PLAINTIFF'S
EXHIBIT
DUP-1689

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January 18, 1983

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VENTILATION MEASUREMENT OF WELDING EXHAUST

The elephant trunk exhaust ventilation in the welding booth in the Carpenter Shop was measured on January 11 using an Alnor Thermo Anemometer, Type 8500. The average face velocity of the trunk was between 1500 and 2000 ft/min. Since the surface area of the trunk opening is approximately 0.0985 ft^2, the total exhaust is 147.75 cfm. According to Du Pont Standard H1U and OSHA, given this exhaust rate, the point of welding can be no further than 4.45 inches from the end of the trunk.

Mechanical local exhaust ventilation is required when welding on galvanized. However, the welding room may be defined as a confined space (less than 10,000 ft^3 of space per welder and ceiling less than 16 feet high), which requires mechanical ventilation even when welding on non-toxic metals. Some improvement in exhaust rate may be had by plugging the hole in the ceiling at the base of the trunk. Also, a conical or flanged piece on the end of the trunk should increase exhaust removal from the area of welding.

CMB:sgd

DUP 0814690