



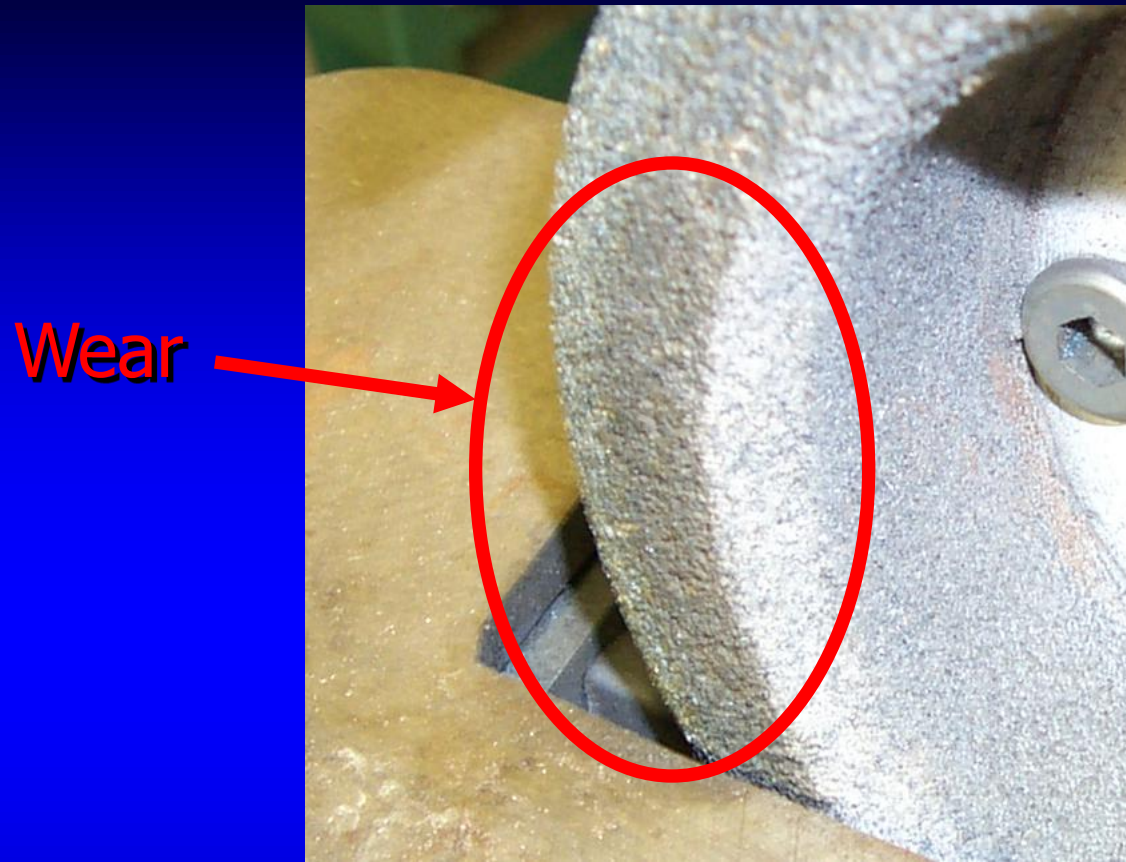
6. Grinding Wheel



The primary purpose of a grinding wheel is to sharpen tools (e.g. drill bits). The hard abrasive wheel is made for removing very hard materials like high speed steel.



First and foremost, never use the grinding wheel to grind soft material like aluminum. Soft materials will coat the wheel and could cause excessive heat and even an explosion.



Check the grinding wheel before use for cracks or signs of wear. A worn grinding wheel will have an uneven grain, and should be dressed before use.

