



Control of Wood Dust from Random Orbital Hand Sanders

To cite this article: (2001) Control of Wood Dust from Random Orbital Hand Sanders, Applied Occupational and Environmental Hygiene, 16:12, 1091-1091, DOI: [10.1080/10473220127406](https://doi.org/10.1080/10473220127406)

To link to this article: <https://doi.org/10.1080/10473220127406>



Published online: 30 Nov 2010.



Submit your article to this journal [↗](#)



Article views: 21



View related articles [↗](#)

Hazard Controls

Control of Wood Dust from Random Orbital Hand Sanders

From the National Institute for Occupational Safety and Health

Description of Hazard

Random orbital (rotating) hand sanders have been found to create significant amounts of wood dust. Workers exposed to wood dusts have experienced a variety of adverse health effects such as eye and skin irritation, allergy, reduced lung function, asthma, and nasal cancer. Therefore, the National Institute for Occupational Safety and Health (NIOSH) recommends limiting wood dust exposures to prevent these health problems.

Description of Controls

NIOSH researchers found that wood dust created by random orbital hand sanders is often poorly controlled. To address this problem, researchers designed and tested a new control system for these hand sanders that significantly reduced dust emissions.

Additional Exhaust System

Random orbital hand sanders are widely used in woodworking applications. The dust generated by these tools is sometimes controlled by an aspirator in combination with a perforated sanding pad. The aspirator creates a vacuum to draw wood dust up through holes in the sanding pad. It was found that, in spite of this control, large amounts of wood dust were still emitted into the workroom. A new control system that uses

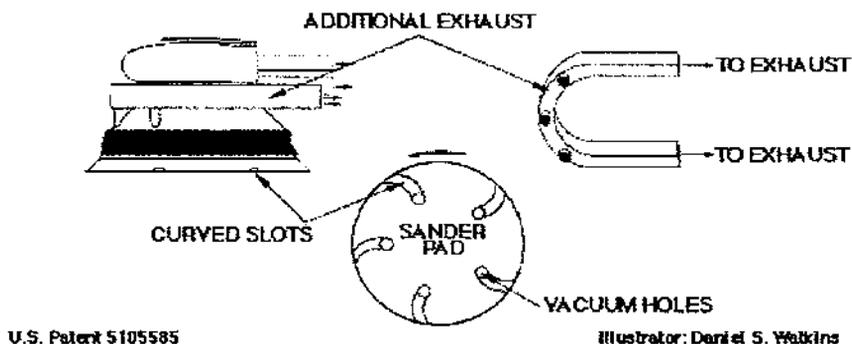


FIGURE 1

additional exhaust and a slotted sanding pad was implemented to increase dust control. (See Figure 1.) The increased suction of the additional exhaust alone causes the sanding pad to be pulled to the work surface making the tool difficult to use. To alleviate this problem, curved slots are cut into the sanding pad. This relieves the pressure caused by the extra suction and provides additional dust control at the pad periphery. The new dust control system reduces dust emissions by approximately 90 percent compared with the currently used aspirator-controlled sander. The new sander does not interfere with the operator, requires no special maintenance, and is inexpensive to operate. This dust control device is not currently commercially available. Call NIOSH for more information.

For More Information

To obtain more information about controlling this hazard, or for informa-

tion on other occupational health and safety issues, call the National Institute for Occupational Safety and Health (NIOSH) at 1-800-35-NIOSH (1-800-356-4674).

NIOSH is the federal agency responsible for conducting research and making recommendations for preventing work-related illness and injuries. Hazard Controls are based on research studies that show reduced worker exposure to hazardous agents or activities.

Acknowledgments

The principal contributors to this Hazard Controls are Jennifer L. Topmiller, Division of Physical Sciences and Engineering, and Jerome P. Flesch, Education and Information Division, NIOSH.

This Hazard Controls is DHHS (NIOSH) Publication No. 96-125.