# WTIA Guidance Note 8: Recommended Oxy-Fuel Gas Daily Inspection and Pre-Start Check List

**Version 1 – 7/05/03**

| ITEM | DESCRIPTION OF INSPECTIONS TO BE CARRIED OUT | STANDARD |
|---|---|---|
| **Gas Cylinders** | Check cylinders are secured and in an upright position. Check cylinder labelling. Check there is no mechanical damage. Check condition of the seat and ensure it is clean and dry. USE NO OIL! | AS 2030 |
| **Cylinder Valve** | Inspect the valve for damage. If the valve appears to be damaged DO NOT OPEN. You may not be able to close it again. Crack cylinder valve prior to fitting gauges, do not cover with hand. | AS 2473 |
| **Regulators** | Check type, rating and condition. When fitting regulators to cylinders ensure they are not contaminated with oil or grease. Face gauges away from operator when opening cylinder valve. | AS 4267 |
| **Flash Back Arrestors** | FBAs should be fitted at both the regulator and blowpipe ends of hose. Check current inspection tag or sticker. | AS 4603 |
| **Hoses** | Check correct hoses are fitted. Oxygen – BLUE. Acetylene – RED. LPG – ORANGE. Check hoses for damage particularly at junctions to fittings where fatigue damage occurs. Maximum length of standard hoses is 15 metres. Use larger diameter hoses for increased length or high draw rate attachments e.g. heating torches. Refer recommendations of equipment manufacturers. | AS1335<br>AS/NZS 1869<br>AS 4839 |
| **Blowpipe** | Ensure the blowpipe is in good condition, the body is true, valves open and close fully, threads and seats are in good condition. | AS 4839 |
| **Tip** | Check the tip condition, seats are in good condition, face is flat and clean, holes are open and free of contamination, tip is the right size and type for the job in hand. Set regulator pressures to suit tip and plate thickness. | AS 4839 |
| **Purging and Pressurising** | • Ensure blowpipe valves are closed.<br>• Ensure regulators are wound all the way out.<br>• Slowly open cylinder valves (one full turn only on fuel gas).<br>• Wind regulators in until required line pressure is indicated.<br>• Individually open the blowpipe valves and allow gas to run through the line, and then close the blowpipe valve before opening the other one. | AS 4839 |
| **Pressure Test** | • With the system purged and pressurised and blowpipe valves closed, close the cylinder valves.<br>• Observe the regulator valves for one minute. Note any anti-clockwise movement of the cylinder pressure or regulated pressure gauges.<br>• Open the cylinder valves. Note any clockwise movement of the cylinder pressure or regulated pressure gauges.<br>• A change in the cylinder pressure gauge usually indicates a leak between the cylinder valve and the regulator diaphragm. A change in the regulated pressure gauge usually indicates a leak downstream of the regulator.<br>• Find and eliminate all leaks. Use a soapy water technique to find leaks. | AS 4839 |
| **Lighting up** | • Use approved lighting flint (not matches or cigarette lighter)<br>• Light fuel gas with medium flow<br>• Open oxy feed blowpipe valve to achieve neutral flame | AS 4839 |
| **Shutting down** | • Shut down fuel feed blowpipe valve.<br>• Shut down oxy feed blowpipe valve.<br>• Close cylinder valves and depressurise blowpipe. | AS 4839 |
| **Storage** | • Store in approved storage areas only.<br>• Keep different gas types separated and empty and full cylinders segregated<br>• Be aware of mandatory requirements for storing gas cylinders. | AS 4289<br>AS 4332<br>AS 4839 |
| **Transport** | • Transport in secure upright position.<br>• Be aware of mandatory requirements for transporting gas cylinders. | AS 4332<br>AS 4839 |
| **Inspection Tag** | Check that a current inspection tag, traceable to your equipment maintenance register, is attached to the equipment. | |

**Notes**

- If on completion of this pre-start checklist you are unsure of the safety of any part of this equipment - DO NOT USE. Isolate the equipment and notify your supervisor immediately, in order that remedial action can be taken.
- Fumes are generated by hot work. Take adequate precautions to limit exposure to fumes from welding consumables or surface coatings and contaminants.
- Oils, greases and other organic compounds may become highly flammable or explosive in the presence of pressurised oxygen. Ensure all fittings are clean and dry before assembly. Ensure there is no opportunity for contamination of parts. Ensure that you have all necessary Personal Protective Equipment in place, in good order and dry, before turning on the oxy-fuel gas equipment.

Welding Technology Institute of Australia
Unit 3, Suite 2, 9 Parramatta Road, Lidcombe, 2141. PO Box 6165, Silverwater, NSW 1811
Phone: (02) 9748 4443 Fax: (02) 9748 2858
E-mail info@wtia.com.au URL http://www.wtia.com.au ABN 69 003 696 526