

## Finger Amputation of Operator

### Overview

In 2021, an employer reported to HIOSH of a workplace amputation within the regulatory time frame. The report was of a fifty-five (55) year-old woman was operating a swaging machine to bead a 12-inch diameter coupling ring with a 4-inch wide sheet metal. The employee donned a specific type of gloves.

The coupling ring snagged the employee's gloved hand and subsequently her left ring finger was caught between the two dies of the swaging machine, resulting in an amputation of her left ring finger.

### Results of Investigation

The HIOSH investigation found that prior to the incident the company failed to:

1. Provide machine guarding;
2. Select the appropriate gloves for the tasks to be performed; and
3. Assess the workplace to determine if hazards were present which necessitated the use of personal protective equipment (PPE).

#### 1. Machine Guarding

The company has been in possession of the swaging machine approximately 5 years prior to the incident. The swaging machine was not equipped with guards to eliminate or reduce the amputation hazard.

#### 2. Appropriate gloves

The operator of the swaging machine donned a specific type of gloves. The gloves were provided by her company three years prior to the incident.

The manufacturer's warning regarding these gloves states "the gloves shall not be worn



*Image of a swaging machine with the circular metal coupling ring between the two dies.*

when there is a risk of entanglement by moving parts or machines." The two dies of the swaging machine were moving parts.

Additionally the safety rating of the glove under EN 388 standard rated as "4131." Each number in this rating corresponds to performance in Abrasion, Cut, Tear, and Puncture, respectively with the rating of 1 representing the least protection. Therefore the glove received a low safety rating for cut resistance.

#### 3. Assess workplace hazards

Before the incident occurred, the employer failed to perform a Job Hazard Analysis for the tasks associated with the swaging machine, which would have determined the appropriate type of gloves to use. The company is unaware of who recommended the gloves several years ago or how those gloves were intended to protect against specific hazards.

## Citations and Penalties

The initial Citations issued to the employer was \$40,959 — after factoring the size of the employer, good faith, and prior HIOSH citation history.

## Recommendations

Employers hold a crucial responsibility in maintaining a safe and healthy workplace. One of their primary duties is to conduct a comprehensive assessment of the work environment. This involves evaluating the tools and equipment used by employees.

Familiarizing themselves with each piece of equipment is essential. Employers must understand the specific functions and potential risks associated with these devices. By doing so, they can identify any hazards that may pose a threat to employee safety.

Additionally, it is important for employers to be well-versed in the proper safeguards that must accompany each device. This includes knowing how to use safety features effectively and ensuring that employees are trained on these protocols.

Finally the employer must review and select the proper PPE to prevent the hazard. Ultimately, a proactive approach to hazard assessment and equipment understanding can significantly reduce the risk of accidents and injuries on the job.

*The described case was selected as being representative of improper work practices which likely contributed to the incident. The findings, citations, and recommendations do not necessarily reflect the outcome of any legal aspects of this case. HIOSH encourages your company or organization to duplicate and share this information.*

*This is one in a series of informational fact sheets highlighting HIOSH programs, policies or standards. It does not impose any new compliance requirements. For a comprehensive list of compliance requirements of HIOSH standards or regulations, refer to Title 12, Subtitle 8 of the Hawai'i Administrative Rules.*

*Auxiliary aids and services are available upon request to individuals with disabilities. TDD/TTY Dial 711 then ask for (808) 586-9116*

## How to Contact HIOSH

Under the Hawai'i Occupational Safety and Health Law, **employers are responsible for providing safe and healthful workplaces for their employees.**

HIOSH's mission is to assure Hawai'i's workers have safe and healthful working conditions free from unlawful retaliation.

HIOSH carries out its mission by setting and enforcing standards; enforcing anti-retaliation provisions of the HIOSH Law; providing and supporting training, outreach, education, and assistance.

For more information, call HIOSH at **(808) 586-9100** or visit [www.labor.hawaii.gov/hiosh](http://www.labor.hawaii.gov/hiosh).

