Oklahoma CTE

Oxyacetylene Welding (2002)

Adopted 2002

Demonstrate Employability Skills

18. **Identify employment opportunities.** A.18

19. **Identify levels of training recommended for related careers.** A.19

20. **Understand salary, wages and benefits packages.** A.20

Safety

26. Explain the purpose for safety policies. A.26

27. Discuss the role of OSHA and EPA
Locate information in MSDS A.27

28. Participate in OSHA training, if possible
Lock Out/Tag Out
HAZCOM
MSDS
Bloodborne Pathogens A.28

29. Explain the proper steps in reporting an accident or emergency. A.29

30. Explain the hazards associated with specific types of equipment and tools. A.30

31. Perform machine operator safety checks of equipment and accessories, when necessary. A.31

32. Practice tool safety. A.32

33. Describe the types of fire hazards found in the workplace. A.33

34. Discuss electrical hazards. A.34

35. Demonstrate safe use of personal protective equipment. A.35

36. Demonstrate safe material handling techniques
Lifting
Transporting
Storing A.36

37. Understand established first aid procedures. A.37

38. Practice good housekeeping. A.38

39. Comply with company safety policies. A.39

Basic Academic Skills

40. Apply mathematical operations involving whole numbers, fractions, decimals, percentages; mathematical word problems, ratios, etc., when necessary
Addition
Subtraction
Multiplication
Division A.40
41. Apply advanced mathematical operations, when necessary
Algebra
Geometry
Trigonometry
Calculus
Statistical Methods A.41
42. Apply scientific principles, when necessary
Physics
Chemistry A.42
43. Interpret charts, table, and graphs. A.43
44. Apply reading and writing skills, when necessary. A.44

Blueprint Reading

50. Identify basic elements of blueprints
Terms
Components
Symbols A.50
51. Discuss different types of drawings. A.51
52. Interpret drawings
Bill of Materials
Revisions
Tolerances A.52
53. Interpret symbols. A.53

Measurement Tools and Techniques

54. Identify types of measuring instruments. A.54
55. Use appropriate measurement instrument for a measurement task. A.55
56. Read measuring instruments. A.56
57. Identify the appropriate formula and units for a measurement task. A.57
58. Differentiate between English and Metric measurement systems, when necessary. A.58
59. Communicate measurements using proper symbols or words. A.59

Interpret Drawing and Welding Symbols and Written Welding Procedures

01. **Interpret basic elements of drawing/sketch
Structural members
Sequence of assembly
Dimensions of tolerances
Scale
View interpretation
List of materials
** B.01
02. **Interpret welding symbol information
Type of weld required
Filler metal
Special details
Non-destructive testing requirements
** B.02

Perform Manual Oxyfuel (OF) Cutting	**01.** Perform safety inspections of equipment and accessories - Protective clothing and equipment - Manual OFC equipment and accessories - Oxygen/fuel gas supply systems and accessories - Hand tools - Work area - Communicate hazard warnings G.01
	02. Make minor external repairs to equipment and accessories (preventative maintenance only) - Manufacturer's recommendations - Company repair policy - Equipment troubleshooting - Regulators G.02
	03. Set up maual oxyfuel fas cutting operations on plain carbon steel - Regulator set for appropriate tip/fuel gas - Tip selection (size and type) G.03
	04. Operate manual oxyfuel cutting equipment - Control gas flow and flame size/tip - Initial lighting procedure - shut down procedures G.04
	05. Perform straight cutting operations on plain carbon steel plate and pipe. G.05
	06. Perform shape cutting operations on carbon steel plate pipe. G.06
	07. Perform bevel cutting operations on plaincarbon steel and pipe. G.07
	08. Remove weld metal from plain carbon steel using weld washing techniques Tip selection to avoid destruction of metal G.08
Perform Machine Oxyfuel (OF) Gas Cutting (Track Burner)	**01.** Perform safety inspections of equipment and accessories - Protective clothing and equipment - Hand tools - Work area - Machine oxyfuel gas cutting (track burner) equipment and accessories) - Oxygen/fuel gas supply systems and accessories - Communicate hazard warning H.01
	02. Make minor external repairs to equipment and accessories - Manufacturer's recommendations - Company repair policy - Eqipment troubleshooting - Regulators H.02
	03. Set up machine oxyfuel cutting (track burner) operations on plain carbon steel - Regulator set for appropriate tip/fuel gas - Tip selection (size and type) - Alignment of track mechanism H.03
	04. Operate machine oxyfuel gas cutting (track burner) equipment - Central gas flow - Initial igniting procedure - Travel speed - Shut down procedures H.04
	05. Perform straight cutting operations on plain carbon steel plate. H.05