

Fire Fighting From a Full Tank

It was a small fire, caused by a routine welding accident. It was the kind of fire that is normally snuffed out in minutes without any serious damage being done. That should have been the end of the story when Chapman's Ice Cream Factory in Markdale Ontario caught fire in the summer of 2009.

Unfortunately the story didn't end here. The volunteer fire department answered the call in a timely manner but soon ran out of water. A late night fire at the town landfill site had depleted their reserves and lowered pressure levels in the Municipal water system. The entire factory, of Markdale's largest employer, was destroyed that day.

Running out of water, while fire fighting, creates a very helpless feeling. It is the theme of nightmares.

In Beverly, a suburb of Prince George British Columbia, the volunteer fire department recently constructed a new fire hall. As the site is serviced with well water there was a concern that an adequate volume may not be readily available to test and refill the fire trucks, especially in emergency situations. The decision was made to install a 90,000 liter underground holding tank on site. By locating the tank underground it was out of sight yet could easily be accessed by the heavy fire trucks. Set below the frost line, winter freezing was not an issue.

The department selected a 3000 mm diameter by 13 meter long corrugated steel pipe (CSP) holding tank. Other tank materials were considered but CSP provided considerable savings. The CSP is 3.5mm thick Polymer Laminated Steel with a 125 x 25 mm corrugation profile. The tank was supplied in a single length with reinforced bulkheads welded to each end. A gasket was inserted into the lock-seam during CSP manufacture to ensure water tightness. Access holes on the tank and large diameter piping and vents ensure high volume capacity for emptying and filling the tank.



90,000 LITRE FIRE FIGHTING TANK

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The polymer laminate coating on galvanized steel provides long term durability for the system and helps to maintain clear water quality. It is a requirement that the pumper trucks be tested on a regular basis. For these tests large volumes of water are drawn from the tank, into the pumper truck and then back into the tank. The water is reused without taxing the municipal treated water and storm sewer systems.

Although not the case in Beverly, where there is a dependable supply of well water and electricity, fire fighting holding tanks are often filled by gravity with rainwater from rooftop drains.

It is reported that the installation went well and the Fire Chief and the Volunteers of Beverly are proud of their new fire hall and fire fighting tank.



BEAVERLY VOLUNTEER FIRE DEPARTMENT HALL AND HOLDING TANK



PUMP TRUCK FILLING