Grinding and cutting discs safety guidelines

These instructions have been prepared in order to determine necessary procedures for safe use, maintenance and protection of any portable or stationary grinding and sanding discs and saws and jet stones.

**IMPORTANT WARNING:** Sparks, which may occur during the grinding and cutting operations, may lead to fire. Therefore, there shall never be any easily inflammable or combustible materials such as thinner and solvent at the locations where grinding shall be carried out. Necessary measures shall be taken to protect from fire. Persons carrying out grinding operations must strictly protect their eyes with protective goggles and take necessary measures to ensure that any people and equipment around would not be damaged.

Portable grinding machines are much riskier as compared to the stationary machines in many cases.

- As an order is placed for a grinding disc, its technical specifications must be strictly specified in such a manner and to such an extent ensuring that they would fully meet the intended purposes and grinding machine on which it would be used. Technical specifications such as disc diameter, shaft hole size, grain size, grain type, type of connector, revolutions per minute (RPM) and surface feeding per minute (SFM) shall be strictly indicated.
- The maximum safe operation speed recommended by the manufacturer must be strictly indicated on the grinding discs.
- Protective covers must be on any portable and stationary grinding machines. No work may be carried out with any equipment not having protective covers.
- Make sure that grinding discs are mounted on proper machines. Any discs would not fit any machines. The disc rotating at a high speed may dislocate or explode due to the rotation problems or connection related problems, inflicting substantial damages on users and people around.
- Only pre-identified specialist persons trained for this purpose may use the grinding discs.
- Users of portable grinding discs shall pay attention to ensure that the machines and discs would not be damaged.
- Grinding discs shall be mounted by specialist persons on the machines. The grinding machines shall be operated only after necessary controls are made.
- Staff performing grinding operations with portable machines shall not wear gloves except for work with very coarse materials or such materials which may not be prevented from heating up.
- Grinding discs may not be operated at such speeds higher than those indicated on them.
- When a disc is broken, the grinding machine must be strictly examined by a specialist maintenance employee and whether there is any crush on the
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These are just basic guidelines gathered from different sources, may vary from standards

protectors, whether the flanges are still strong and whether the balance position is distorted must be controlled.

- The maximum clearing of the set support or bush protectors must be maximum 1/8 inch = 3.2 mm. These settings shall not be made as the engine operates.
- Flanges having an appropriate length and manufactured from high quality steel shall be installed on the grinding discs.
- Remove any keys or setting apparatuses on the grinding machine before it is operated.
- No modification shall be made to the grinding discs to adapt them to the machines. Grinding machines shall be purchased complete with their approved safety bearings.
- Magnesium metal may be ground by such stones having a lettering “exclusively for magnesium” on them; no other discs may be used.
- Steel material may never be ground by a disc having a lettering “exclusively for magnesium” on it.
- A disc must be tested by hitting and tinkling it in order to understand if there is any crack on the disc.
- The grinding disc must be contacted with the material slowly. Never press the cold grinding disc on the material suddenly.
- The engine of the grinding discs shall be stopped when they are not operated.
- The grinding operation on the disc edges shall be made only on such discs special for this work.
- Portable grinding discs and machines thereof shall be delivered to the depot officer in a sound and clean condition upon completion of work.
- Grinding machines should not be left on any high locations having a risk of fall-off.
- Grinding machines may be operated by electricity, compressed air, hydraulic power or liquid fuel. Therefore, necessary safety measures must be taken matching the applicable power supply for the machine in question.
- Portable grinding machines may cause highly serious injuries by hitting the bodies of users or other people by sliding off as a result of a sudden movement. Therefore, necessary measures must be taken so that the portable machines would not hit the body by accident during their operation.
- Necessary measures must be taken to ensure that the electrical cables or air hoses of the portable grinding machines would not get stuck into something or that any vehicles would not pass across them.
- Any machines with worn electrical cables or malfunctioning and broken sockets and plugs may never be used. Any bare cable tips are never connected to an electricity supply outlet or plugged into a socket.
- Whenever any kind of maintenance is conducted on the grinding machines or grinding discs are to be replaced, the machines shall be strictly disconnected from the power supply entirely.
- Burns, cuts, electric shocks, burrs hitting eyes and fall-off by getting stuck into cables or hoses are the most common injuries arising from the grinding machines.

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✓ Periodical inspection of portable grinding machines must be carried out by specialists and any irregularities detected must again be rectified by specialists or service of such machines.