Grinding Disk Strikes Face

A chunk of broken grinder disk smashed a worker’s faceshield and hit him in the forehead, causing a fatal head injury.

The employee at a metal castings plant had been using an angle grinder to remove slag from metal cast for use as forklift counterweights. He installed a cutoff saw disk on the angle grinder to cut grooves into the slag. He then switched to an air chisel and another grinder to chip and grind away the remaining slag. He repeated this process a number of times during his shift as he cleaned up the newly-cast counterweights.

About 10 hours into the shift, the grinder disk broke and a piece flew into his face. A co-worker heard an unusual sound and came to investigate. He found the victim lying on the ground and bleeding heavily. Emergency medics were not able to revive him, and a medical examiner pronounced him dead at the scene.

This fatality was caused by incorrect use of the angle grinder. The tool was missing a safeguard. The cutoff saw disk installed on it was 4.13 inches (105 millimeters) larger in diameter than the size recommended by the manufacturer, and the ring size was too large for the shaft of the grinder. The grinder was designed to use a depressed center disk. Instead, the flat-surface cutoff saw disk was installed without adequate support in the center. In addition to failure to follow the manufacturer’s instructions, the missing safety guard indicates a weakness in supervision and a failure on the part of the safety committee inspection team.

The employer made several changes after this fatality, including instruction in safe use of grinders and discontinuing the use of cutoff saw disc for cutting grooves in the slag.

There’s a lesson for all workers in a fatality such as this: Use the correct tools and use them the way they were designed to be used safely.