

# B.L.E.V.E. in action

## Boiling Liquid Expanding Vapor Explosion

Heated liquid expands transforming rapidly into vapor which in turn causes a pressure build up inside a closed container. If the container is not designed to hold that pressure the pressure will cause the container to fail, releasing all of the vapor in the form of an explosion. If the vaporized liquid is flammable and mixes with air it can easily be ignited by an ignition source.



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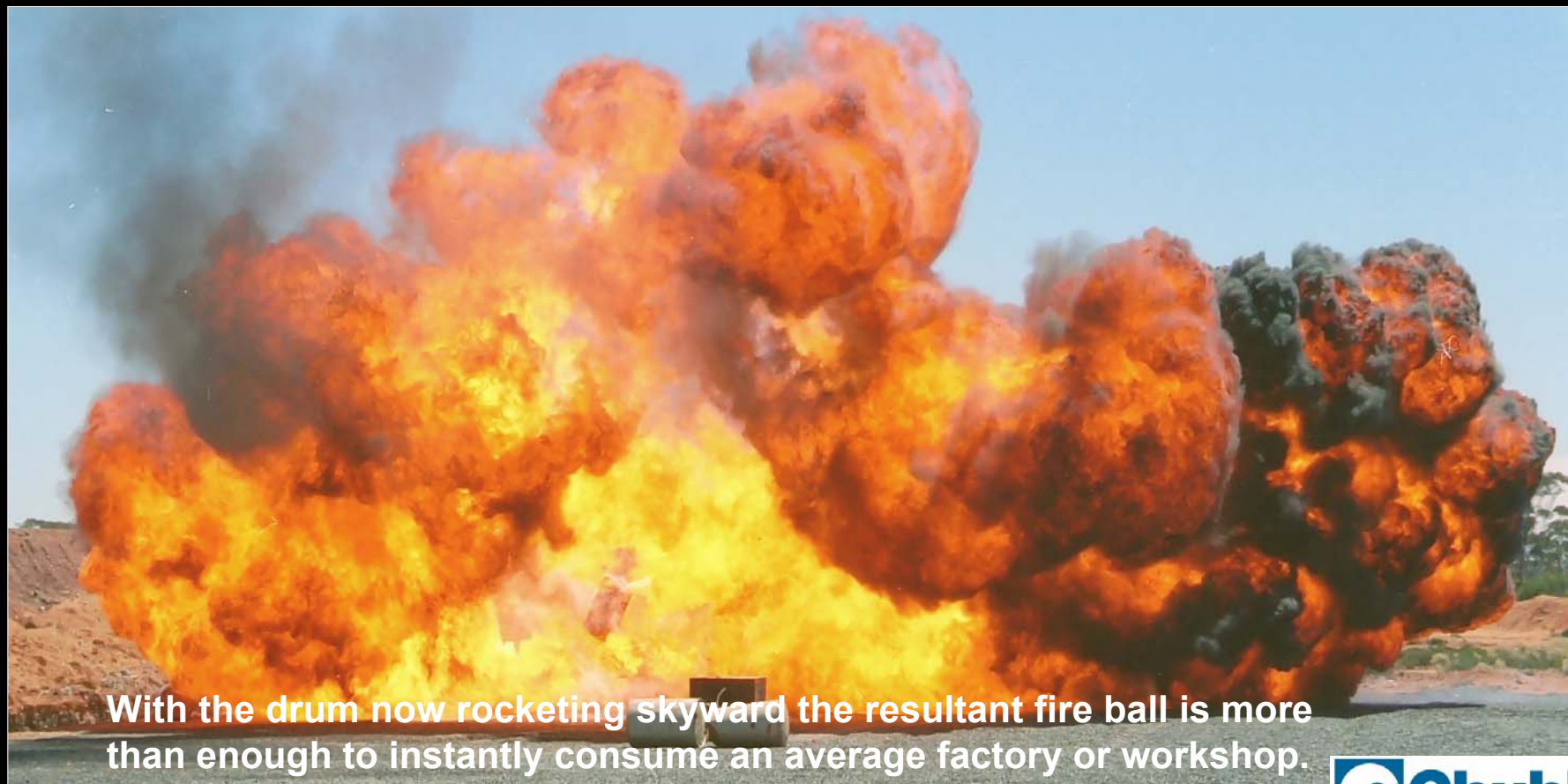
When 10 liters of diesel was heated in a 205lt drum, the expanding vapor pressurized the drum causing the ends to bulge. Vaporized diesel is forced past the heat damaged 50mm aluminum bung and ignited....

