Hot Work Equipment
Monthly Inspection Form

The checklist is designed so that a negative answer to a question indicates an area of safety concern. However, it should be emphasized that the checklist is only a guide. Compliance with it does not necessarily assure full compliance with all OSHA Standards for General Industry, 29 CFR 1920.

<table>
<thead>
<tr>
<th>Your Name</th>
<th>print</th>
<th>sign</th>
<th>date</th>
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</thead>
<tbody>
<tr>
<td>Name of Department / Shop</td>
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<tr>
<td>Type of Equipment Inspected</td>
<td>Equipment Number</td>
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Installation and Operation of Oxygen-Fuel Gas Systems for Welding and Cutting - 1910.253

Yes No N/A Date corrected
1. Is acetylene generated, piped, or utilized at a pressure of 30 p.s.i. absolute pressure or less? .253(a)(2)
2. Have personnel in charge of the oxygen or fuel gas supply equipment been instructed and judged competent before being left in charge? .253(a)(4)
3. Is the gas content of compressed gas cylinders marked with either the chemical or the trade name of the gas? .253(b)(1)(ii) (Also see ANSI Z48.1-1954)
4. Are cylinders stored away from radiators and other sources of heat? .253(b)(2)(i)
5. Are cylinders that are stored inside kept in a well-ventilated, dry location at least 20 feet from highly combustible material? .253(b)(2)(ii)
6. Are cylinders stored in assigned places away from elevators, stairs, or gangways and where they will not be knocked over or damaged? .253(b)(2)(ii)
7. Are the valves of empty cylinders kept closed? .253(b)(2)(iii)
8. Are valve protection caps in place and hand-tight except when in use or connected for use? .253(b)(2)(iv)
9. Are fuel gas cylinders except those in use or attached for use, which are stored inside a building, limited to a total gas capacity of 2,000 cubic feet or 300 pounds of liquefied petroleum gas? .253(b)(3)(i)
10. Are acetylene cylinders stored valve end up? .253(b)(3)(ii)
11. If oxygen cylinders are stored in outside generator houses, are they separated from the generator or carbide storage rooms by a gastight, noncombustible partition having a fire-resistance rating of at least one hour? .253(b)(4)(ii)
12. Are stored oxygen cylinders separated from fuel gas cylinders or combustible material by a minimum of 20 feet, or by a noncombustible barrier at least five feet high with a fire-resistance rating of at least one-half hour? .253(b)(4)(iii)
13. Are cylinders, cylinder valves, couplings, regulators, hose and apparatus kept free from oily or greasy substances? .253(b)(5)(i)
14. Do you ensure that cylinders are not dropped, struck, or permitted to strike each other violently? .253(b)(5)(ii)(B)
15. Do you ensure that valve-protection caps are not used for lifting cylinders from one vertical position to another? .253(b)(5)(ii)(C)

16. Do you ensure that cylinders which do not have fixed hand wheels, have keys, handles, or nonadjustable wrenches on the valve stems while the cylinders are in service? .253(b)(5)(ii)(E) (NOTE: In multiple cylinder installations only one key or handle is required for each manifold.)

17. Are cylinder valves closed before moving cylinder and when work is finished? .253(b)(5)(ii)(F) & (G)

18. Are cylinders kept away from sparks, hot slag, or flame produced by welding or cutting operations, or are fire-resistance shields provided? .253(b)(5)(ii)(I)

19. Are cylinders placed where they will not become part of an electric circuit? .253(b)(5)(ii)(J)

20. Do you insure that cylinders are not used as rollers or supports, and that only proper tools are used to open cylinder valves? .253(b)(5)(ii)(k) and (q)

21. Are fuel gas cylinders placed valve end up while in use? .253(b)(5)(iii)(a)

22. Are cylinders with leaky valves or fittings taken outdoors and slowly emptied? .253(b)(5)(iii)(f)

23. Are warning signs posted which prohibit open flame or other sources of ignition near cylinders with leaking fuse plugs or other leaking safety devices, and are the cylinders tagged? .253(b)(5)(iii)(G)

**Manifold Systems - 1910.253**

24. Do you ensure that oxygen manifolds are not located in an acetylene generator room? .253(c)(2)(i)

25. Do you ensure that portable outlet headers are used indoors only for temporary service where conditions preclude a direct supply from outlets located on the service piping system? .253(c)(4)(i)

26. Is each outlet on the service piping which supplies a portable outlet header equipped with a readily accessible shutoff valve? .253(c)(4)(ii)

27. Are master shutoff valves for both oxygen and fuel gas provided at the entry end of the portable outlet header? .253(c)(4)(iv)

28. Are portable outlet headers provided with frames to support the equipment securely in the correct operating position? .253(c)(4)(viii)

29. When acetylene cylinders are coupled in a manifold, are flash arresters installed between each cylinder and the coupler block? .253(c)(5)(ii)