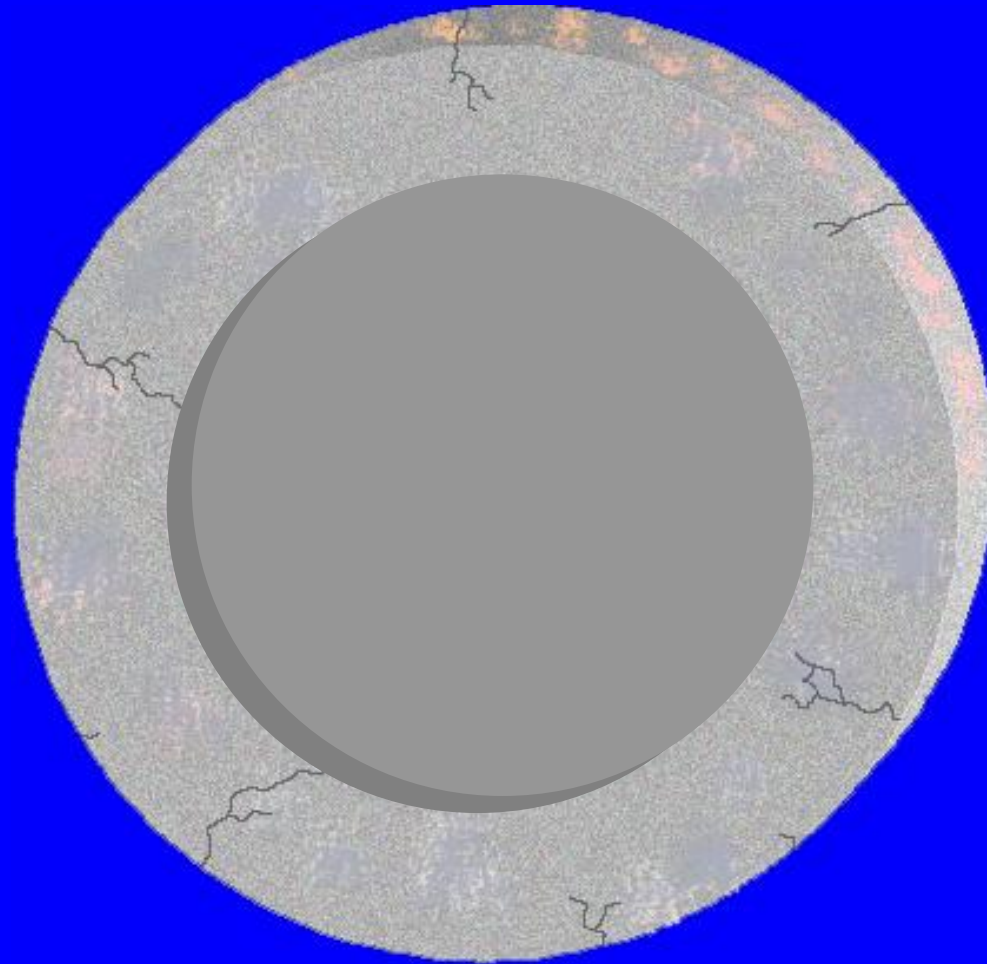
Coated
Wheel



A wheel that is coated with material should also be dressed before use.



You can dress the wheel by grinding a block of carborundum across the surface of the wheel. This will even out the grain and remove excess material.



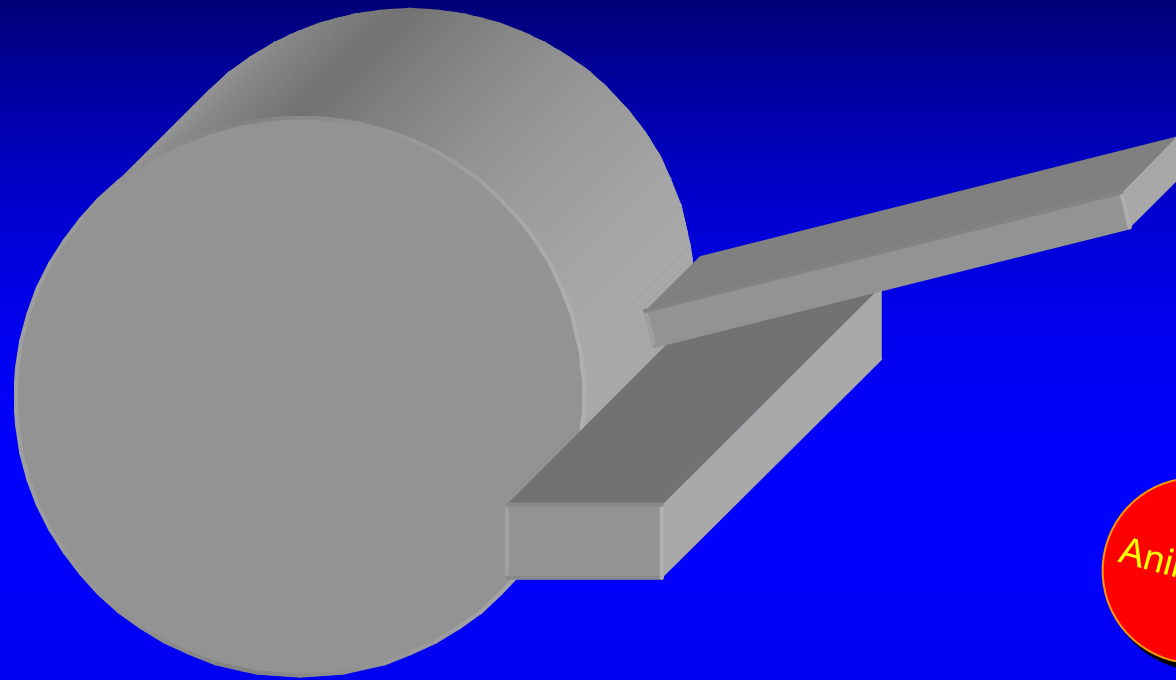
If the grinding wheel is severely worn, coated, or cracked, it should be replaced.



