



**HOBART INSTITUTE**  
OF WELDING TECHNOLOGY

# WELDING TRAINING MATERIALS CATALOG

**2025**



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# COMPLETE TRAINING COURSE OVERVIEW

## Each Complete Course Includes:

an instructor's guide; DVD(s), one student workbook, one technical guide, tests & answer keys.

### • Instructor's Guide

With comprehensive instructions for implementing each topic.

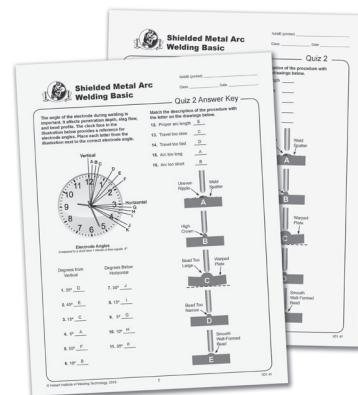
| Topic/Objective                                                                                                                     | Training Time                                                 | Materials/Settings                                                                                                                                                                                                                                                                                        | Testing Method                                                                                                                                                | Suggestions/Notes/Cautions for the Instructor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3. Arc Welding Safety<br><br>Objective:<br>To become familiar with the important safety rules associated with all phases of welding | 1 Hr.<br><br><b>Recommended practice time for each topic.</b> | • DVD 1, Topic 3 (11 min. 13 sec.)<br>• Student Workbook, Topic 3, Page 13.<br>• Welding jacket or welding gloves, safety glasses with side shields, welding helmet with proper lens shade, welding gloves, leather safety shoes, denim pants free of cuffs, tears, and holes, proper hearing protection. | Written test based on ANSI Z49.1 (for AWS® EG2.0 and QC10 compliance).<br><br>AND/OR<br>Oral Quiz<br><br><b>Suggested testing methodology for each topic.</b> | Introduce this topic by paraphrasing the following:<br><br><b>Every year, hundreds of peoples' lives are changed forever because they, or someone they work with fails to follow proper safety procedures.</b><br><br><b>Think about it. One day the pressure is on to get a job done. You've done the job so many times before, and it seems so routine that you decide to take a few short cuts. The next thing you know you're lying in a hospital bed with third degree burns, or perhaps you've lost the use of your legs and will never walk again. So protect yourself and those around you by following safe work procedures.</b><br><br>This next topic deals with the things you need to do to pro-<br><br><b>A complete script of recommended things to say (bold) and questions to ask (indented) along with suggestions, notes &amp; cautions for implementing each topic.</b> |

### • DVDs



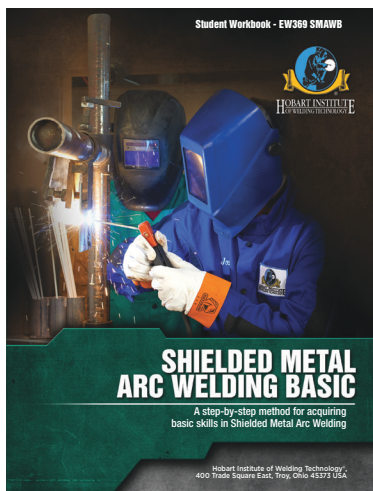
### • Answer Keys for Written Test

Answer keys for each written test make it easy for instructors to measure student mastery of key concepts. (50 copies of each written test are shipped with each complete course.)



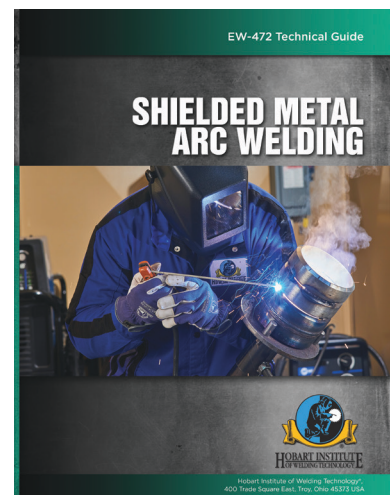
### • One Student Workbook

Featuring easy to follow practice sessions based on video demonstrations and summaries of essential theory.



