



Engineering Sciences Section – 2003

C16 A Flaming Farm Gasoline Tank Turned Into a Rocket

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The goals of this presentation are to describe a strange disastrous and lethal event, which may well happen again, as is apparent after determining the cause. Beware the circumstances and note the conditions!

The subject gasoline storage tank was the standard type erected on a steel stand above ground, the type used on farms in Canada and the U.S. It had two compartments each with a top filler cap and each with a pressure relief valve. These standard tanks have a gravity flow coming from each compartment, each with an external valve/hose and a standard hand nozzle/closing valve similar to gasoline service stations.

Both tanks had been filled on the previous day. It was hot spring weather. Vented gasoline vapors from the rear compartment filler cap ignited producing a 6-10 ft. flaming torch over the filler cap. The cause of ignition was never determined although it is strongly suspected that the power company's service Triplex was the cause as it passed directly above the tank and there was certain metallurgical evidence on the Triplex cable which supported such a suspicion.

Rural neighbors and the local village fire department gathered at a "safe" distance. The rear compartment of the tank exploded blowing the end out of the compartment driving the tank 400 feet across the farmyard at which point it threw flaming fuel on a spectator neighbor family. Tragically this family was virtually wiped out, three children and the mother - truly a Greek tragedy!

One sentence of the statement made by a witness spectator confirmed the cause of the explosion and the rocket launching. The author will explain all with photographs and diagrams. Perhaps the classic Hollywood gas tank explosion is not entirely imagination and drama - is there a real danger of a similar occurrence?

The conditions and situation required for such an accident will be explained and those conditions are obvious once the cause is determined.

Gasoline Storage, Explosions, Gasoline Precautions