

A **23 year old male** employee was **electrocuted** while using a large walk behind grinder on a concrete floor at a new construction site. The contractor had been sub-contracted to complete the flooring work at the site using four SASE grinders working in two shifts.

The grinders were powered by plugging the cord attached to the grinder into a cord that was hardwired into a vacuum. The vacuum was powered by multiple extension cords run from a Wacker Neuson G100 generator located outside the building on the construction site. Employees had not utilized the permanent power of the building because there were no 3 phase outlets available in the area.

The Bull 1250 vacuum was positioned in the hallway right outside the door of room 208 where the victim was working. From interviews, it appears that the victim was attempting to reposition the grinder when the power cord got caught around the drive wheel pulling it tight against the machine frame and cutting into the cord. This cut exposed wires inside the cord and struck the frame, energizing the frame of the grinder. The employee's legs then contacted the kickstand portion of the machine, which was energized.

During the course of the inspection, it was determined that extension cords were plugged into pig tails attached to the generator and running up the side of the building, into the hallway, and plugged into junction boxes attached to the vacuum. It was found that there were no ground fault circuit interrupters installed on the pigtail receptacles wired directly into the generator and the main circuit breaker on the Wacker Neuson generator had a 500 amp circuit breaker instead of a 250 amp circuit breaker as recommended by the manufacturer. Essentially, with the larger circuit breaker, the ground fault would not have tripped even if it were in place.

**Citation(s) as Originally Issued**

A complete inspection was conducted at the accident scene. Some of the items cited may not directly relate to the fatality.

**Citation 1 Item 1**

**Type of Violation: Serious**

**\$500**

**29 CFR 1926.403(b)(2):** Listed, labeled or certified equipment was not installed and used in accordance with instructions in the listing, labeling or certification.

In that two 150foot extension cords, plugged together (in a daisy chained manner) were being used to supply power to the SASE vacuum and grinder in the Tray Pack area of the construction site.

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**Citation 1 Item 2**                      **Type of Violation: Serious**                      **\$4,000**

**29 CFR 1926.404(b)(1)(ii):** Where an assured equipment grounding program was not utilized on the construction site, the 3 phase/ 480 volt receptacle outlets, which were not part of the permanent wiring of the building or structure and which are in use by employees, did not have approved ground fault circuit interrupters for personal protection.

In that the Wacker Neuson model# G100, serial# 5888263, was not equipped with ground fault circuit interrupters where three pigtail receptacles had been wired directly into the bus bar and were providing power to three SASE vacuums and grinders.

**Citation 1 Item 3**                      **Type of Violation: Serious**                      **\$4,000**

**29 CFR 1926.416(c):** Load ratings. In existing installations changes in circuit protection were made to increase the load in excess of the load rating of the circuit wiring.

In that the main circuit breaker on the Wacker Neuson G100 generator, being used to provide 3 phase/460 volts of power to the SASE vacuums/ grinders, had been changed from 250 amp (manufacturer recommended) to 500amp.

**Citation 2 Item 1a**                      **Type of Violation: Other-than-Serious**                      **\$100**

**29 CFR 1910.1200(e)(1):** The employer did not develop, implement, and/or maintain at the workplace a written hazard communication program which describes how the criteria specified in 29 CFR 1910.1200(f), (g), and (h) will be met:

[as adopted by reference in 29CFR1926.59]

In that a Hazardous Communication Program had not been developed and implemented to address chemicals employees are exposed to such as, but not limited to concrete dust, carbon monoxide, and propane.

**Citation 2 Item 1b**                      **Type of Violation: Other-than-Serious**                      **\$0**

**29 CFR 1910.1200(g)(8):** The employer did not ensure that safety data sheets were readily accessible to the employees in their work area during each shift for chemicals used:

[as adopted by reference in 29CFR1926.59]

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In that safety data sheets (SDS) were not available at the site for all chemicals, employees were exposed to such as, but not limited to: concrete dust, propane, and carbon monoxide.

**Citation 2 Item 1c**                      **Type of Violation:**      **Other-than-Serious**                      **\$0**

**29 CFR 1910.1200(h)(1):** Employees were not provided effective information and training on hazardous chemicals or materials in their work area at the time of their initial assignment and whenever a new hazard was introduced into their work area:

[as adopted by reference in 29CFR1926.59]

In that employees working at the construction site located at 10 McKnight Road, had not received information and training regarding the chemicals they are potentially exposed to such as, but not limited to; carbon monoxide, propane, and concrete dust.





