

Optional Information

Name of School:

Date of Inspection:

Vocational Program/Course/Room:

Signature of Inspector:

**Welding, Cutting and Brazing - General Requirements
Self Inspection Checklist**

Guidelines: This checklist covers selected regulations issued by the U.S. Department of Labor - OSHA under the General Industry standards 29 CFR 1910.252 and the Construction standards 29 CFR 1926.351, 1926.352, 1926.353 & 1926.354. All of these regulations were adopted by reference. The checklist also covers regulations issued by the New Jersey Department of Community Affairs (NJDCA) under the Uniform Fire Code (N.J.A.C. 5:70-3.2). The Uniform Fire Code has adopted by reference the model code of the Building Officials and Code Administrators International, Inc. known as the "BOCA National Fire Prevention Code/1996." The checklist applies to operations involving welding, cutting, brazing and heating. This checklist does not cover in detail regulations dealing with work in confined or enclosed spaces. If these conditions are encountered, please consult 29 CFR and 1926.353. Questions marked with the symbol (☞) may require the help of an outside expert. Any question marked with the symbol (⊗) indicates a history of previous violations in vocational schools.

Fire Prevention and Protection

Please Circle

Y N N/A DK

1. Are all moveable fire hazards and combustibles relocated at least 35 feet from areas or objects to be welded? [29 CFR 1910.252(a)(1)(i) & (a)(2)(vii), 1926.352(a) and N.J.A.C. 5:70-3.2 {BOCA F-2204.2}]

Comments/Corrective Action:

Safe Schools: A Health and Safety Check

New Jersey Safe Schools Program/New Jersey Department of Education

2. When welding or cutting operations are performed within 35 feet of combustible materials, or within 35 feet of floor, ceiling or wall openings, are guards, barriers and/or precautions used to confine heat sparks and slag? [29 CFR 1910.252(a)(1)(ii), (a)(2)(i), (a)(2)(v) and (a)(2)(vii); 1926.352(b); and N.J.A.C. 5:70-3.2{BOCA F-2204.2}] Y N N/A DK

Note: In instances where all the fire hazards cannot be removed or when there are floor, ceiling or wall openings, special precautions spelled out in 1910.252(a)(2), 1926.352(e) & (f) and N.J.A.C. 5:70-3.2{BOCA F-2204.2} may be necessary. In those cases, please refer to the actual code. The following requirements may be necessary: presence of fire watchers during and up to 30 minutes after the job is done; authorization inspections prior to beginning work; covering or wetting of combustible materials; relocation of combustibles; covering or shutting down ventilation ducts and conveyors; and a signed inspection report. In some cases, welding or cutting is prohibited if sprinkler systems are inoperable or unusual fire and explosion hazards exist.

3. Is welding prohibited where there is the use of flammable materials such as paints or the presence of heavy dust concentrations? [29 CFR 1910.252(a)(2), 29 CFR 1926.352(c) and N.J.A.C. 5:70-3.2{BOCA F-2204.4}] Y N N/A DK

Comments/Corrective Action:

Safe Schools: A Health and Safety Check

New Jersey Safe Schools Program/New Jersey Department of Education

4. Is one portable fire extinguisher having a rating of not less than 2-A:20-B:C kept at the location where the welding or cutting is done? [N.J.A.C. 5:70-3.2{BOCA F-2204.3}] Y N N/A DK

Note: The OSHA regulations 1910.252(a)(2)(ii) and 1926.352(d) require the presence of suitable fire extinguishing equipment and that it be in a state of readiness for instant use.

5. Is one portable fire extinguisher having a rating of not less than 2-A:10-B:C attached to all portable welding carts? [N.J.A.C. 5:70-3.2{BOCA F-2204.3}] Y N N/A DK

6. When welding or cutting containers such as barrels or tanks, are they thoroughly cleaned to remove materials which when heated may cause fire, explosion or release of toxic materials? [29 CFR 1910.252(a)(3)(i), 1926.352(i) and N.J.A.C. 5:70-3.2{BOCA F-2204.5}] Y N N/A DK

Note: The Construction regulations in 1926.352(i) also permit barrels or tanks to be filled with water as an alternative to cleaning.

7. Prior to welding or cutting containers, are all hollow spaces and cavities vented to permit the escape of trapped air or gases? [29 CFR 1910.252(a)(3)(ii) and 1926.352(j)] Y N N/A DK

Note: Purging with inert gas is recommended.

8. Is automatic sprinkler protection maintained when welding or cutting work is performed? [N.J.A.C. 5:70-3.2{BOCA F-2204.6}] Y N N/A DK

Comments/Corrective Action:

Safe Schools: A Health and Safety Check

New Jersey Safe Schools Program/New Jersey Department of Education

Protection of Personnel

- | | | |
|------|---|------------|
| 9. | Are welding cables and hoses kept clear of passageways, ladders and stairways? [29 CFR 1910.252(b)(1)(ii)] | Y N N/A DK |
| 10. | Are students/employees welding on platforms, scaffolds or runways protected from falls by means of railings, lifelines, or safety belts? [29 CFR 1910.252(b)(1)(i)] | Y N N/A DK |
| 11. | Are welders, cutters, brazers and helpers provided with suitable face, neck and ear protection to prevent direct radiant energy from the arc? [29 CFR 1910.252(b)(2)(ii)(B)] | Y N N/A DK |
| 12.⊗ | Where the work permits, are welders enclosed in an individual noncombustible booth or screened in area which has an internal non-reflective surface? [29 CFR 1910.252(b)(2)(iii) and 1926.351(e)] | Y N N/A DK |
| 13. | Are teachers/students working nearby protected from arc welding rays by means of screens, booths or shields? [29 CFR 1910.252(b)(2)(iii)] | Y N N/A DK |
| 14. | Do booths and screens permit circulation of air at the floor level? [29 CFR 1910.252(b)(2)(iii) and (c)(1)(ii)] (At least 2 feet of space is recommended at the bottom.) | Y N N/A DK |
| 15. | Are welders, cutters, brazers and helpers provided with suitable eye protection with properly selected filter lens shade numbers? [29 CFR 1910.252(b)(2) and 1926.353(e)(2)] | Y N N/A DK |