30. In service piping systems, are distribution lines installed and maintained in a safe operating condition? .253(d)(3)(i)

31. Are emergency gas cocks or valves provided for all buildings? .253(d)(3)(v)

32. Is underground pipe and tubing and outdoor ferrous pipe and tubing protected against corrosion? .253(d)(4)(i)
Yes  No  N/A  Date corrected

**General Requirements - 1910.253**

33. Is flashback protection provided by an approved device that will prevent flame from passing into the fuel gas systems? .253(e)(3)(ii)(C)(3)

34. Are hoses showing defects repaired or replaced? .253(e)(5)(v)

35. Are pressure-reducing regulators used only for the gas and pressures for which they are intended? .253(e)(6)(i)

36. Is the repair of regulators performed by properly instructed, skilled mechanics? .253(e)(6)(ii)

37. Are gauges on oxygen regulators marked “USE NO OIL”? .253(e)(6)(iii)

38. Are union nuts and connections on regulators inspected before use to detect faulty seats? .253(e)(6)(iv)

**Acetylene Generators - 1910.253**

39. Is ample space provided around the generator for operation and maintenance? .253(f)(3)

40. Are generators placed where water will not freeze, and is the use of sodium chloride to prevent freezing prohibited? .253(f)(4)(i)(B)

41. Are portable generators located at a safe distance from the welding position? .253(f)(5)(ii)(E)

42. Are the walls, floors, and roofs of outside generator houses constructed of noncombustible materials? .253(f)(6)(i)(B)

43. Are exit doors readily accessible in case of emergency? .253(f)(6)(i)(D)

44. Are generators installed inside buildings enclosed in a separate room? .253(f)(6)(i)(G)

45. Are the walls, partitions, floors, and ceilings of inside generator rooms of noncombustible construction with a fire-resistance rating of at least one hour? .253(f)(6)(i)(H)

46. Are generator rooms or buildings well ventilated with vents located at floor and ceiling levels? .253(f)(6)(ii)

47. Do generator rooms or buildings have natural light during daylight hours or artificial light restricted to electric lamps installed in a fixed position? .253(f)(6)(iv)(A)

48. Are operating instructions posted in a conspicuous place near the generator or available for ready reference? .253(f)(7)(i)(A)

49. Is the generator room electrically wired in accordance with 1910.307 (hazardous locations)?

50. Do you ensure that the water-carbide residue mixture drained from the generator is not discharged into sewer pipes or stored in areas near open flames? .253(f)(7)(i)(D)

51. Do you ensure that calcium carbide is kept in metal packages strong enough to prevent rupture? .253(g)(1)(i)
Acetylene Generators - 1910.253 (cont)

52. Are the packages marked “Calcium Carbide - Dangerous If Not Kept Dry”? .253(g)(1)(ii)

53. Do you ensure that the calcium carbide stored indoors does not exceed 600 pounds and that the storage area is dry, waterproof, and well-ventilated? .253(g)(2)(i)

54. Are carbide containers that are stored outside periodically examined for conditions that could affect water or air tightness? .253(g)(3)(ii)

Application, Installation and Operation of Arc Welding and Cutting Equipment - 1910.254

55. Have employees who are designated to operate arc welding equipment been properly instructed and qualified? .254(a)(3)

56. Are open circuit (no load) voltages of arc welding and cutting machines as low as possible, consistent with satisfactory welding? .254(b)(3)

57. When open circuit voltages must be higher, are means provided to prevent the operator from making accidental contact with the higher voltages? .254(b)(3)(iii)

58. Is control apparatus enclosed on all types of arc welding machines? .254(b)(4)(ii)

59. Are terminals for welding leads protected from accidental electrical contact by personnel or metal objects? .254(b)(4)(iv)

60. Do you ensure that no connections for portable control devices, such as push buttons carried by the operator, are connected to an a.c. circuit of higher than 120 volts? .254(b)(4)(v)

61. Is the frame or case of the welding machine effectively grounded and the grounding checked? .254(c)(2)(i) and (d)(3)

62. Is a separate disconnecting switch or controller provided at or near each welding machine? .254(c)(3)(i)

63. Are electrode holders placed so that they cannot make electrical contact with persons, conducting objects, fuel, or compressed gas tanks? .254(d)(7)

64. Has the operator been instructed to report any equipment defect or safety hazard to his supervisor, and is use of the equipment discontinued until repaired by qualified personnel? .254(d)(9)(i)

65. Are work and electrode lead cables frequently inspected for wear and damage, and are cables with damaged insulation or exposed bare conductors replaced? .254(d)(9)(iii)

Installation and Operation of Resistance Welding Equipment - 1910.255

66. Have personnel who are designated to operate resistance welding equipment been properly instructed and judged competent to operate such equipment? .255(a)(3)

67. Are all doors and access panels of all resistance welding machines and control panels kept locked and interlocked? .255(b)(3)
### Hot Work Equipment Monthly Inspection Form

