

# Fluke tools help firefighters stay safe

## Application Note

### Firefighter Application Case Study



They fight fire. They're among the bravest individuals in our society. They use Fluke to stay safe.

The City of Whitehorse Fire Department in the Northwest Territories of Canada holds three training sessions a week for their combined team of career and volunteer firefighters. Part of that training involves going into the "burn building" - a two-story fabrication structure specially made for practice fires. Trainees must enter the building, locate and extinguish the fire.

"The purpose of the burn building training is to get the firefighters experience in a safe environment, so they can respond with confidence on a real call," says Warren Zakus, Training Officer for the Whitehorse Fire Department.

One of the ways Zakus makes sure the environment is safe is using a digital thermometer and thermocouple probes, strategically located within the burn building - on the ceiling and floor of each room, and in the interior stairwell. Using a Fluke 52-II Thermometer with five 80PK-1 beaded probe thermocouples, the firefighters now know the actual temperatures within the building ensuring the safety of the trainees, and also providing them with valuable information.

"Part of the purpose of using the digital thermometer is to keep everyone safe. The other is to be able to truly educate the trainees on exactly how hot the environment will be as a fire passes through different stages," says Zakus. "They can really feel what they will be facing in the field and they know how to react."

Zakus says the thermometer and probes also allow him to better control the environment and ensure it is suitable to the level of experience of the group he is training at the time.

"We start the volunteers out at lower temperatures and easier tests than the kind of training we would do with a career veteran of the department."



Zakus chose the Fluke 52-II for several reasons. "When it came down to selecting a thermometer for our training sessions, I wanted one with dual displays so we can see two readings at a time and compare temperatures at the ceiling and floor during the same fire. I also wanted the data logging and recording for comparison between sessions. I found the Fluke 52 had all the features I needed," he says. "And I already owned a couple of Fluke tools for my personal use, so I knew they were really high quality and would stand up to the environment."

Despite having "melted lots of stuff in the past" in the burn building, Zakus says the Fluke probes have stood up to the test so far.

"They get sooty sometimes, but they've never been damaged. I know they're used in other fire-related industries too, like building materials testing for firewalls and fire doors."

Zakus says that the new, in-depth temperature information has been welcomed by his trainees.

"They like the whole system. The new guys are really interested in knowing the true experience, and the veterans take comfort in knowing the real temperature going in. They know they can handle the heat."

For the future, Zakus plans to take the 52-II involvement in the training program a step further.

"What I'm working on now is integrating the information we capture from the data logging and recording feature into our training videos. I want to show the real-

time temperature on the bottom corner of the screen as the firefighters move through the building on the video. I think that would be really valuable for classroom sessions."

The first priority, however, is always safety.

"We now know exactly what they're facing when they go in. We know exactly how long they've been exposed to a certain level of heat, and how long they can remain in the building as the fire progresses," he says. "It's all about keeping everyone safe."



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