

Electrocution – Inspection #1097559

A **26 year old male** employee was electrocuted after coming into contact with an energized lifting table. On the day of the accident, the victim was using an air hose and broom to clean a six inch work area between the Lauderdale-Hamilton brand gang rip saw and a lifting table. Shortly afterwards, the victim was found lying face down, and unresponsive, his body still in contact with the two machines. When an employee attempted to move the body to administer first aid, he was shocked. During the investigation it was determined, that the lifting table was equipped with a flexible power cord connected to a receptacle fixed to the frame of the gang rip saw. The grounding wire located inside the receptacle was covered in insulation, rendering it ineffective. In addition, the flexible power cord revealed seven areas of damage to the sheath, and insulation, including two complete breaks which were spliced together, and then covered by electrical tape. The energized inner copper wires of the flexible cord were in contact with the lifting table as a result of the cord being pinched by the frame of the lifting table during use. As the victim was attempting to clean the area, he made contact with the lifting table, and the gang rip saw simultaneously. Due to the insulation damage on the flexible power cord allowing the copper wiring to make contact with the lifting table, the lack of a continuous path to ground in the receptacle, and the subsequent welding of the third fuse in the open position in the main electrical panel, the victim was electrocuted when he made contact with the lifting table.

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

29 CFR 1910.304(g)(5)	The path to ground from circuits, equipment, and enclosures was not permanent, continuous, and effective: In that one employee, located in the production area, was exposed to electric shock when the 480 volt lifting table he was operating failed to maintain a permanent and continuous path to ground.
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Citation 1 Item 2

29 CFR 1910.305(b)(1)(ii)	Unused openings in the boxes, cabinets, or fittings were not effectively closed: In that one employee, located in the production area, was exposed to a potential electrical shock hazard when cleaning the gang rip saw due to an opening in an electrical box not being effectively closed.
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Citation 1 Item 3

29 CFR 191.305(a)(2)(x)	Flexible cords and cables were not protected from accidental damage, as might be caused, for example, by sharp corners, projections, and doorways or other pinch points: In that one employee, located in the production area, was exposed to electric shock while using a lifting table. The flexible cord supplying power to the lifting table had 7 different areas of damage to the insulation due to it being pinched by the table when it would be lowered.
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Citation 1 Item 4

29 CFR 1910.305(g)(2)(ii)	Hard-service cord and junior hard-service cord No. 14 and larger were repaired by splicing, which did not retain the insulation, outer sheath properties, and usage characteristics of the cord that was spliced: Note: Hard service flexible cords No. 12 or larger may be spliced if the splice retains the insulation, outer sheath properties, and usage characteristics of the cord being spliced: In that one employee, located in the production area, was exposed to electric shock while using a lifting table that utilized a power cord that had two splices that were not properly insulated.
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Citation 1 Item 5

29 CFR 1910.333(b)(2)	While an employee was exposed to contact with parts of fixed electric equipment or circuits which were de-energized, the circuits energizing the parts were not locked out or tagged or both in accordance with the requirements of this paragraph (b) of 29 CFR 1910.333(b)(2). In that one authorized employee, located in the production area, removed a cover from an electrical box and was performing maintenance on the exposed wires without utilizing any energy control procedure to protect him from an accidental start-up of the RFS brand frequency press.
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Citation 2 Item 1

29 CFR 1910.37(a)(3)	Exit route(s) were not kept free and unobstructed: In that two employees, located at the DMC top sander area, did not have an unobstructed access to an exit due to the conveyer system used to transport material through the production process.
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Citation 2 Item 2

29 CFR 1910.106(d)(4)(iv)	If a mechanical exhaust system is used, it shall be controlled by a switch located outside of the door. The ventilating equipment and any lighting fixtures were not operated by the same switch. In that one employee, located in the spraying area, enters a flammable chemical storage room that is not equipped with a functioning interlock that turns power on to the ventilation system when the lights inside the storage room are turned on.
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Citation 2 Item 3

29 CFR 1910.106(h)(8)(iii)	Combustible waste material and residues in a building or operating area were not stored in closed metal waste cans: In that one employee located in the spray area, uses rags to apply stain to wooden material and stores the rags over a railing underneath the table to dry.
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Citation 2 Item 4

29 CFR 1910.146(c)(1)	The employer did not evaluate the workplace to determine if any spaces were permit-required confined spaces: In that the employer failed to evaluate the dust collection system hoppers to determine if they were a permit-required confined space.
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Citation 2 Item 5

29 CFR 1910.147(c)(6)(i)	The employer did not conduct a periodic inspection of the energy control procedure at least annually to ensure that the procedure and the requirement of this standard were being followed. In that the employer did not conduct periodic inspections of the energy control program to ensure employees compliance and understanding of the program.
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Photo 1 of 2 – Photo of the Lauderdale-Hamilton brand rip saw, and the lifting table located to the left of the saw.

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Photo 2 of 2 – Photo shows the power cord for the lifting table and one of the several splices to the cord.