### • One Technical Guide

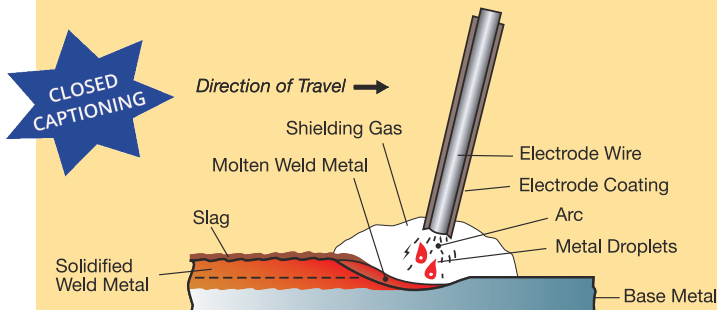
An individual resource for instructors and students, each technical guide contains process specific information on equipment, process variables, weldability, pre- and post-weld procedures, shielding gases, electrodes, safety and more.



# COMPLETE TRAINING COURSES

## Shielded Metal Arc Welding

The Shielded Metal Arc Welding program is a complete training program. The fundamentals of shielded metal arc welding are covered in the basic program. It provides training in all positions, on mild steel with single and multipass welds. SMAWA-1 (Structural) teaches welding on single V-groove welds on carbon steel with multipass welds in all positions with backing strips. SMAWA-2 (Pre-pipe) teaches welding on single V-groove welds with open root on carbon steel with multipass welds in all positions. SMAWA-2 is in preparation for the transition to pipe welding. There are three pipe welding courses; 2" Pipe Uphill, 6" Pipe Uphill and 6" Pipe Downhill.



SMAW is an electric arc welding process where the heat for welding is generated by an electric arc between a covered metal electrode and the work.

27. Square-Groove Weld, Butt Joint, Vertical Position, Uphill, Guided Bend Test
28. Square-Groove Weld, Butt Joint, Overhead Position
29. Distortion Control
30. Multi-Pass Fillet Welds, T-Joints, Flat, Horizontal, Vertical & Overhead Positions, E7018
31. Multi-Pass Fillet Welds, Lap Joint, Horizontal Position, E7018 & E7024
32. Square-Groove Weld, Butt Joint, Flat Position, Fillet Welds, Lap & T-Joints, Horiz. Pos., E7024
33. Fillet Weld, Lap & T-Joints, Horizontal & Vertical Position, Down, 11 Gauge, E6013
34. Fillet Weld, Lap & T-Joints, Horizontal & Vertical Position, Down, 16 Gauge, E6013
35. Fillet Weld, Lap Joint, Vertical Position, Down, 11 & 16 Gauge, E6013
36. AWS® QC10 2G Qualification Test
37. AWS® QC10 3G Qualification Test
38. AWS® Standard Guided Bend Test

| Product                    | Item No. | List Price |
|----------------------------|----------|------------|
| Complete SMAWB course..... | DV01     | \$1,125.00 |

## Shielded Metal Arc Welding Basic

Complete Course: 4 DVDs (3 hrs. 47 min);  
1 Instructor Guide; 5 written tests, 50 copies each

ITEM NO.  
**DV01**

### Topics

1. Shielded Metal Arc Welding Basic, Course Overview
2. Introduction to Shielded Metal Arc Welding
3. Arc Welding Safety
4. The Five Essentials
5. Striking & Controlling the Arc
6. Pad of Beads, Flat Position, E6013
7. Pads of Beads, Flat Position, E6010
8. Pads of Beads, Horizontal Position, E6010
9. The Welders Role In Quality Control
10. Fillet Weld, Lap Joint, Horizontal Position, E6013
11. Fillet Weld, Lap Joint, Horizontal Position, Uphill, E6010
12. Fillet Weld, Lap Joint, Overhead Position, E6010
13. Electrode Selection
14. Three-Bead Fillet Weld, T-Joint, Horizontal Position, E6010
15. Fillet Weld, T-Joint, Horizontal Position, Break Test, E6010
16. Fillet Weld, T-Joint, Vertical Position, Uphill, with Z-weave Cover, E6010
17. Three-Bead Fillet Weld (Root & 2 Weaves), T-Joint Vertical Position, Uphill, E6010
18. Three-Bead Fillet Weld, T-Joint, Overhead Position, E6010
19. Fillet Weld, T-Joint, Overhead Position, Break Test, E6010
20. The Low Hydrogen Electrodes and Their Uses
21. Three-Bead Fillet Weld, T-Joint, Vertical Position, Uphill, with Z-weave Cover, E7018
22. Three-Bead Fillet Weld, T-Joint, Overhead Position, E7018
23. Power Source Technology
24. Square-Groove Weld, Butt Joint, Horizontal Position
25. Square-Groove Weld, Butt Joint, Horizontal Position, Guided Bend Test
26. Square-Groove Weld, Butt Joint, Vertical Position, Uphill

