

## **PRESSURE IS DANGEROUS**

This document can be used to ensure that your staff are reminded regularly to ensure they work safely to protect themselves and others.

### **Use of a Regulating Device SANS 1475-1 (4.2 /4.5)**

#### **Direct Pressure:**

No person will use direct pressure from a Nitrogen cylinder to re-pressurize an extinguisher at all.

This practice is highly dangerous – and a regulator will always be used when re-pressurizing.

#### **Illegal Pipe:**

The only way direct pressure can be done is if a purpose built hose is manufactured, and that can only be done if a regulator “Bull Nose” is crimped onto a high pressure flexible pipe, and a fitting also crimped on to allow a connection to the extinguisher.

Hose clamps will not work due to the pressure being too great.

**Dismissal:** This practice is so dangerous that should any member of staff found in possession of one of the pipe / hoses will be dismissed no matter what their employment history is.

#### **Why such drastic measures:**

The method used is called cracking the valve, believing that they are only letting a little pressure out. This is simply untrue.

A nitrogen cylinder holds a pressure of 20000kpa when full at a temperature of 15c

Experiment 1: (temperature 17c)

#### **Virtually empty nitrogen cylinder was use.**

Full output pressure at that stage was 5000kpa on cracking the valve the pressure released was 4500kpa within a fraction of a second. That is 1000kpa below burst pressure of 5500kpa.

Experiment 2: (temperature 14c)

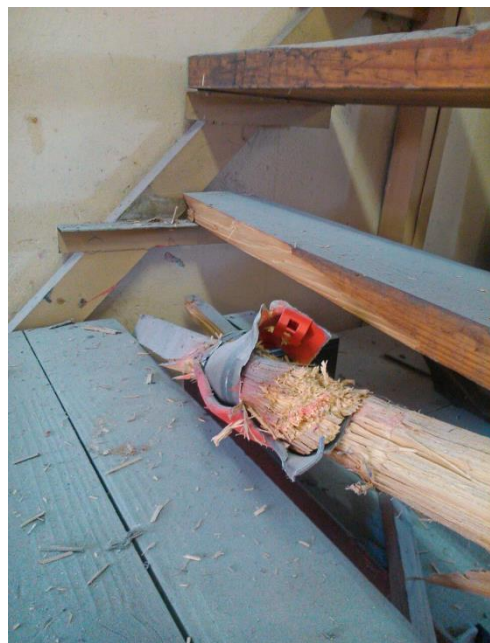
Almost full cylinder 17000kpa

Cracking valve produced 5000kpa within 2 seconds of a second and full pressure in 3 seconds

#### **Proof:**

Use a full Nitrogen cylinder with a regulator fitted and

Ensure input gauge is set at zero – Slowly open the valve, and see how quickly you can close again before it exceeds 1400kpa.- The speed it reaches the pressure is faster than you can react.





TOOL BOX 005

<b>Presented By:</b> Name: _____	<b>Date</b> _____	<b>Signature</b> _____
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