13. Fall into shredder

A **43-year-old** machine operator died when he fell into a shredder at a secondary aluminum smelting operation. Scrap metal is loaded into the hopper of the shredder using a skid loader. The shredder then cuts the scrap into medium-sized pieces. Then the medium pieces are moved by conveyor to another shredder to cut the pieces smaller, and then into a bin from which the metal is loaded into a furnace. At the time of the fatality, the victim was working alone on the night shift at shredder line # 1. A co-worker came through the area looking for the victim, but could not find him. However, the co-worker observed a pool of blood and clothing at the end of the shredder line and under both shredders. The victim had fallen into the shredder and was carried through the entire shredder line. In the past the victim had been observed by a co-worker standing on the ledge of the shredder with the equipment still running. The co-worker verbally reprimanded the victim when that occurred. By company rule, the line is supposed to be de-energized and locked out whenever the operator must approach the shredders, hoppers, etc. However, actual implementation of proper lock-out procedures varied from supervisor-to-supervisor and from shift-to-shift.

Citations as Originally Issued

A complete inspection was conducted at the facility. Thus, some of the items cited may not directly relate to the fatality.

Citation 1

Item 1 T.C.A. 50-3-105(1)	The employer did not furnish employment and a place of employment which were free from recognized hazards that were causing or likely to cause death or serious physical harm to employees in that an employee was exposed to burn hazards when a furnace helper was standing on the lip of an aluminum crucible approximately one foot from molten aluminum
Item 2a 1910.147(c)(4)(i)	Procedures were not developed, documented, and utilized for the control of potentially hazardous energy when employees were engaged in activities while servicing or maintaining equipment.
Item 2b 1910.147(c)(5)(ii)	Lockout devices and tagout devices were utilized for other purposes than controlling energy such as latching a locker and securing a cover on a grinding wheel.
Item 3 1910.212(a)(1)	One or more methods of machine guarding were not provided to protect the operator and other employees in the machine area from hazards such as ingoing nip points, rotating parts, and unguarded blades. (specifically moving teeth of the shredder and shredded metal parts)
Item 4a 1910.305(g)(2)(iii)	Flexible cords were not connected to devices and fittings so that tension would not be transmitted to joints or terminal screws.
Item 4b 1910.305(b)(1)(i)	Conductors entering cutout boxes, cabinets, or fittings were not protected from abrasion and openings through which conductors enter were not effectively closed.
Item 4c 1910.305(b)(2)(i)	All pull boxes, junction boxes, and fittings were not provided with covers identified for the purpose.

Citation 2

Item 1 1910.133(a)(2)	The employer did not ensure that each affected employee used eye protection that provides side protection when there is a hazard from flying objects.
Item 2 1910.1200(f)(6)(i)	The employer did not ensure that each container of hazardous chemicals in the workplace was labeled with the identity of the hazardous chemical contained therein.

Loading of shredder where fatality occurred showing ledge victim was previously observed standing on

Interior of shredder as viewed from ledge.