## Shielded Metal Arc Welding – Structural

Complete Course: 3 DVDs (1 hr. 58 min);  
1 Instructor Guide; 4 written tests, 50 copies each

ITEM NO.  
**DV02**

*Recommended as an advanced plate curriculum for Structural welding and displaying the use of backing strips.*

### Topics

1. Shielded Metal Arc Welding Structural - Course Overview
2. Introduction to Shielded Metal Arc Welding
3. Safety & Health Of Welders
4. Single V-Groove Weld, Butt Joint, Horizontal (2G) Position
5. Weld Size & Profile
6. Procedure & Welder Qualification
7. Single V-Groove Weld, Butt Joint, Horizontal (2G) Position, Destructive Test
8. Single V-Groove Weld, Butt Joint, Vertical (3G) Position
9. Destructive Testing
10. Single V-Groove Weld, Butt Joint, Overhead (4G) Position
11. Nondestructive Testing
12. Single V-Groove Weld, Butt Joint, Horizontal (2G) Position
13. Air Carbon Arc Cutting & Gouging
14. Single V-Groove Weld, Butt Joint, Horizontal (2G) Position, Destructive Test
15. Single V-Groove Weld, Butt Joint, Vertical (3G) Position
16. Metals Identification for Welding
17. Single V-Groove Weld, Butt Joint, Overhead (4G) Position
18. Welding Cast Iron & Hard Surfacing Welds
19. Single V-Groove Weld, Butt Joint, Flat (1G) Position

| Product                      | Item No. | List Price |
|------------------------------|----------|------------|
| Complete SMAWA-1 course..... | DV02     | \$1,125.00 |



## Shielded Metal Arc Welding – Pre-Pipe

Complete Course: 3 DVDs (1 hr. 58 min);  
1 Instructor Guide; 4 written tests, 50 copies each

ITEM NO.  
**DV05**

*Recommended as an advanced curriculum to prepare students for SMAW – open root – pipe welding.*

### Topics

1. Shielded Metal Arc Welding Pre-Pipe - Course Overview
2. Introduction to Shielded Metal Arc Welding
3. Safety & Health of Welders
4. Single V-Groove Weld, Butt Joint, Horizontal (2G) Position
5. Weld Size & Profile
6. Procedure & Welder Qualification
7. Single V-Groove Weld, Butt Joint, Horizontal (2G) Position, Destructive Test
8. Single V-Groove Weld, Butt Joint, Vertical (3G) Position
9. Destructive Testing
10. Single V-Groove Weld, Butt Joint, Overhead (4G) Position
11. Nondestructive Testing
12. Single V-Groove Weld, Butt Joint, Vertical Down (3G) Position
13. Air Carbon Arc Cutting & Gouging
14. Single V-Groove Weld, Butt Joint, Vertical (3G) Position
15. Single V-Groove Weld, Butt Joint, Vertical (3G) Position, Destructive Test
16. Metals Identification of Welding
17. Single V-Groove Weld, Butt Joint, Overhead (4G) Position
18. Welding Cast Iron & Hard Surfacing Welds
19. Single V-Groove, Butt Joint, Flat (1G) Position

| Product                      | Item No. | List Price |
|------------------------------|----------|------------|
| Complete SMAWA-2 course..... | DV05     | \$1,125.00 |

## Shielded Metal Arc Welding 2-Inch Pipe Uphill

Complete Course: 2 DVDs (1 hr. 54 min);  
1 Instructor Guide; 2 written tests, 50 copies each

