**Safe Work Requirement**

Abrasive Wheels and Grinders

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| PURPOSE The principal hazards associated with the use of pedestal, bench mounted and portable grinding wheels are the bursting of the wheel due to a weakened wheel or improper use, skin abrasions through contact with the moving wheel, and eye injuries from dirt and sparks.  The purpose of this instruction is to provide a regulation to control the risk and hazard during use abrasive wheels and grinders. SCOPE This instruction is applicable to all ECDC abrasive wheels and grinders, to the extent that it does not conflict with the applicable OEM instructions. RESPONSIBILITY      Rig Manager The Rig Manager has overall responsibility for abrasive wheels and grinders operation and safety issues. This includes overall responsibility for ensuring the system is in place to provide the means of abrasive wheels and grinders operate and maintenance on the location.  The Rig Manager is responsible for implementing the approved abrasive wheels and grinders safety work instruction at rig site where work is carried out under their control. Additionally, they shall ensure that any subcontractor who working under their direction are fully follow this instruction. HSE Supervisor The HSE Supervisor shall assist the Rig Manager in ensuring all related personnel are trained in operating abrasive wheels and grinders.  The HSE Supervisor shall periodically verify the employee who operate abrasive wheels and grinders are trained.  Provide advice on the use of all types of protective equipment. Operator The operator should have suitable experience in accordance with OEM instructions.  Ensuring that safe working practices are being enforced at all times Procedures and Guidelines    Work Site Safety Grinders are only partially guarded, making them dangerous in the event of someone slipping or tripping and falling against them. The area around a pedestal or bench mounted grinder must therefore be flat, clean and free from obstructions. Grinders should not be positioned in areas of pedestrian traffic unless the areas are separated by screens. Eye injured by the spark contact with the operator is the greatest hazards.  Portable grinders must be fitted with a dead mans or side handle. The wheel must be guarded in case it bursts or if the grinder is accidentally dropped. Before commencing portable grinding operations operators must ensure that the areas in the close proximity of the work is clear of other persons, that they have a secure foothold and that they are unlikely to trip over cables or other obstructions. Personal Protective Equipment Grinding operations can cause the emission of high velocity fragments, grit and sparks. These can lead to eye injury. All personnel engaged in grinding operations are to wear face shields.  Overalls are to be intact and free from loose materials which could catch on the grinding wheel. All forms of loose clothing, e.g. ties, scarves and chains, are not to be worn. Mounting of Abrasive Wheels The mounting of an abrasive wheel is a specialized operation which must only be undertaken by a qualified person. The Mechanics are the only personnel who are permitted to change abrasive wheels. Guarding of Grinding Wheels DO NOT OPERATE GRINDER IF GUARD IS NOT IN PLACE. Guards must be strong enough to contain any parts of a wheel which bursts. The guard on a pedestal or bench mounted grinder should enclose the wheel to the maximum extent while still permitting adequate access to the wheel. The guard must be securely anchored to the machine frame.  Guards on portable grinders must be positioned directly between the wheel and the operator. At least half the circumference of the wheel must be guarded. Grinders with no guards must be discarded unless a guard can be ordered for it. Work Rests and Side Grinding Work rests of substantial steel construction with hardened steel top plates must be fitted to pedestal and bench mounted grinders. Rests are to be regularly adjusted to minimize the space between the rest and the wheel as wheel wear occurs. Adjustments should only be made with the grinder isolated from its source of motive power.  Side grinding can weaken the wheel causing it to burst. Where side grinding is carried out using a portable grinder, a resin-bonded reinforced wheel must be used. Dressing and Storage of Grinding Wheels Dressing of grinding wheels should only be undertaken by the mechanic. The operations involve, "trueing" the wheel to make it run concentrically, and cutting back to restore a grooved or clogged up surface. Dressing should be carried out frequently using a rigidly mounted dressing tool.  Grinding wheels are fragile and require careful storage and handling. They should be protected from chipping and cracking by the use of suitable racks and stored in dry conditions. Wheels should be date marked and used in order of purchase. New wheels should be cleaned with a brush and ring tested to ensure that they are not cracked. Precautions When operating abrasive wheels in hazardous areas around the rig, the work will be controlled by a Permit to Work and the area cordoned off. Use of abrasive wheels in the welding area / shop does not require the use of a permit.  Adequate portable fire-fighting equipment should be sited adjacent to the work area.  The required standard of Personal Protective Clothing and Equipment is to be worn for abrasive wheel work. |