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With a sudden and explosive release of high pressure diesel vapor the drum is propelled into a 360 degree spin, discharging and mixing it's contents with air, igniting and developing into a super heated fire ball.

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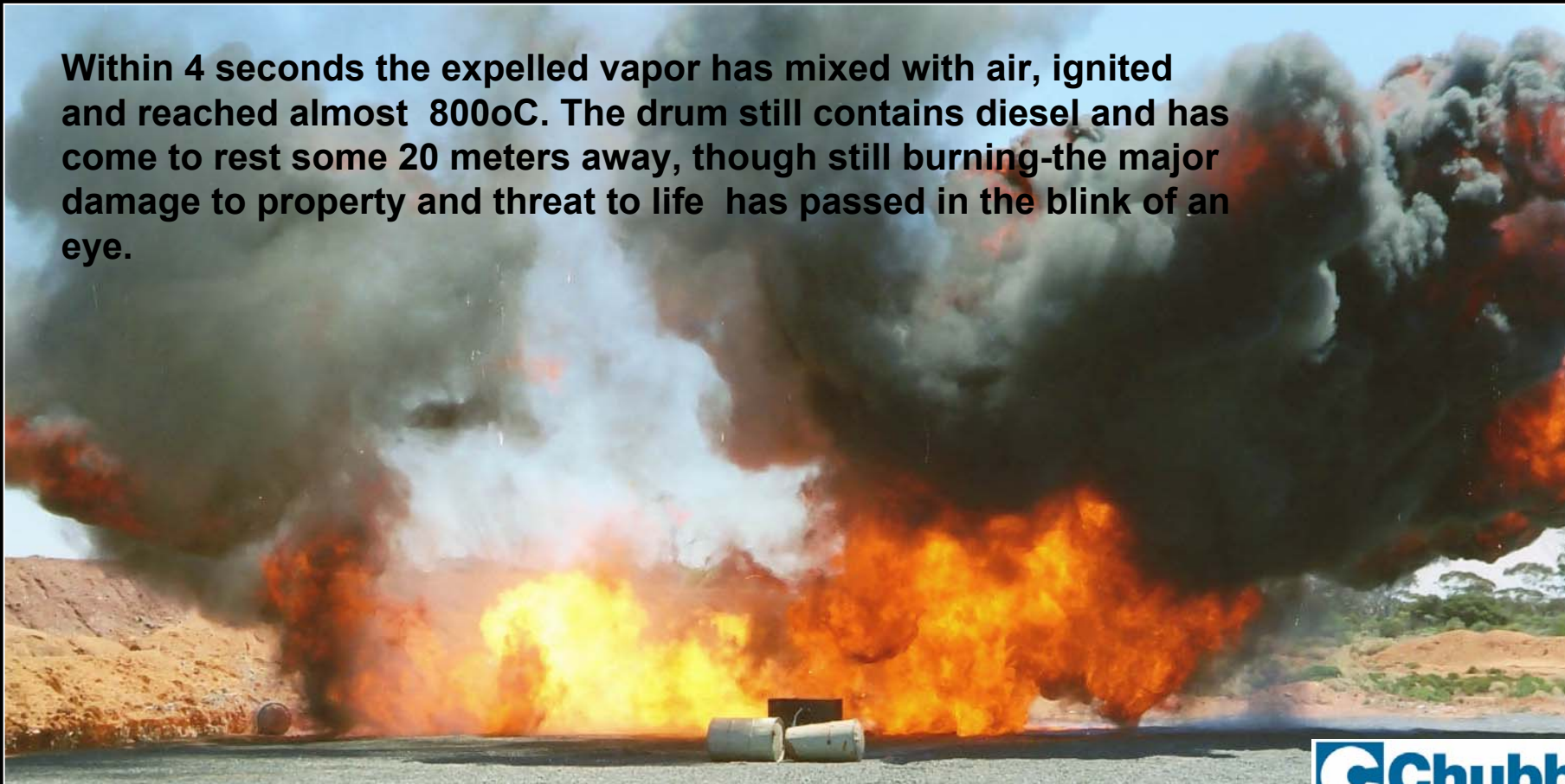


With the drum now rocketing skyward the resultant fire ball is more than enough to instantly consume an average factory or workshop.

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Within 4 seconds the expelled vapor has mixed with air, ignited and reached almost 800°C. The drum still contains diesel and has come to rest some 20 meters away, though still burning—the major damage to property and threat to life has passed in the blink of an eye.



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This demonstration was conducted in a controlled environment, life nor property was at risk, even so the images I captured were rare and highlighted the uncontrollable and unpredictable nature of a Boiling Liquid Expanding Vapor Explosion.

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