ITEM NO.  
**DV03**

### Topics

1. Shielded Metal Arc Welding 2" Pipe Uphill - Course Overview
2. Introduction to Shielded Metal Arc Welding Pipe
3. Safety & Health of Welders
4. Weld Quality: Reading the Puddle
5. Preparation & Assembly of an Open Root Pipe Joint - Double Extra Strong (XX Strong)
6. Single V-Groove Weld, Butt Joint, (2G) Pipe - Double Extra Strong (XX Strong)
7. Standard Destructive Test - Double Extra Strong Pipe (XX Strong)
8. Single V-Groove Weld, Butt Joint, (5G) Pipe - Double Extra Strong (XX Strong)
9. Single V-Groove Weld, Butt Joint, (6G) Pipe - Double Extra Strong (XX Strong)
10. Preparation & Assembly of an Open Root Pipe - Schedule 40
11. Single V-Groove Weld, Butt Joint, (2G) Pipe - Schedule 80
12. Standard Destructive Test Schedule 80 Pipe
13. Single V-Groove Weld, Butt Joint, (5G) Pipe - Schedule 80
14. Single V-Groove Weld, Butt Joint, Vertical (6G) Pipe - Schedule 80

## 15. Pipe Scheduling & Tubing Dimensions

| Product                            | Item No. | List Price |
|------------------------------------|----------|------------|
| Complete SMAW 2" Pipe Uphill ..... | DV03     | \$1,125.00 |

## Shielded Metal Arc Welding 6-Inch Pipe Uphill

Complete Course: 2 DVDs (1 hr. 57 min);  
1 Instructor Guide; 5 written tests, 50 copies each

ITEM NO.  
**DV06**

### Topics

1. Shielded Metal Arc Welding 6" Pipe Uphill - Course Overview
2. Introduction to Shielded Metal Arc Welding Pipe
3. Safety & Health of Welders
4. Weld Quality: Reading the Puddle
5. Preparation & Assembly of an Open Root Pipe Joint
6. Single V-Groove Weld, Butt Joint, (2G) Pipe - Schedule 80
7. Standard Destructive Test - Schedule 80 Pipe
8. Methods of Applying the Root Pass
9. Single V-Groove Weld, Butt Joint, (5G) Pipe - Schedule 80
10. How to Read & Apply Welding Procedures
11. Single V-Groove Weld, Butt Joint, (6G) Pipe - Schedule 80
12. Preheat & Interpass Temperatures
13. Single V-Groove Weld, Butt Joint, (6G) Pipe E7018 Root - Schedule 80

| Product                            | Item No. | List Price |
|------------------------------------|----------|------------|
| Complete SMAW 6" Pipe Uphill ..... | DV06     | \$1,125.00 |

## Shielded Metal Arc Welding Pipe - Downhill

Complete Course: 2 DVDs (1 hr. 49 min);  
1 Instructor Guide; 2 written tests, 50 copies each

ITEM NO.  
**DV04**

### Topics

1. Shielded Metal Arc Welding Pipe Downhill - Course Overview
2. Introduction to Shielded Metal Arc Welding Pipe - Downhill
3. Safety & Health of Welders
4. Weld Quality: Reading the Puddle - Downhill Travel
5. Preparation & Assembly of a 6" Open Root Pipe Joint - Downhill
6. Single V-Groove Weld, Butt Joint, (5G) Position, 6" Pipe- Downhill
7. Standard Visual Inspection - Schedule 80 Pipe - Downhill
8. Pipeline Construction & Welding - Downhill
9. How to Read & Apply Welding Procedures - Downhill
10. Single V-Groove Weld, Butt Joint, (6G) Position, 6" Pipe- Downhill
11. Standard Destructive Test, Guided Bend & Nick Break Test
12. Preparation & Assembly of a 2" Open Root Pipe Joint - Downhill
13. Single V-Groove Weld, Butt Joint, (5G) Position, 2" Pipe - Downhill
14. Single V-Groove Weld, Butt Joint, (6G) Position, 2" Pipe - Downhill

