Fire Extinguisher Training

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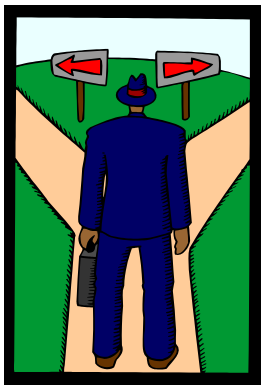
Fire Extinguisher Training

- Safety
- The Fire Triangle
- Classes of fires
- Types of extinguishers
- Using extinguishers
- Maintenance
- Practical

Safety



- Only extinguish fires, if safe to do so.
- If you choose to, do it safely
- For an extinguisher to be effective, it must be used in the first few minutes of fire ignition


FLAMMABLE


FC-8
FC-7


RESCUE
BRIGADE
FIRE
211 882
SCANIA
FIRE


DANGER—NO ENTRY
A.C.T. FIRE BRIGADE

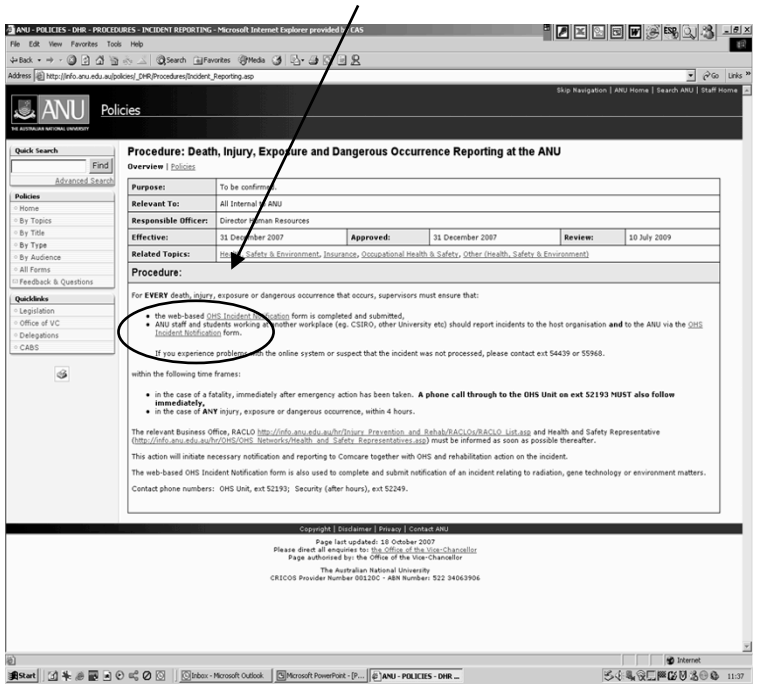
Safety

- If you think the fire is getting out of control, close doors behind you and sound the alarm and evacuate the building,

Safety

- After the event for you
  - Contact Building Manager/Building Custodian
  - Fill in a OH&S hazard exposure form – online
  - Follow up / report
  - Refill / Service Equipment

- Fire Safety Officer
  - Formal report to ANU
    - What happened
    - Recommendations / Actions
    - Procedures
    - Training



Safety

At it's most basic FIRE SAFETY, is based upon the principle of keeping fuel sources and ignition sources separate

What happens when you don't!


FIRE
ACT FIRE BRIGADE

Fighting a fire

- **Upon the detection of smoke and/or fire, follow the <u>RACE</u> plan described below:**

Rescue - Rescue/Remove person(s) from the immediate fire scene/ room

Alert - Alert personnel by activating the nearest fire alarm break glass then call the Fire Brigade 0-000 or 112 from a mobile.

