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| G:\6100_Performance_HR\6555 - Organisational Safety and Wellbeing\2. HSW - Systems and Strategy Team\Rebadging OSW Documents (Kristyn)\ITD logos\Updated 2018\Welding_word_banner_SOP.jpg**OXY – FUEL GAS WELDING** |
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| **DO NOT** use this equipment unless a teacher has instructed you in its safe use and operation and has given permission |

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| Approved welding glasses must be worn at all times. | Hair Protection circleLong and loose hair must be contained or restrained. |
| Foot Protection circleAppropriate protective footwear with substantial uppers must be worn. | ApronClose fitting protective clothing or overalls, leather apron and spats must be worn. |
| Prohibition circleRings and jewellery must not be worn. | Hand Protection circleOil free leather gloves must be worn when using this equipment. |
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### **PRE-OPERATIONAL SAFETY CHECKS**

1. **Check workspace to ensure that no slip/trip hazards are present.**
2. **Check work area is clean and free of grease, oil and flammable material.**
3. **Ensure gas hoses are in good condition and are not causing a trip hazard.**
4. **Inspect all equipment for signs of damage.**
5. **Check for ventilation and ensure fume extraction unit is on.**
6. **Gloves should be used to position and hold work.**

**DO NOT** use faulty equipment – report this immediately to your teacher.

PRESSURE SETTING

1. **Check the oxygen and acetylene/fuel regulator adjusting knobs are loose.**
2. **Check that both blowpipe valves are closed.**
3. **Slowly open the cylinder valves on each cylinder for half a turn only.**
4. **Screw in the regulator adjusting knobs slowly until the delivery pressure gauges register 70kPa.**
5. **Purge and check for constant oxygen gas flow.
- Open the oxygen blowpipe for two seconds valve and check the delivery gauge.
- If necessary, re-adjust the oxygen regulator to achieve a 70kPa pressure.
- Close the oxygen blowpipe valve.**
6. **Purge and check for constant acetylene/fuel gas flow.
- Open the acetylene/fuel blowpipe valve for two seconds and check the delivery gauge
- If necessary, re-adjust the acetylene regulator to achieve a 70kPa pressure.
- Check the acetylene blowpipe valve.**

LIGHTING UP

1. **Open the acetylene/fuel blowpipe valve slightly and light the blowpipe with a flint lighter.**
2. **Continue to slowly open the acetylene/fuel valve until the flame no longer produces soot.**
3. **Slowly open the oxygen blowpipe valve until a neutral flame is produced.**

SHUTTING OFF THE BLOWPIPE

1. **Close the acetylene/fuel blowpipe valve first.**
2. **Then close the oxygen blowpipe valve.**

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| **CLOSING DOWN**1. **Close down both cylinder valves.**
2. **Open oxygen blowpipe valve to allow the gas to drain out.**
3. **When oxygen gauges read zero, unscrew regulator-adjusting knob.**
4. **Close oxygen blowpipe valve.**
5. **Turn off acetylene/fuel cylinder valve.**
6. **Open acetylene/fuel blowpipe valve and release gas.**
7. **When acetylene/fuel gauges read zero, release regulator-adjusting knob.**
8. **Close acetylene/fuel blowpipe valve.**
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HOUSEKEEPING

1. **Hang up welding blowpipe and hoses.**
2. **Turn off fume extraction.**
3. **Leave the work area in a safe, clean and tidy condition.**

#### POTENTIAL HAZARDS

* **Flying sparks ◼ Fumes and vapours ◼ Flashbacks**
* **IR radiation burns to eyes and skin ◼ Fire ◼ Explosion by gas leakage**

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| **FORBIDDEN****◼ Lighting the blowpipe with matches or lighters.****◼ Using oil, greases or other hydrocarbons near or around oxy/acetylene gasses.****◼ Using oxygen as a substitute for compressed air.** |