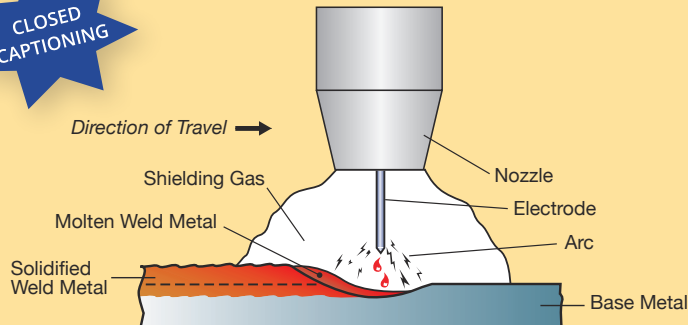
| Product               | Item No. | List Price |
|-----------------------|----------|------------|
| Complete SMAWPD ..... | DV04     | \$1,125.00 |

# COMPLETE TRAINING COURSES

## Gas Metal Arc Welding

There are three courses in the Gas Metal Arc series — Basic, Advanced and Pipe. The programs feature male and female narration, animated graphics and shots of the arc so clear you can see the silicon island in the welding puddle.

CLOSED  
CAPTIONING



## Gas Metal Arc Welding Basic

Complete Course: 3 DVDs (2 hrs. 10 min);  
1 Instructor Guide; 2 written tests, 50 copies each

ITEM NO.  
**DV10**

### Topics

1. Gas Metal Arc Welding Basic - Course Overview
2. Introduction to Gas Metal Arc Welding
3. Safety & Health of Welders
4. Installation, Setup & Maintenance of Equipment
5. Surfacing Welds, Flat Position
6. Square Groove & Fillet Welds, Butt, Lap & T-Joints, Flat Position
7. Square Groove & Fillet Welds, Butt, Lap & T-Joints, Horizontal Position
8. The Quality of Welds
9. Square Groove & Fillet Welds, Butt, Lap & T-Joints, Vertical Position, Down
10. Square Groove & Fillet Welds, Butt, Lap & T-Joints, Vertical Position, Up
11. Metal Transfer & Shielding Gases
12. Square Groove & Fillet Welds, Butt, Lap & T-Joints, Overhead Position
13. Square V-Groove, Butt Joint, Horizontal Position
14. Square V-Groove, Butt Joint, Horizontal Position, Guided Bend Test
15. Square V-Groove, Butt Joint, Vertical Position, Down
16. Square V-Groove, Butt Joint, Vertical Position, Down, Guided Bend Test
17. Square V-Groove, Butt Joint, Vertical Position, Up
18. Square V-Groove, Butt Joint, Flat Position
19. Square V-Groove, Butt Joint, Overhead Position
20. Fillet Welds, Lap & T-Joints, Horizontal Position
21. Fillet Welds, Lap & T-Joints, Vertical Position, Down
22. Fillet Welds, Lap & T-Joints, Flat Position with Spray Transfer
23. Fillet Welds, Lap & T-Joints, Horizontal Position with Spray Transfer
24. Single V-Groove Weld, Flat Position with Spray Transfer

| Product                     | Item No. | List Price |
|-----------------------------|----------|------------|
| Complete GMAWB course ..... | DV10     | \$1,125.00 |

## Gas Metal Arc Welding Advanced

Complete Course: 2 DVDs (1 hr. 52 min);  
1 Instructor Guide; 2 written tests, 50 copies each

ITEM NO.  
**DV11**

### Topics

1. Gas Metal Arc Welding Advanced - Course Overview
2. Introduction to Gas Metal Arc Welding - Spray & Pulse Spray Transfer
3. Safety & Health of Welders
4. Equipment Set-Up, Operation & Shut-Down
5. Single V-Groove Weld, Butt Joint, (1G) Position - Spray
6. Introduction to Pulse Spray Transfer
7. Single V-Groove Weld, Butt Joint, (2G) Position - Pulse
8. Standard Destructive Test
9. Weldability of Aluminum Alloys
10. Fillet Weld, Lap & T-Joint (2F) Position
11. Fillet Weld, Lap & T-Joint (3F) Position
12. Single V-Groove Weld, Butt Joint, (3G) Position
13. Single V-Groove Weld, Butt Joint, (3G) Position with Visual Inspection & Microetch Test
14. Single V-Groove Weld, Butt Joint, (4G) Position
15. Fillet Weld, Lap & T-Joint (2F) Position

| Product                    | Item No. | List Price |
|----------------------------|----------|------------|
| Complete GMAWA course..... | DV11     | \$1,125.00 |