Confine - Confine fire and smoke by closing all doors in the area

Extinguish - Extinguish a small fire by using a portable fire extinguisher

Rescue

- Tell people in the immediate area
- Move mobility impaired people
- Help people with hearing & sight difficulties
- Never enter smoke filled rooms

Alert

- Activate alarm by breaking the glass in the red break glass panel
- Ring 0-000 or 112 (mobile) to confirm fire
- Second call to ANU Security 52249

Confine

- Close all door between you and the fire
- Slow the spread of fire
- Reduce the amount of smoke

Extinguish

- Extinguish a small fire by using a portable fire extinguisher or use to escape from a large fire.
- Evacuate the building immediately
- Wait for the Fire Brigade to arrive

The Fire Triangle

FUEL Any combustible material - solid, liquid or gas.

HEAT Sufficient heat must be applied to raise the fuel to it's ignition

OXYGEN Sufficient oxygen must be present for fire to burn

The combination of these three elements is frequently referred to as the

Essentially, Fire extinguishers put out fire by taking away one or more elements of the "FIRE TRIANGLE"

Classes of Fire

- 6 classes of fires
  - Class A
  - Class B
  - Class C
  - Class D
  - Class E
  - Class F

Class A

- Ordinary combustibles
  - Wood, paper, plastics etc

Class B

- Flammable and combustible liquids
  - Fuels
  - Oils
  - Solvents
  - Chemicals

Class C

- Flammable gasses
  - LPG
  - Propane
  - Butane

Class D

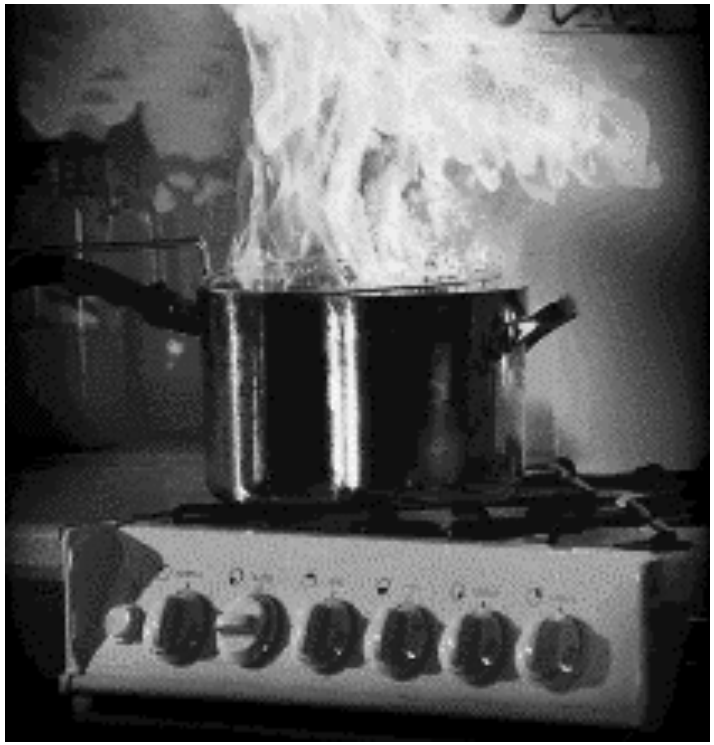
- **Combustible Metals**
  - **Magnesium burns at 2200 degrees**

Class E

- Electrical energised equipment
  - Computers
  - Appliances
  - UPS
  - Switchboards

Class F

- Cooking oils and fats
  - Woks
  - Deep fryers
  - Kitchen cooking



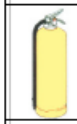
Extinguishers

- Correct type
- Size is sufficient

Types of extinguishers

- Water
- Wet Chemical
- Foam
- Dry Chemical Powder
- Carbon Dioxide
- Vaporising Liquid

