruction given with fog nozzles, turning right for tight gives you the classic smooth bore stream.

Firefighters like having stream choices, and the BLADE nozzle provides it in spades. The BLADE stream exits the nozzle like in a solid linear stream. The stream's forward linear face covers a wide portion of the fire area. The BLADE stream can be used horizontally or vertically. The wide BLADE provides coverage using large water droplets that cool and contact more area per gallon than any other stream style.

Fire department trainers need to examine how streams work and how they are used in fire operations. "Flow and move" and "Stop and flow" are two interior attack methodologies that all firefighters need to know how to do at a fire. Understanding how to move a nozzle and its subsequent water placement characteristics are critical for determining effectiveness.

Let's examine two common fire stream movements: the O and the Z. Many firefighters have been taught these patterns, especially when using straight or solid streams. Both of these work. However, they have limitations. The O works very well in standard size rooms, but as the spaces get larger, the void created by repeatedly using a wider O is considerable. Many use the Z method, but for improved coverage, the stream must be moved repeatedly to get the voids like the O.

This is where the BLADE stream excels. The BLADE coverage is wider horizontally and only requires one up-and-down motion to fill the space ahead of it, unlike tight streams. If operated vertically in a standard space, floor-to-ceiling coverage is supplied, and a simple side-to-side motion saves effort on the nozzle firefighter's part. This is why training officers and fire departments need to examine firefighter fatigue. Firefighters shouldn't have to repeatedly whip the nozzle to gain coverage. The nozzle should provide it. Fog cone streams leave coverage voids similar to an O stream movement and entrain a large volume of air, often without reaching the target with its small water droplets.

Nozzle technology has changed, and so have fires. Today's fires require us to teach how to cool conditions ahead of us on our approach to the fire room. We are no longer waiting to see the fire

1. The BLADE pattern requires a simple up-and-down painting motion, drastically reducing nozzleman fatigue. *(Photo courtesy of Andrew Starnes, Insight Fire Training.)*

2. The solid linear BLADE™ pattern can be turned vertically or horizontally, depending on the fire situation. *(Photo courtesy of Ray McCormack, HEN Nozzles.)*

before opening the nozzle. If your department training staff is still holding onto this oldie, drop it immediately. It's dangerous to your people. The BLADE stream with its expanding steam width as it exits the nozzle cools on the way up toward the ceiling. This helps contract gases in a way no straight stream can. Once the stream hits the hard ceiling, it expands out farther like a tight stream does, except its ceiling footprint is larger and reaches farther to cool more of the surface.

Coverage, cooling, and gas contraction are what a successful fire attack is all about. The faster and the more complete these components are, the more likely the fire is knocked down. The BLADE supplies all these key features by supplying an improved coverage pattern that cools more effectively and contracts gases more completely, especially on the way up initially from the nozzle.

The engine crew is relying on its fire department to stay abreast of new technology and methodologies. That new technology and methodologies should make them more effective and efficient while providing increased safety and personal growth. We must take the emotion out of fire training and stay current on technological breakthroughs that allow us to work better, not harder, with tools that help us save lives and property. We do it for our firefighters and the public. ■

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