Hot work toolbox talk

Fire and electricity · about 5 minutes · read it out, or say it in your own words

SITE OR JOB	DATE	PRESENTER

Welding, gas cutting and grinding throw sparks and hot metal that can land in timber, insulation, rubbish or waterproofing and smoulder unseen until long after the job is done. Hot work also brings arc flash, fumes and electric shock, and cutting into a drum or tank that once held fuel can cause an explosion.

SAY THIS

What counts as hot work

Hot work is any job that makes sparks, flames or heat: arc welding, gas cutting, grinding, brazing, soldering and torching on waterproofing. Sparks travel much further than most people think. They drop through gaps in slabs, roll under doors and land in places you cannot see. A spark can smoulder in timber or insulation for a long time and only burst into flame after everyone has gone home.

Before you strike an arc

Get the go-ahead from your supervisor first. Look all around, above and below. Move anything that can burn out of the way, or cover it with a fire blanket. Check what is on the other side of the wall or under the floor. Have a working extinguisher right next to you, and ask a second person to watch for sparks and fire while you work. If the area cannot be made safe, the job waits.

Never cut a closed or dirty drum

Do not weld, cut or grind any drum, tank, pipe or container that is closed, or that held fuel, paint, thinners or any other chemical. Heat can make what is left inside explode or give off poison gas. It may only be worked on once a competent person has checked it, cleaned it out and signed in writing that it is safe.

Protect yourself and the people near you

Wear the right welding helmet or face shield, leather gloves, an apron or flame-resistant overalls, and boots. Arc flash can burn the eyes of people standing nearby, so put up screens, and if you cannot screen the area, warn people and give them eye protection. Work where fumes can blow away. Welding in a tank, pit or other confined space needs proper ventilation or supplied air. Go through the confined spaces talk before anyone works inside one.

Electric welding in wet places

Check that welding leads and the electrode holder are fully insulated and not cracked or taped. In wet or damp places, inside metal tanks, or against big metal structures, the welder must be insulated with boots, gloves or rubber mats, and a trained helper must stay with them the whole time.

When you finish

Do not just pack up and leave. Walk the area again, above and below, and look and feel for anything smouldering. Keep watching for a while after the last spark. Warn people about hot metal so nobody grabs it with bare hands.

CHECK ON SITE TODAY

- [ ] Look at today's hot work spots and point out anything that can burn within reach of sparks.
- [ ] Check that an extinguisher or fire blanket is next to every welding or cutting job.
- [ ] Inspect welding leads, electrode holders and earth clamps for cracks, bare wire and taped joints.
- [ ] Check that screens are up wherever other people work near welding.
- [ ] Ask whether any drum, tank or pipe is due to be cut, and who has checked it is clean and safe.
- [ ] Agree who will act as fire watch during the job and check the area after it.

ASK THE CREW

? Where could sparks from today's job land that we cannot see from where the welder stands?

? What would you do if you were asked to cut open an old drum on site?

? Has anyone had arc eye or a burn from hot work? What happened?

? Who checks the area once the welding is finished, and how long do they watch it?

PROTECTIVE EQUIPMENT FOR THIS JOB

Welding helmet with the correct filter shade for the process · Safety goggles or a full face shield for grinding and cutting · Leather welding gloves and a leather apron or flame-resistant overalls · Safety boots, and insulating boots, gloves or mats for electric welding in wet places · Respiratory protection where fumes cannot be removed by ventilation

THE LAW

General Safety Regulations, 1986, regulation 9: Welding, flame cutting, soldering and similar operations; Construction Regulations, 2014, regulation 29: Fire precautions on construction sites; General Safety Regulations, 1986, regulation 2: Personal safety equipment and facilities. What each one says, in plain words, with links: sitediary.co.za/toolbox-talks/hot-work/

Toolbox talk attendance register

TOPIC

Hot work: welding, cutting and grinding

DATE

SITE OR JOB

TIME

PRESENTER

COMPANY

PRESENTER SIGNATURE

By signing, I confirm that I attended this toolbox talk, that it was given in a language I understand, and that I could ask questions.

NO.	NAME AND SURNAME	COMPANY OR TRADE	SIGNATURE
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Keep this register in the site health and safety file. Log the talk in today's site diary with a photo of this page.