Portable Fire Extinguisher Guide

Pre 1997	Current	Extinguishing Agent		Class A Wood Paper Plastics	Class B Flammable & Combustible Liquids	Class C Flammable Gasses	Class D Metal Fires	Class E Electrically Energised Equipment	Class F Cooking Oils and Fats	Comments
		**Water**		✓	✗	✗	**Use only special purpose extin-guishers and seek expert advice**	✗	✗	Dangerous if used on flammable liquid, energised electrical equipment and cooking oil/fat fires
		**Wet Chemical**		✓	✗	✗		✗	✓	Dangerous if used on energised electrical equipment
		**Foam**		✓	✓	✗		✗	Limited	Dangerous if used on energised electrical equipment
		**Powder**	(ABE)	✓	✓	✓		✓	✗	Check extinguisher to determine if it is a ABE or BE unit as the capability is different
			(BE)	✗	✓	✓		✓	✓	
		**Carbon Dioxide**		Limited	Limited	✗		✓	✗	Not suitable for outdoor use or smouldering deep seated A Class Fires
		**Vaporising Liquid**		✓	Limited	Limited		✓	✗	Check the characteristics of the specific extinguishing agent
		**Fire Blanket**		Limited	Limited	✗		✗	✓	Fire Blankets may be used as a thermal barrier against radiated heat and control a fire in clothes being worn by a person

✓ = the class or classes in which agent is most effective

✗ = not recommended for these class of fires

Limited = indicates that the Extinguishant is not the agent of choice for the class of fire, but may have a limited extinguishing capability.

Fire extinguishers are a small first attack fire appliance.
If you do not feel confident in operating one in an emergency situation, leave it.

Do not put yourself at risk.
Alert others in the vicinity and contact the Fire Brigade 000

Using an extinguisher

- Remember the acronym PASS

- Pull the pin
- Aim the extinguisher or nozzle at the base of the fire
- Squeeze the handle to release the extinguisher agent
- Sweep the extinguisher from side to side across the base of the fire until it appears to be out

Using an extinguisher

- Watch the extinguished fire for a few moments to see if it re-ignites
- Repeat if necessary

