

## **Air Supply for Successful Dry Ice Blasting**

To get the best productivity from your dry ice blasting, please evaluate your compressed air supply for the following:

- pressure
- flow
- dryness
- connectivity (to air piping and electricity)

The air line pressure should be at least 70 psig (pounds per square inch gauge), 80 psig or more is better.

The air flow needs to be 150 to 200 s.c.f.m (standard cubic feet per minute). The diameter of the supply line becomes important to maintain the required flow. A one-inch diameter line is best. If only a 3/4-inch line is available, or there is a 3/4-inch restriction in the line, you can get by if the flow is adequate. This means a minimum compressor size of 25 horsepower. Be sure that other work is not scheduled to use the air supply at the same time as the dry ice blasting.

Dryness of the air supply helps assure trouble-free dry ice blasting. Achieving a lower "dew point" in the air supply by allowing the air to cool (aftercooling) after it is compressed will help assure trouble-free dry ice blasting. As the dry ice used in blast cleaning is very cold (-110 degrees F.) the less moisture in the air supply the better.

To connect to the dry ice blasting equipment, you will need a one-inch-diameter N.P.T. (national pipe thread - tapered) MALE fitting on a full-flow shutoff valve. Your approximate working radius from the air drop (connection point) will be the sum of the air supply hose plus the blast hose on your equipment. If you need a working radius greater than 200 feet, you need a 1.5-inch air hose to maintain air pressure and flow. There must be a standard 120-volt electrical service outlet within 50 feet of the actual cleaning position.

Noise levels up to 120 Dba will be produced by the blasting process, so hearing protection will be required by all personnel within 150 feet of the dry ice blasting equipment.

Carbon dioxide levels in the air at the blasting site will increase. CO<sub>2</sub> is heavier than air and thus will accumulate in lower levels like tank bottoms and pits. Low areas and small spaces need additional ventilation. Any space smaller than 30,000 cubic feet in volume needs forced ventilation to assure adequate breathing air for workers.

Effluent scatter will occur from dry ice blasting, although the dry ice pellets will evaporate. Work involving viscous or dusty residue should involve planning for draping plastic or canvas protection over areas subject to effluent scatter.