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БЕЛОРУССКО-РОССИЙСКИЙ УНИВЕРСИТЕТ

Today's workplace is faced with accelerating changes in technology. Economic and social developments are also changing the daily life of workers. Despite the progress achieved, the safety, health and conditions of work of many workers remain arduous or give rise to new problems as a result of these changes.

Grinding is the process of removing metal by the application of abrasives which are bonded to form a rotating wheel. When moving abrasive particles contact the work piece, they act as tiny cutting tools, each particle cutting a tiny chip from the work piece. It is a common error to believe that grinding abrasive wheels remove material by a rubbing action; actually, the process is as much a cutting action as drilling, milling, and lathe turning.

The grinding machine is used for roughing and finishing flat, cylindrical, and conical surfaces; finishing internal cylinders or bores; forming and sharpening cutting tools; snagging or removing rough projections from castings and stamps; and cleaning, polishing, and buffing surfaces.

Cylindrical grinding is the practice of grinding cylindrical or conical workpieces by revolving the work piece in contact with the grinding wheel. Cylindrical grinding is divided into three general operations: plain cylindrical, conical grinding and internal grinding. The work piece and wheel are set to rotate in opposite directions at the point of contact.

Grinding machines have some special safety precautions that must be observed. To avoid injuries one should follow the safety precautions listed below:

- 1) wear goggles for all grinding machine operations;
- 2) check grinding wheels for cracks before mounting;
- 3) never operate grinding wheels at speeds in excess of the recommended speed;
- 4) do not exceed recommended depth of cut for the grinding wheel or machine;
- 5) provide the work area with good lighting that doesn't create glare or shadows;
- 6) make sure that the electrical power source is properly grounded and its cord and connections are in good condition.

Personal clothing should be in conformance with specified rules. The essential rule is not to wear anything loose that could get caught in the machine. Scarves, ties, loose hair, and dangling jewelry are dangerous.

There are risks in all workplaces. Safety is possible only by knowing these risks and properly guarding ourselves until the risks have been eliminated.