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VENTILATION MEASUREMENTS IN CARPENTER SHOP

The elephant trunk exhaust ventilation in the welding booth was remeasured on June 1 to test the effect of the newly installed Ruemelin cone. The Alnor Thermo Anemometer, Type 8500 was used to take ten readings across the face of the cone.

Average velocity: 483.5 fpm
Area of cone face: .532 sq. ft.
Calculated Q: 257.22 cfm
Distance from cone face where V=100 fpm: 1.7 inches

On March 8 the exhaust ventilation without the cone was measured at 2000 fpm across the face of the trunk. While the exhaust area was much smaller, the high exhaust rate was interfering with welding when too close. The above measurements show the cone has reduced the exhaust flow rate, however, the cone must now be 1.7 inches from the point of weld to meet Du Pont standards. Since placement this close is impossible, this ventilation should be altered in one of the following ways: a) change to smaller cone which may reduce flow less; b) increase Q of fan system with more powerful fan.

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