



Canadian Pipe Supply Ltd.
Toronto - Orillia - Tillsonburg - Ottawa

**OPERATING INSTRUCTIONS
FOR CANADIAN PIPE SUPPLY LTD.
LANCE PIPE/THERMIC LANCE/BURNING BAR**

(abbreviated version found in our brochure with product size and description)

Lance pipe is a hollow pipe and Thermic Lance (Burning Bar) is a pipe filled with wire rods. Both the Lance Pipe and the Thermic Lance are connected to a source of oxygen and ignited. As the Lance Pipe/Thermic lance is consumed, heat is generated to enable the Lance Pipe/Thermic Lance to melt a variety of materials.

Lance Pipe/Thermic Lance can be used for multiple applications but the following safety procedures apply to all users and applications.

Canadian Pipe Supply Ltd. offers all the purchasers of our lance pipe and thermic lance pipe the opportunity of on-site demonstration on the SAFE use of its products. We cannot stress often enough that working with oxygen and combustible materials requires

- *education/training by the operators,*
- *continual vigilance when using the lance pipe/thermic lance,*
- *awareness of the working area and the potential hazards, i.e. physical or space restrictions, tripping, lack of ventilation*
- *use of aluminized safety clothing.*

STORAGE AND HANDLING

1. All Canadian Pipe Supply Ltd. Products are cleaned and degreased for use with oxygen. Purchasers are advised to protect the pipe from oil, grease and other substances that have a reaction in the presence of oxygen. If oil or grease are detected by the operator, DO NOT USE.
2. Canadian Pipe Supply Ltd. recommends storing product inside, or if outside, protected to prevent excess rust formation.

EQUIPMENT RECOMMENDED

1. Aluminized suit (fire retardant) and fire retardant gloves.
2. Hard hat with full face shield (tinted #5 or #6) safety glasses
3. Steel toes shoes – aluminized shoe covering (spats).
4. Oxygen hose and fittings, a supply of oxygen capable of 40 cubic feet per minute at 75-100 psi and a high flow oxygen regulator
5. Recommended Canpipe Holder

EQUIPMENT SET UP

1. Place oxygen supply in a location protected from heat, sparks, or slag from the burning operation.
2. A clear, hazard- free, work site is *mandatory*.
3. Always use an oxygen hose with enough length to keep the lance pipe/thermic lance a safe distance from the oxygen cylinders.
4. Where proper ventilation is not possible, a ventilated aluminized hood or a ventilated aluminized hood with fresh air supply is recommended.
5. A Material Safety Data Sheet for the lance pipe/thermic lance should be available to the operator for review and understanding as well a MSDS for the material being cut. The operator should have a proper understanding of material he is working with.

PROCEDURE

1. Start by ensuring the oxygen source shut off.
2. Check lance pipe/thermic lance ends. Ensure that ends are free of dirt and other obstructions.
3. Check the holder. Ensure that holder is free of dirt, oil, grease. (See Canadian Pipe Supply Ltd. instructions on use of holder - follow precautions) If operator suspects damage, DO NOT USE.
4. Check to see that the lance holder valve opens and closes freely.
5. Check that lance holder valve is now in the closed position.
6. Connect all parts and turn oxygen on at source, with holder valve in closed position.
7. Check all hoses, fittings and handle connections for leaks prior to use.
8. Check that oxygen hose is a high pressure hose and that there are no kinks in the hose.
9. Set oxygen to desired operating pressure, 75-100 psi. DO NOT EXCEED 200 psi.
10. Ensure lance pipe is pointed towards work site.
11. Ensure oxygen flow by opening holder valve and then closing once confirmed.
12. Make sure that workers are protected from splash back by outfitting them with protective wear.

PREPARE FOR IGNITION

13. Heat the tip of the lance pipe until outer pipe and/or wire rods are “cherry” red.
14. Slowly open the holder valve until completely opened. If the lance tip is properly heated, the end will light up and be ready for cutting.
15. Make any necessary adjustments to oxygen flow and begin to cut.
16. If the lance pipe does not ignite, shut off the holder valve and repeat starting at instruction #13.
17. If difficulty continues CONTACT SUPERVISOR.

18. Cutting can begin as soon as lance is properly lit. At any time during cutting operation the lance can be extinguished by closing oxygen control valve. Lance will not burn without oxygen flowing through pipe.
19. The speed of the cut will depend on the ability of the material to oxidize. Materials that oxidize rapidly will cut faster than materials that do not oxidize such as cast iron or concrete.
20. For non ferrous material, concrete and refractory, the cutting method is to heat material until it reaches its melting point and blow the molten material out of the kerf with oxygen pressure. Cutting these materials is a much slower process than cutting steel or stainless steel and requires higher oxygen pressure (125 to 150 psi).
21. If a new lance is required, turn off oxygen, and relight the new lance as per above instructions.
22. When lancing is completed, turn off oxygen at source, disconnect hoses and equipment and return to designated storage area.

CANADIAN PIPE SUPPLY LIMITED is committed to the safety of its employees and customers. Committing to the following will help to ensure the safe use of our products.

- Supervisor/employee training,
- Awareness and practise of safety precautions,
- Care of the work area
- Vigilance on the part of supervisors and employees

Canadian Pipe Supply Ltd. understands that our product is used on a 7 day 24 hour basis by many of its customers and provides emergency telephone numbers for speedy response to all questions and needs.

416-244-6476

evenings/weekends

416-247-5707



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Safety requirements for the use of lance pipe/Thermic lance (burning bars)

Due to the volatile nature of the lance pipe/thermic lance, personal safety depends on closely adhering to the practice of following all safety rules and regulations issued for use with this type of product.

Improper use of lance pipe/thermic lance can result in serious personal injury. It is essential that these cutting tools be used in accordance with these instructions set out in this manual in conjunction with site specific safety operating procedures.

Basic Requirements:

Use of appropriate personal safety equipment

General safety regarding the use of oxygen

Safe use of Lance Pipe/Thermic Lance

Awareness of site conditions such as confined space, fume collection, site specific hazards, oxygen supply systems

Pre start inspections

Following Manufacturer's recommendations

Checks for contamination