Caught In/Caught Between

Many injuries occur each year as the result of having an arm, hand or foot caught in or caught between objects. Depicted below are several scenarios where employees were injured when caught between machinery or equipment. Can you identify with these accidents? What operations or processes in our operation represent hazards similar to these?

- While turning a trim-press die up on its end, the worker's hand slipped, allowing the die to fall. The worker's hand was caught between the die and the table.
- A worker was rotating a part on a set of rollers, when his hand was caught between the part and the roller.
- A machine operator put her hand into a part spinning in a lathe to see if the tool was cutting properly. Her hand was caught between the part and the cutter.
- A trim-press operator was trying to free a part from a die, when the press recycled and caught a finger between the dies.
- A worker reached into a machine while it was running to pull out a piece of metal, when his arm was caught between the part being machined and the cutter.

These incidents and others have occurred for reasons, such as those listed below:
- Inadequate procedures explained to perform an operation.
- Working on moving equipment.
- Under mental or physical stress.
- Using unsafe equipment.
- Employee training deficiency.
- Inadequate or no guarding.
- Failure to use guarding and interlocks.

Case Study
A screw-press operator was setting up the press in preparation for a production run. The setup procedure required a shim to be placed alongside the die to meet tool alignment specifications. This is usually accomplished by jogging the ram down rod at the alignment point and inserting the shim with a pair of tongs.

This is a slow process and the operator chose not to follow the procedure. Instead, the operator inserted the shim with one hand, held it in place and used the "inch" button with the other hand to screw the ram. This caused the ram to be inched down too far and the operator's hand was caught between the upper and lower die blocks. The operator suffered fractures to the left hand and wrist.

What are the immediate and contributing causes of the accident?

Possible answers:
- Unsafe operating procedure.
- Inadequate program of inspection and maintenance of equipment.
- Employee was not trained to perform the operation safely.
- Employee was not supervised properly.
- Employee was under physical or mental stress.
What can be done to prevent a similar accident in the future?

Possible solutions:

- Develop a standard operating procedure that would allow the shim to be inserted quickly and safely with hands away from the point of alignment.
- Review the preventive maintenance program and determine if maintenance is performed regularly. Take the necessary steps to ensure that equipment is thoroughly checked as part of the preventive maintenance program.
- Conduct press training and retraining.
- Require supervisors to ask employees to report any potential safety hazards as soon as possible.
- Employees must be willing to follow safe operating procedures.