## Gas Metal Arc Welding Pipe

Complete Course: 2 DVDs (1 hr. 10 min);  
1 Instructor Guide; 2 written tests, 50 copies each

ITEM NO.  
**DV15**

### Topics

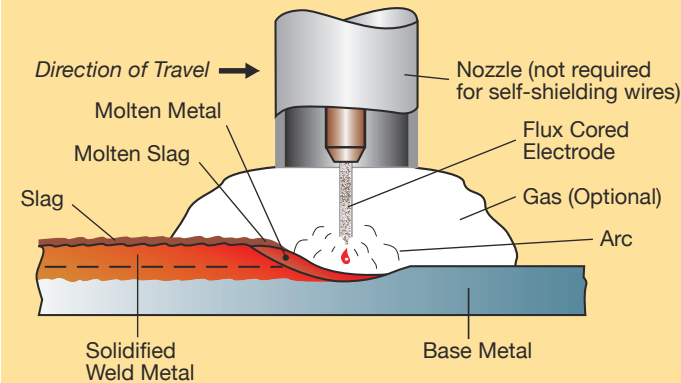
1. Gas Metal Arc Welding Pipe - Course Overview
2. Introduction to Gas Metal Arc Welding
3. Safety & Health of Welders
4. Equipment Setup, Operation & Shutdown
5. Preparation & Assembly of an Open Root Pipe Joint
6. Single V-Groove Weld, Butt Joint, (2G) Position
7. Weld Quality: Visual Inspection
8. Standard Destructive Test - Schedule 80 Pipe
9. Single V-Groove Weld, Butt Joint, (5G) Position - Downhill
10. Single V-Groove Weld, Butt Joint, (5G) Position Downhill Root, Uphill Fill & Cover
11. Single V-Groove Weld, Butt Joint, (6G) Position, Downhill - 6" Pipe
12. Single V-Groove Weld, Butt Joint, (6G) Position, Downhill - 2" Pipe

| Product                    | Item No. | List Price |
|----------------------------|----------|------------|
| Complete GMAWP course..... | DV15     | \$1,125.00 |



## Flux-Cored Arc Welding

The Flux Cored Arc Welding training program provides the student with a thorough understanding of the Flux Cored Arc Welding process. It provides training in all positions, on carbon steels, with and without shielding gas, using small and large diameter flux cored electrodes.



## Flux-Cored Arc Welding

Complete Course: 3 DVDs (2 hrs. 20 min);  
1 Instructor Guide; 2 written tests, 50 copies each

ITEM NO.  
DV12

### Topics

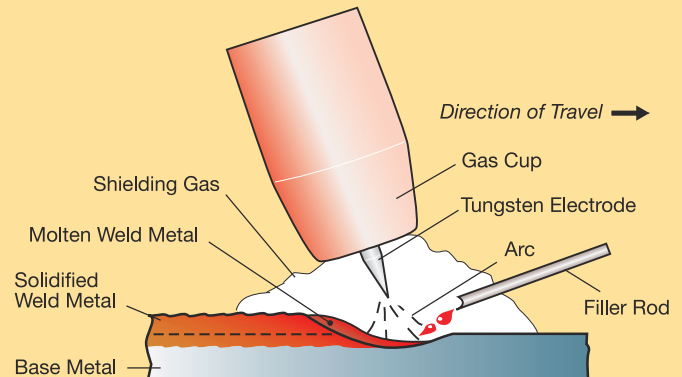
1. Flux-Cored Arc Welding - Course Overview
2. Introduction to Flux-Cored Arc Welding
3. Safety & Health of Welders
4. Equipment Setup, Adjustment & Maintenance
5. Fillet Welds, T-Joints, Horizontal, Vertical & Overhead Positions (Gas & Self-Shielded)
6. Electrode Classification & Selection
7. Single V-Groove Weld, Butt Joint, Horizontal (2G) Position (Gas & Self-Shielded)
8. Single V-Groove Weld, 2G Destructive Test
9. Single V-Groove Weld, Butt Joint, Vertical (3G) Position (Gas & Self-Shielded)
10. Single V-Groove Weld, Butt Joint, Overhead (4G) Position (Gas & Self-Shielded)
11. Single V-Groove Weld, Butt Joint, Horizontal (2G) Position (Gas & Self-Shielded)
12. Single V-Groove Weld, Butt Joint, Vertical (3G) Position (Gas & Self-Shielded)
13. Single V-Groove Weld, 3G Destructive Test
14. Single V-Groove Weld, Butt Joint, Horizontal (1G) Position (Self-Shielded)
15. Fillet Weld, Lap Joint, Flat (1F) Position (Metal-Cored)
16. Single V-Groove Weld, Butt Joint, Flat (1G) Position (Metal-Cored)
17. Single V-Groove Weld, Butt Joint, Horizontal (2G) Position (Gas & Self-Shielded)
18. Single V-Groove Weld, Butt Joint, Horizontal Fixed Position (5G), Pipe