The tool rest should be set no more than 1/16" distance from the wheel for safe grinding.



Every grinding wheel should be equipped with a glass guard. Look through the glass guard and not around it. If the guard is dirty, clean or replace it. Never use a grinder if its guard is off.

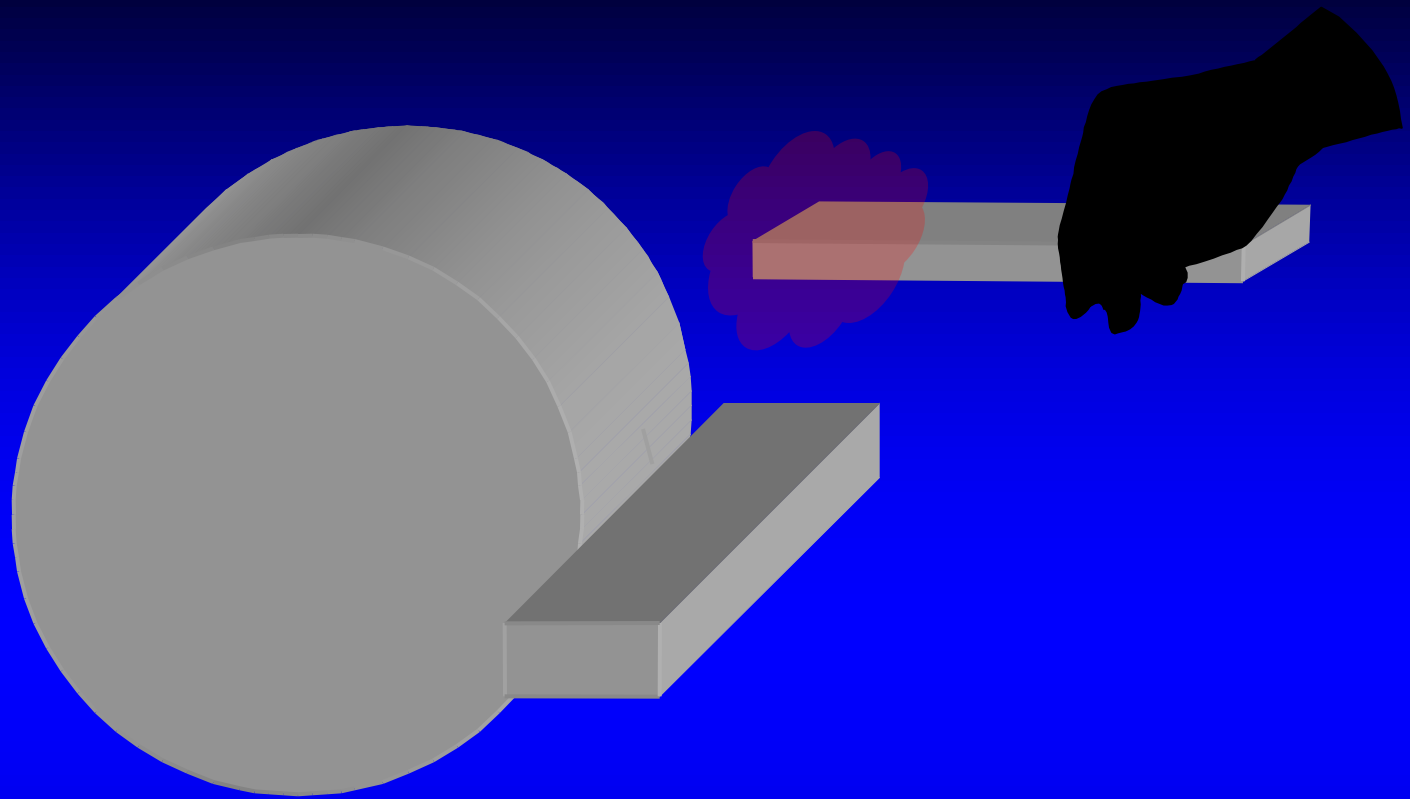


Hold work securely in hand while grinding. Use firm, steady pressure and move work in a back-and-forth motion.



AAAH...

