

# Extrusion and Safety

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For the past twenty years we have observed increasing activity on the part of manufacturers of plastics equipment to up grade safety equipment and operating procedures. The operating environment has also been upgraded with reduced sound and noise in the operating areas. All new equipment now arrives on the plant receiving dock with infinitely large numbers of yellow warning labels, plates and notices. At times it is difficult to locate equipment specifications due to the large numbers of warning literature plastered on the machines. Safety gates and guards are well defined.

It is industry practice to upgrade existing equipment for increased production or new products as the marketplace requires. Many times idle, obsolete or used equipment is secured for a needed job. Herein lies the danger to the operational safety of the equipment. We tend to become careless and forgetful in the necessity to convert or upgrade the equipment. It is often difficult enough to make the product run without considering extra equipment features for safety. Perhaps we are not sure just what safety equipment will be needed until the machine is once into acceptable production. Guards are left off, inter-locks are ignored as the equipment is considered prototype until acceptable production is achieved. Later, under pressure of other pending problems, we neglect and ignore the challenge to double check the equipment for necessary equipment safety features. The pressure of business problems keeps our attention elsewhere until an accident happens. Then we are jerked back to reality.

In general, plastics equipment manufacturers cover the outstanding and necessary safety hazards such as drive guards, electrical boxes and wiring, head bolts and guards, fans, hot piping and major cutting equipment. There is increased pressure to place our attention on heretofore incidental features not previously considered hazardous. Much attention has been given to reach new lower sound db standards for saws, punches, granulators, fans and other equipment. Units are now becoming available that operate in a quiet acceptable mode. Operating areas are now becoming clean and junk free. More and more one observes plastics plants that are orderly. This indicates good control management. Air quality is being upgraded by improved ventilation and scrubbing by the new, smaller available cleaning units. New installations of plastics equipment now recapture cooling water, cleaned and recirculated to reduce water and sewerage costs, while not contaminating the environment.

Attention is being given such items as guarded trim knives, trim and pinch points, punches and cutting operations. The automation of packaging permits the use of guides, air assists, unloaders and winders, all without operating personnel. Each situation has hazards caused by such automation. Personnel have to be protected from the silent operators in the automatic function. We must be cautious that we do not obsolete safety interlocks and other safety features as we convert the equipment to new uses or revise the equipment for larger loads or faster operation. It is a minor matter to revise holding jigs for larger punches or heavier mandrels which would negate safety features.

All manufacturers take a lively interest as to revisions to their equipment. The sales engineering department of the equipment manufacturer should be notified if safety equipment features are modified or eliminated. Many times the manufacturer will assist with suggestions for the owner to improve his machine in a safe manner. No one wants a loose roll dropping to the floor due to a heavier than anticipated load, or flying bits of saw and punch parts whirling about. Manufacturers often give wise counsel.

The manufacturer has a deep interest in a machine being kept safe.

These safety matters need to be kept before us at all times. Safety is a part of every job. It is a constant responsibility that we consistently check the equipment. The upgrading of safety features never ends. Not only can we make equipment operate faster while giving a better product, but we can and must at the same time make the equipment easier to operate in a safer manner.

The attention to housekeeping, safety and the environment will show directly on the bottom line of profitability with decreased absenteeism due to fewer cuts and other injuries. Morale will be higher as the employee works in a more pleasant environment. The employees will keep their attention on the job, which is to produce a better quality product faster. Well applied safety features will not hinder equipment operation but will eliminate operator preoccupation that something could harm. The operator is less nervous and thus becomes more efficient.

We all desire a smooth running, efficient plant operation. Proper safety features will help obtain these goals.

- Speer Ezzard

See also:

- A bomb, a gun or a useful tool
- Cord connected equipment
- Extrusion with plugged vented barrel extruders

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