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TOOLBOX TALK

Hot Work Safety

WHY THIS MATTERS

Hot work — welding, cutting, brazing, and grinding — causes over 4,500 fires in industrial and commercial settings every year. Sparks can travel up to 35 feet (10 m) and ignite hidden combustibles. Hot work fires have destroyed entire facilities in minutes.

4,500
Fires caused by hot work per year

35 ft
Distance sparks can travel (10 m)

100%
Hot work fires are preventable

6 Essential Rules for Hot Work Safety

Every rule must be followed — sparks don't forgive shortcuts:

1. **OBTAIN A HOT WORK PERMIT**
   No hot work without a signed permit. Identify hazards, controls, and fire watch requirements.
2. **CLEAR THE AREA OF COMBUSTIBLES**
   Remove all flammables within 35 ft (10 m). If they can't be moved, cover with fire-resistant blankets.
3. **ASSIGN A FIRE WATCH**
   A dedicated fire watch must remain for 60 minutes after hot work ends. Equipped with extinguisher.
4. **WEAR PROPER PPE**
   Welding helmet, fire-resistant clothing, leather gloves, safety boots, ear protection. No synthetics.
5. **ENSURE PROPER VENTILATION**
   Welding fumes are toxic. Use local exhaust ventilation or respiratory protection in enclosed areas.
6. **INSPECT EQUIPMENT BEFORE USE**
   Check hoses, regulators, cables, torches, and gas cylinders. No leaks, no damaged components.

Before Starting Hot Work — Checklist

- [ ] Is the hot work permit signed and posted at the work area?
- [ ] Are all combustibles removed or covered within 35 ft (10 m)?
- [ ] Is a trained fire watch assigned with an extinguisher?
- [ ] Is adequate ventilation in place for the work area?
- [ ] Are fire suppression systems operational and accessible?

Equipment & Area Inspection — Before Every Job

Welding machine: Check cables, clamps, ground connections, and power supply. No frayed wires or loose connections.

Gas cylinders: Upright, secured, caps on when not in use. Check for leaks with soapy water, never a flame.

Hoses/Regulators: Inspect for cracks, burns, oil contamination, or loose fittings. Flashback arrestors in place.

Fire extinguisher: Fully charged, correct type (ABC), within arm's reach of fire watch. Inspect gauge and pin.

Ventilation: Exhaust fans running, air monitors in place for enclosed spaces. Fume extraction positioned at source.

Surrounding area: Floors swept, wall and floor openings sealed, adjacent rooms checked for hidden combustibles.

Common Mistakes That Start Fires

- ✗ Starting without clearing combustibles — "they're far enough" is never true for sparks
- ✗ No fire watch after completing work — fires often start 30-60 minutes AFTER hot work ends
- ✗ Welding on containers without purging — residual vapors explode on contact with heat
- ✗ Ignoring fumes because "it's only a quick weld" — metal fume fever and lung damage are real
- ✗ Using oxygen to clean clothing or skin — oxygen-saturated clothes ignite explosively

Safety Tips to Remember

- ✓ Permit first, work second — never start hot work without a signed, valid permit
- ✓ 60-minute fire watch minimum — fires from hot work can smolder and ignite long after you stop
- ✓ Sparks travel in every direction — check above, below, behind walls, and through floor openings
- ✓ Never weld on drums or tanks unless certified gas-free — even "empty" containers hold deadly vapors
- ✓ Ventilate, ventilate, ventilate — welding fumes cause permanent lung damage with repeated exposure

Discussion Questions for Your Team

1. What hot work operations are planned on our site today?
2. Who is the designated fire watch and do they have an extinguisher?
3. Have all combustibles been removed or covered within 35 feet?
4. Is ventilation adequate for today's welding or cutting tasks?
5. What would you do if the fire watch person needed to leave?

TOOLBOX TALK SIGN-OFF

Date: _____ Supervisor: _____

Project: _____ Location: _____

Attendance sheet attached: [ ] Yes

