

**Case 326. 61-year-old maintenance laborer at a paper manufacturing company died when he fell from a ragger spool frame into a partially filled paper pulper tank in operation.**

A 61-year-old male maintenance laborer at a paper manufacturing company died when he fell from a ragger spool frame into a paper pulper tank which was partially filled with product and in operation. The decedent was welding on the center of a “ragger spool wheel” located three feet from the edge and 24-28 inches above the pulper tank. The pulper tank was a 25-diameter open (non-covered) vat with a 43-inch-high barrier around it from the cement floor. The tank was 16-20 feet deep with a sloped base. The ragger unit was a coarse cleaning unit, removing all lightweight trash from the spinning waste paper. The ragger material resembled a large woven synthetic rope line and had an arm that held the spool. The arm of the ragger was stationary and was designed to hold the ragger line in the pulper tank so that it could effectively capture the debris in the tank. At the center of the tank was a beater blade measuring approximately five feet across and powered by a 500 HP electric motor at 900 rpm. A spinning rotor blade located at the bottom of the tank shredded recycled paper and mixed it with water to produce the paper pulp. To access the ragger spool, the decedent used a wood 4-step step ladder. Positioning the step ladder as a straight ladder, he placed it in the junction corner between the ragger unit frame and the pulper tank barrier. The decedent was working alone welding flat metal stock bars on the spool’s center. Based on his previously observed work practice, it was postulated that he was standing on the second step of the folded 4-step step ladder and was leaning over the open pulper tank to access the ragger spool when he fell into the pulper. The cause(s) of the fall were unknown. The maintenance supervisor walked by the area and found the folded ladder leaning up against the ragger and the pulper standard barrier, the Miller Bobcat 250 welder he was using running, and the welder’s electrode holder (stinger) draped over the standard barrier edge of the pulper. He could not locate the decedent. After searching the decedent’s usual break areas, they concluded the decedent must be located within the pulper and turned the pulper “off”. Emergency response was called and the decedent was declared dead at the scene.

MIOSHA General Industry Safety and Health Division issued the following Serious citations to the employer at the conclusion of its investigation:

**SERIOUS:** MICHIGAN OCCUPATIONAL SAFETY AND HEALTH ACT, ACT 154, P.A. 1974, AS AMENDED, SECTION 11(a)

The employer did not furnish to each employee, employment and a place of employment, which was free from recognized hazards that were causing or were likely to cause death or serious physical harm to the employee.

No fall protection utilized while employee was kneeling on the ragger unit 20 feet to the base of the tank when leaning over the spool to conduct welding repair.

Among other, one feasible and acceptable method to correct this violation is to develop a fall arrest procedure and training, and utilize a fall arrest system, lanyard and harness.

## **SERIOUS: PORTABLE LADDERS, PART 4**

- Rule 446(3): When a step ladder did not have a guardrail, the top step or cap used to work from or to climb on - Employee had used the top step of the step ladder when conducting work.
- Rule 446(3): When a step ladder did not have a guardrail, the top step or cap used to work from or to climb on - Employee used a 4-step step ladder as a straight ladder when accessing the ragger spool.
- Rule 454(1): A non-wood ladder shall be maintained pursuant to Rule 443(4)- Non-movable hinge, ladder coated with paper residue that is restricting the employees ability to open 4-step step ladder.
- Rule 454(3): A non-wood ladder was not repaired or replace when it showed cracked, bent or twisted side rails or legs, rungs where opposite surfaces were bent or deformed, loose or broken rivets and bolts, or other fasteners; or broken or bent spreaders, guides or locks- bent second step and top cap, 4-step step ladder.