### Product

|                                  | Item No. | List Price |
|----------------------------------|----------|------------|
| Complete FCAW course (DVD) ..... | DV12     | \$1,125.00 |

## Gas Tungsten Arc Welding

The Gas Tungsten Arc Welding program is a complete training program. The fundamentals of Gas Tungsten Arc Welding are covered in the basic program. It provides training on mild steel, stainless steel and aluminum, using both direct and alternating current. Gas Tungsten Arc Welding Pipe is divided into two programs. Gas Tungsten Arc Welding 2-inch Pipe prepares the student for pipe welding, and teaches the student to weld on 2-inch Sch. 80 pipe, in all positions. Gas Tungsten Arc Welding 6-inch Pipe provides training on 6-inch pipe using GTAW to deposit the root and second pass; and SMAW to complete the weld. Students also weld on stainless steel pipe and with a consumable insert.



## Gas Tungsten Arc Welding

Complete Course: 4 DVDs (3 hrs. 40 min);  
1 Instructor Guide; 4 written tests, 50 copies each

ITEM NO.  
DV20

### Topics

1. Gas Tungsten Arc Welding - Course Overview
2. Introduction to Gas Tungsten Arc Welding
3. Safety & Health of Welders
4. Equipment Setup, Adjustment & Shutdown
5. Stringer Bead, Flat Position (Carbon Steel)
6. The Essentials of GTAW
7. Fillet Weld, Lap Joint, Horizontal & Flat Positions (Carbon Steel)
8. The Metallurgy & Weldability of Carbon Steel
9. Fillet Weld, Outside Corner Joint, Flat Position (Carbon Steel)
10. Fillet Weld, T-Joint, Horizontal, Vertical Up & Flat Positions (Carbon Steel)
11. Fillet Weld, T-Joint, Overhead Position (Carbon Steel)
12. Square-Groove Weld, Butt Joint, Flat Position (Carbon Steel)
13. Square-Groove Weld, 1G Destructive Test (Carbon Steel)
14. Square-Groove Weld, Butt Joint, Horizontal & Vertical Up Positions (Carbon Steel)
15. Square-Groove Weld, Butt Joint, Overhead Position (Carbon Steel)
16. Introduction to GTAW Using Pulsed Current
17. Square-Groove Weld, Butt Joint, Flat Position (Stainless Steel)
18. The Welding Characteristics of Stainless Steel
19. Square-Groove Weld, Butt Joint, Horizontal Position (Carbon Steel)
20. Fillet Weld, Lap Joint, Horizontal & Flat Positions (Stainless Steel)
21. Fillet Weld, Outside Corner Joint, Flat Position (Stainless Steel)
22. Fillet Weld, T-Joint, Horizontal, Vertical Up & Flat Positions (Stainless Steel)
23. Visual Inspection Test, Stainless Steel
24. The Welding Characteristics of Aluminum
25. Stringer Bead, Flat Position (Aluminum)
26. The Effects of Process Variables on the Welding Arc
27. Fillet Weld, Outside Corner Joint, Flat Position (Aluminum)
28. Fillet Weld, Outside Corner Joint, Vertical Position, Up (Aluminum)

# COMPLETE TRAINING COURSES

- 29. Fillet Weld, Lap Joint, Horizontal & Flat Positions (Aluminum)
- 30. Square-Groove Weld, Butt Joint, Flat Position (Aluminum)
- 31. Fillet Weld, T-Joint, Horizontal & Flat Positions (Aluminum)
- 32. Fillet Weld, T-Joint, Vertical Position, Up (Aluminum)
- 33. Visual Inspection Test, Aluminum

| Product                          | Item No. | List Price |
|----------------------------------|----------|------------|
| Complete GTAWB course (DVD)..... | DV20     | \$1,125.00 |