Note: See the Personal Protective Equipment checklist. The following is a guide for the selection of proper shade numbers. These recommendations may vary to suit the individual's need: [29 CFR 1910.252(b)(2)(ii)(H)]

Comments/Corrective Action:

Safe Schools: A Health and Safety Check

New Jersey Safe Schools Program/New Jersey Department of Education

Welding Operation	Shade No.
Shielded meta-arc welding - 1/16, 3/32, 1/8, 5/32 inch electrodes	10
Gas-shielded arc welding (nonferrous) - 1/16, 3/32, 1/8, 5/32 inch electrodes	11
Gas-shielded arc welding (ferrous) - 1/16, 3/32, 1/8, 5/32 inch electrodes	12
Shielded metal-arc welding:	
3/16, 7/32, 1/4 inch electrodes	12
5/16, 3/8 inch electrodes	14
Atomic hydrogen welding	10-14
Carbon arc welding	14
Soldering	2
Torch brazing	3 or 4
Light cutting, up to 1 inch	3 or 4
Medium cutting, 1 inch to 6 inches	4 or 5
Heavy cutting, 6 inches and over	5 or 6
Gas welding (light) up to 1/8 inch	4 or 5
Gas welding (medium) 1/8 inch to 1/2 inch	5 or 6
Gas welding (heavy) 1/2 inch and over	6 or 8

Note: In gas welding or oxygen cutting where the torch produces a high yellow light, it is desirable to use a filter or lens that absorbs the yellow or sodium line in the visible light of the operation.

16. Are students/employees provided with personal protective clothing as needed to prevent injury from welding hazards? [29 CFR 1910.252(b)(3)] Y N N/A DK
17. ☞ Are all welding operations in confined spaces done with careful consideration to space ventilation, respiratory protection, rescue, escape, permitting, atmospheric testing and personnel training? [29 CFR 1910.252(b)(4)] Y N N/A DK
18. ☞ Have all operations involving the welding, cutting or heating of metals containing lead, cadmium, mercury or beryllium been evaluated to determine if respiratory protection is required? [29 CFR 1926.353(c)] Y N N/A DK

Comments/Corrective Action:

Safe Schools: A Health and Safety Check

New Jersey Safe Schools Program/New Jersey Department of Education

Health Protection and Ventilation

- | | | |
|---|---|------------|
| 19. | ☞ Is local or general exhaust ventilation provided during welding to maintain concentrations of toxic materials such as fluorides, cadmium, zinc, beryllium, lead or mercury within acceptable limits? [29 CFR 1910.252(c) and 1926.353(a)(2)] | Y N N/A DK |
| 20. | Do the suppliers of fluxes, coatings, coverings, and filler metals used in welding and cutting supply information which talks about the hazardous releases which can be associated with the use of these materials? [29 CFR 1910.252(c)(1)(iv)] | Y N N/A DK |
| <p>Note: Check the MSDS (Material Safety Data Sheet) for information.</p> | | |
| 21. | Is mechanical ventilation provided when there is less than 10,000 cubic feet of space per welder? [29 CFR 1910.252(c)(2)(i)(A)] | Y N N/A DK |
| 22. | Is mechanical ventilation provided when the room has a ceiling height of less than 16 feet? [29 CFR 1910.252(c)(2)(i)(B)] | Y N N/A DK |
| 23. | Is contaminated air exhausted from a working space discharged into the open air and away from sources of fresh intake air? [29 CFR 1926.353(a)(4)] | Y N N/A DK |
| 24. | ☞ Do all air discharges from local exhaust ventilation systems for welding operations comply with New Jersey Department of Environmental Protection air pollution regulations? [see "Air Pollution Control" checklist] | Y N N/A DK |

Comments/Corrective Action:

Safe Schools: A Health and Safety Check

New Jersey Safe Schools Program/New Jersey Department of Education

25. Is first aid equipment for welders immediately available at all times? [29 CFR 1910.252(c)(13)] Y N N/A DK

Welding, Cutting and Heating of Coatings

26. Is welding, cutting or heating of surfaces covered by a preservative coating prohibited unless the flammability of the coating has been evaluated by a competent person? [29 CFR 1926.354(a)] Y N N/A DK

Note: Preservative coatings shall be considered to be highly flammable when scrapings burn with extreme rapidity.

27. Are highly flammable coatings stripped from the area to be heated? [29 CFR 1926.354(b)] Y N N/A DK

28. Are preservative coatings removed a sufficient distance from the area to be heated to ensure that the temperature of the unstripped metal will not be appreciably raised? [29 CFR 1926(354(d)] Y N N/A DK

29. Are toxic preservative surfaces removed a distance of at least 4 inches from the area of heat application or is suitable respiratory protection provided? [29 CFR 1926.354(c)] Y N N/A DK

Comments/Corrective Action:

Safe Schools: A Health and Safety Check

New Jersey Safe Schools Program/New Jersey Department of Education

This page was left intentionally blank.

Safe Schools: A Health and Safety Check

New Jersey Safe Schools Program/New Jersey Department of Education

05/2018