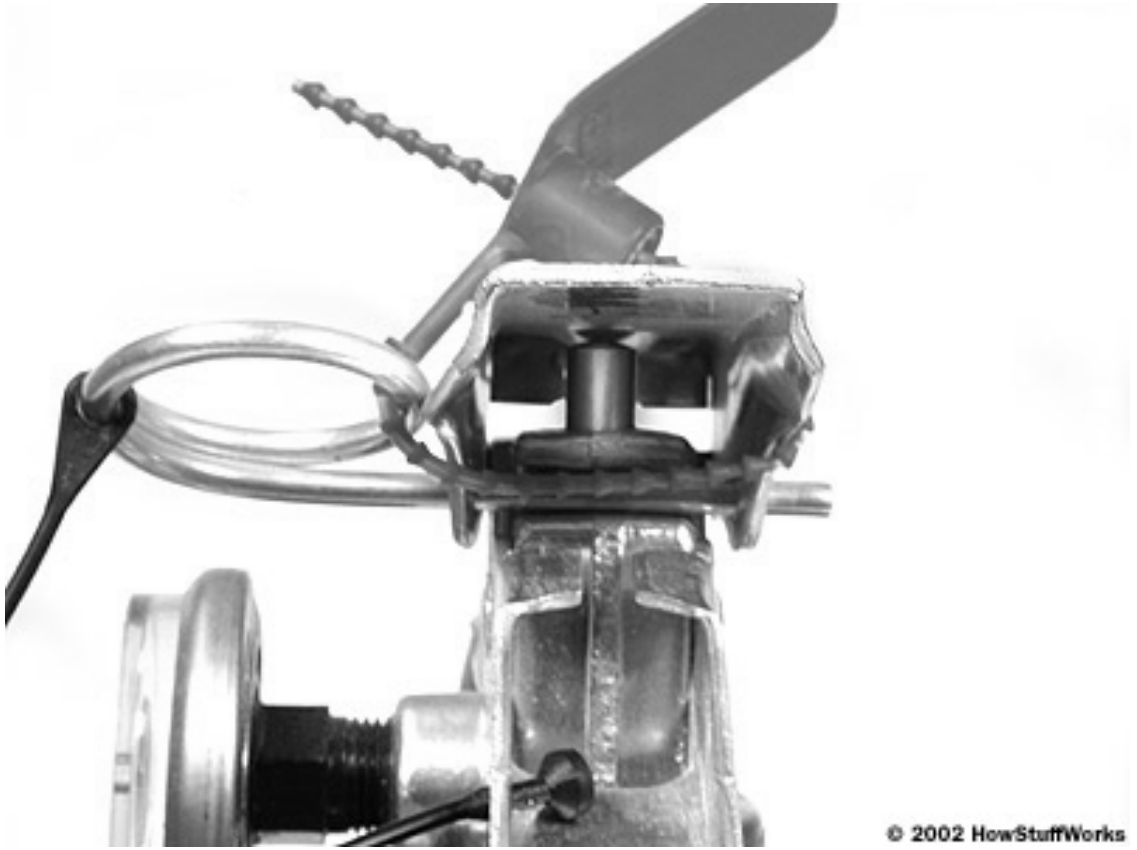
Maintenance

- Check the test tags
  - Need to be check 6 monthly

- Check pressure gauge
  - Needs to be in the green
  - Not all have one

Maintenance

- Check to see if the safety pin and plastic tag are in place

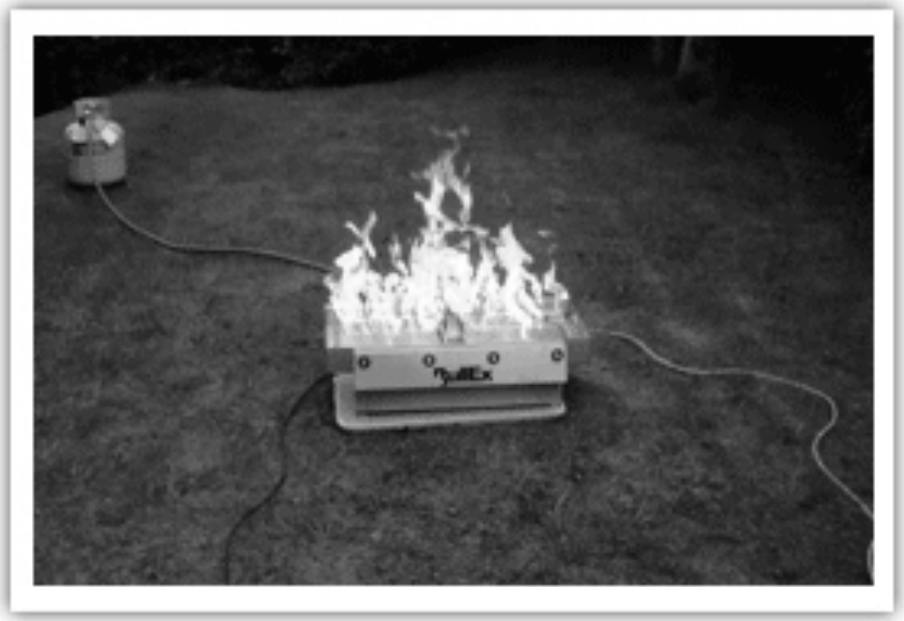


Maintenance

- If you use a fire extinguisher
- Find an empty fire extinguisher then tell or take the fire extinguisher to the Chief Warden to start the process of refilling it.

Practical

- Using the latest technology
- Replicate Class A, B, C and E fire
- 4 levels of difficulty
- Controlled environment



Objectives

- Fight a Class B level 3 fire individually
- Fight a Class E level 4 fire as a team

Temperatures of oil

Smoke Points

Sunflower	246 degrees C
Soybean	241 degrees C
Canola	238 degrees C
Corn	236 degrees C
Peanut	231 degrees C
Sesame	215 degrees C
Olive	190 degrees C
Lards	183 to 205 degrees C

An oil reaches its **flash point** about 320^{o}C

fire point slightly under 400^{o} C

Questions?