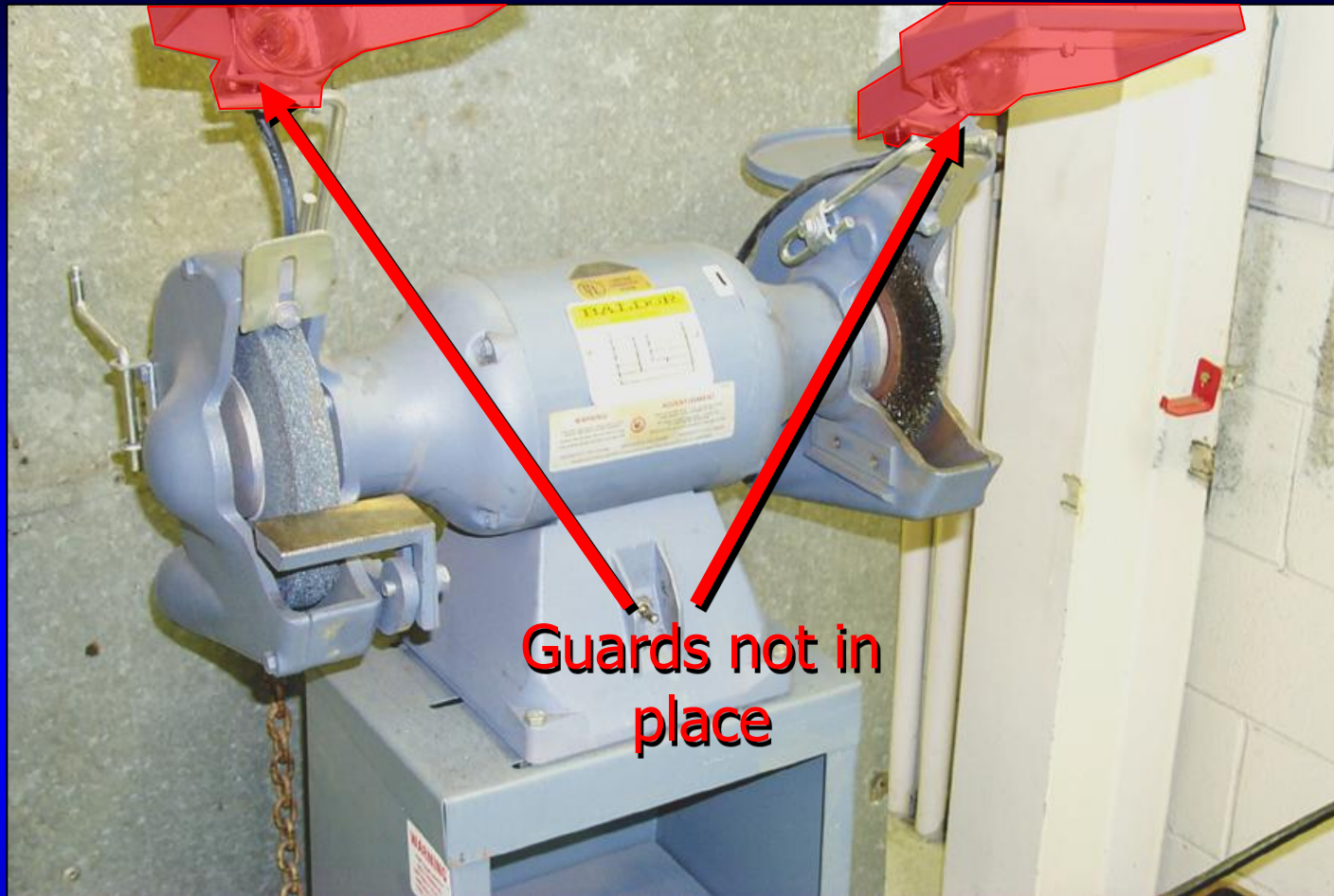
Grinding generates heat. Keep work cool by placing it frequently in water.



You can also dissipate the heat from a workpiece by pausing between passes against the grinding wheel.



Q: What's wrong with this picture?



Q: What's wrong with this picture?



Q: This grinding wheel is coated with material. Can it be used in this condition?



A: No! This wheel should be dressed by grinding a block of carborundum to remove the excess material before it can be used.

Q: Which of the following materials can be worked on a grinding wheel?

- a. Wood
- b. Plastic
- c. High speed steel
- d. Aluminum

A: The grinding wheel is for grinding hard tool steel only. Wood, plastic and aluminum are soft materials and can coat the wheel, possibly resulting in fire.

a. Wood

b. Plastic

c. High speed steel

d. Aluminum

Let's Review

- Never use the grinding wheel to grind soft material like aluminum
- Check wheel for cracks, defects or wear.
- Replace defective wheels
- Tool rest should be set at 1/16" clearance
- Always use a glass guard
- Hold work securely and apply steady pressure
- Cool work in water frequently

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