**revised: 09/2013**

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
<th>Date Corrected</th>
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68. Has a shield guard of safety glass or suitable fire-resistant plastic been installed at the point of operation? .255(b)(5)

69. Are foot switches guarded to prevent accidental operation of the machine? .255(b)(6)

70. Are two or more safety emergency stop buttons provided on all special, multiposition welding machines, including 2-post and 4-post weld presses? .255(b)(7)

71. Are flash welding machines equipped with hoods to control flying flash? .255(d)(1)

72. Are periodic inspections of the machines made by qualified maintenance personnel, and are records of the inspections maintained? .255(e)

### Fire Prevention and Protection – 1910.252

73. Is suitable fire extinguishing equipment maintained in a state of readiness for instant use? .252(a)(2)(ii)

74. Are fire watches on duty whenever welding or cutting is performed in locations where a major fire might develop? (See conditions listed) .252(a)(2)(iii)(A)

75. Before cutting or welding is permitted, is the area inspected by the individual responsible for authorized cutting and welding operations? .252(a)(2)(iv)

76. Where practicable, are all combustibles relocated at least 35 feet from the work site? .252(a)(2)(vii)

77. Does management recognize its responsibility for the safe usage of cutting and welding equipment on its property? .252(a)(2)(xiii)

78. Do supervisors recognize their responsibilities in the safe management of welding and cutting operations as defined in .252(a)(2)(xiv)(A)?

### Protection of Personnel – 1910.252

79. Are welders or helpers who are working on platforms, scaffolds, or runways protected against falling by railings, safety belts or lifelines? .252(b)(1)(i)

80. Is welding cable and other equipment kept clear of passageways, ladders, and stairways? .252(b)(1)(ii)

81. Are helmets, face shields, and goggles worn during all arc welding or cutting operations? .252(b)(2)(i)(A)

82. Has a hazard assessment been performed to determine if hazards are present or likely to be present? .132(d)(1)

83. Are employees who are exposed to the hazards created by welding, cutting, or brazing operations protected by personal protective equipment as required by 1910.132 and 1910.252(b)(3)?

84. When welding or cutting is being performed in any confined space, are gas cylinders and welding machines left outside? .252(b)(4)(iii)

85. Before operations are started, is heavy, portable, wheel-mounted equipment securely blocked to prevent accidental movement? .252(b)(4)(iii)
Yes No N/A Date corrected

**Health Protection and Ventilation – 1910.252**

86. Where a welder must enter a confined space through a manhole or other small opening, have means been provided for his quick removal in case of emergency? 1910.252(b)(4)(iv)

87. Are ventilation or respiratory protective devices provided where necessary and do they meet the equivalent requirements of 1910.252(c)(4)(i), (ii), (iii), (iv) and (v)?

88. Are employees trained to render first aid, and is first aid equipment available at all times? 1910.252(c)(13)

### Ventilation Requirements for Welding and Cutting – 1910 Standards

<table>
<thead>
<tr>
<th>Metal Compound</th>
<th>Requirements Confined Space</th>
<th>Requirements Indoors</th>
<th>Requirements Outdoors</th>
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<tbody>
<tr>
<td>Flourine Compound</td>
<td>Air replacement or airline respirator or self-contained breathing apparatus needed</td>
<td>Air sample tests to determine if exhaust hood, booth, and airline respirator are required</td>
<td>Same as indoors</td>
</tr>
<tr>
<td>Lead Zinc</td>
<td>Air replacement or airline respirator or self-contained breathing apparatus</td>
<td>Exhaust hood or booth</td>
<td>Combination particulate and vapor and gas removing type respirator if tests indicate need</td>
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<tr>
<td>(Galvanized Metals)</td>
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<tr>
<td>Beryllium</td>
<td>Exhaust hood or booth and airline respirator if air sample tests indicate need</td>
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</tr>
<tr>
<td>Cadmium Mercury</td>
<td>Exhaust hood or booth and airline respirator if air sample tests indicate need</td>
<td>Exhaust hood or booth and airline respirator if air sample tests indicate need</td>
<td>Combination particulate and vapor and gas removing type respirator if tests indicate need</td>
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1. Airline or self-contained breathing apparatus are required in confined areas that are immediately hazardous to life.

2. Local exhaust hoods or booths must provide airflow of 100 linear feet per minute.

3. Mechanical ventilation at 2,000 cubic feet of air per minute per welder is required when welding or cutting on metals other than described above; when there is less than 10,000 cubic feet of space per welder; or where the ceiling height is less than 16 feet; or in confined spaces or where structural barriers (such as partitions or balconies) significantly obstruct cross ventilation. 1910.252(c)(2)(i)(A) through (C).

**NOTE:** Mechanical ventilation is necessary when an exhaust hood or fixed booth provide for a rate of airflow sufficient to maintain a velocity away from the welder or not less than 100 linear feet per minute.