

## **Kentucky Fatality Assessment and Control Evaluation (FACE) Program**

**Incident Number:** 05KY015  
**Incident Date:** April 13, 2005  
**Release Date:** February 21, 2006  
**Subject:** Worker Crushed To Death by Falling Steel Coil

**This is a summary. The entire KY FACE report is available on our website at:**

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### **Summary**

On April 13, 2005, a 40-year-old male laborer was moving a 5-feet by 9-inch coil of slitted steel, weighing 6600 pounds, when it fell on him. The laborer was in the process of wrapping a chain through the middle of the coil and through a homemade device on the forks of a forklift when the coil tipped over. As the laborer tried to move away from the falling coil, it landed on his left side, breaking his left leg and causing internal injuries. Other workers in the area did not see, but heard the commotion of the falling coil. The plant manager and other workers rushed to aid the laborer who was conscious. They tried to lift the coil of steel off the laborer's leg, but could not. While one of the workers called emergency services, another used a forklift to remove the coil from the laborer's legs. Cognizant and using a cell phone, the laborer spoke to his wife while he was waiting for emergency management service personnel to arrive. Emergency personnel arrived and he told them that he was hurting and to get him to a hospital. The laborer was taken by ambulance to the closest hospital in a neighboring state where he died that same day from internal injuries.

To prevent future occurrences of similar incidents, the following recommendations have been made:

Recommendation No. 1: Employers should provide workers with a safe work environment.

According to KRS 338.031(1)(a), employers are to provide each employee with a safe work environment, free from recognized hazards. This includes providing proper equipment for each task and training on how to use the equipment. Training on recognition of hazards and how to abate them should also be provided by the employer. A safe work environment includes workers using equipment with appropriate weight and lift ratings to perform job tasks.

Recommendation No. 2: Equipment should only be modified with the manufacturer's approval.

To accommodate the size of the steel coils, the homemade device was placed at a 36 inch load center instead of the 24 inch load center. The forklift was designed for a 24 inch load center. Placing the device at 36-inches on the forks changed the forklift center of gravity, load distribution, and carrying capacity. This load distribution change and handmade device were not

approved by the forklift manufacturer. Equipment had been modified by the workers at the plant to enable them to transport the coils of steel to different locations within the facility. The modifications made to the forklift changed its center of gravity, load distribution, and carrying capacity from the manufacturer's original design. 29 CFR 1910.178(q)(6) prohibits modifications not approved by the manufacturer. Also, 29 CFR 1910.178(o)(2) prohibits handling loads greater than the capacity of the forklift. After the incident, a device, approved by the forklift manufacturer and KY OSH, was purchased which allows a chain to be attached safely to the forks of the forklift.

Recommendation No. 3: Coils should be kept from rolling or falling by use of chocking materials.

Since the incident, procedures on moving and storing steel coils have been changed. Now, coils of steel stacked on edge are chocked and there are boards placed between the coils, whereas previously they were not. This allows the chain to be placed through the middle of the coil without having to sit the coil on its narrow edge, thus reducing the risk of the coil falling over. 29 CFR 1910.176(b) states "for secured storage of materials, they must be stacked, blocked, chocked or interlocked so that they are stable and secured against movement, sliding or collapse".

Recommendation No. 4: An alternative coil transport system could be implemented.

Besides a forklift, there are several other material handling methods which could be implemented that would reduce the risk of a coil falling on an employee. One such method would be to use an overhead crane. Another method would be to use an overhead magnetic lifter. A cradle which would support the coil on all sides could be used in conjunction with a forklift.

## References

KRS 338.031(1)(a)

29 CFR 1910.176(b)

29 CFR 1910.178(q)(6)

29 CFR 1910.178(o)(2)

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The Kentucky Fatality Assessment & Control Evaluation Program (FACE) is funded by a grant from the Centers for Disease Control and the National Institute of Safety and Health. The purpose of FACE is to aid in the research and prevention of occupational fatalities by evaluating events leading to, during, and after a work related fatality. Recommendations are made to help employers and employees to have a safer work environment. For more information about FACE and KIPRC, please visit our website at: [www.kiprc.uky.edu](http://www.kiprc.uky.edu)