## Gas Tungsten Arc Welding 2-Inch Pipe

|                                                                                               |                         |
|-----------------------------------------------------------------------------------------------|-------------------------|
| Complete Course: 2 DVDs (1 hr. 30 min);<br>1 Instructor Guide; 1 written test, 50 copies each | ITEM NO.<br><b>DV22</b> |
|-----------------------------------------------------------------------------------------------|-------------------------|

### Topics

1. Gas Tungsten Arc Welding 2" Pipe - Course Overview
2. Introduction to Gas Tungsten Arc Welding
3. Safety & Health of Welders
4. Equipment Setup, Adjustment & Shutdown
5. Preparation & Assembly of an Open Root Pipe Joint
6. Single V-Groove Weld, Butt Joint, (2G) Pipe
7. Pipe Weld Quality
8. Single V-Groove Weld, Butt Joint, (2G) Pipe Destructive Test
9. Single V-Groove Weld, Butt Joint, (5G) Pipe
10. Single V-Groove Weld, Butt Joint, (6G) Pipe

| Product                     | Item No. | List Price |
|-----------------------------|----------|------------|
| Complete GTAW 2" Pipe ..... | DV22     | \$1,125.00 |

## Gas Tungsten Arc Welding - Shielded Metal Arc Welding 6-Inch Pipe

|                                                                                                |                         |
|------------------------------------------------------------------------------------------------|-------------------------|
| Complete Course: 2 DVDs (1 hr. 57 min);<br>1 Instructor Guide; 2 written tests, 50 copies each | ITEM NO.<br><b>DV26</b> |
|------------------------------------------------------------------------------------------------|-------------------------|

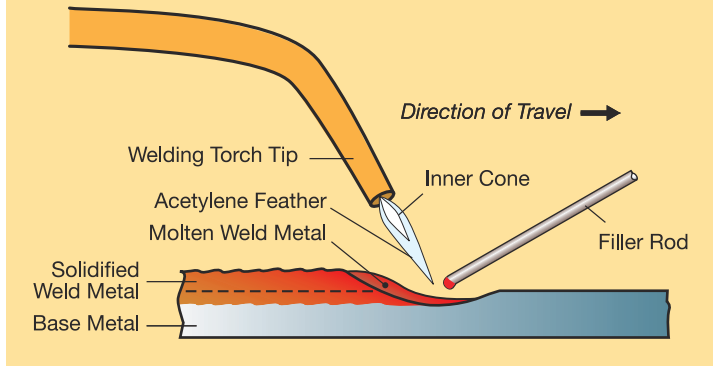
### Topics

1. Gas Tungsten Arc Welding- Shielded Metal Arc Welding 6" Pipe - Course Overview
2. Introduction to Gas Tungsten Arc Welding
3. Safety & Health of Welders
4. Preparation & Assembly of an Open Root Pipe Joint
5. Single V-Groove Weld, Butt Joint, (5G) Pipe
6. Single V-Groove Weld, Butt Joint, (5G) Pipe, Destructive Test
7. Single V-Groove Weld, Butt Joint, (2G) Pipe
8. Single V-Groove Weld, Butt Joint, (6G) Pipe
9. Stainless Steel Pipe Welding
10. Preparation & Assembly of a Stainless Steel Pipe Joint
11. Single V-Groove Weld, Butt Joint, (6G) Stainless Steel Pipe
12. Joint Design for Gas Tungsten Arc Welding Pipe & Tubing
13. Preparation & Assembly of a Pipe Joint with Consumable Insert
14. Single V-Groove Weld, Butt Joint, (6G) Pipe with Consumable Insert
15. Pipe Weld Quality

| Product                       | Item No. | List Price |
|-------------------------------|----------|------------|
| Complete GTAW-SMAW Pipe ..... | DV26     | \$1,125.00 |

## Oxyacetylene Welding, Cutting & Brazing

The Oxyacetylene Welding, Cutting and Brazing program is a complete training program. It teaches the student to flame cut plate, braze mild steel, cast iron and copper. There is related information on weld quality and applications of fuel gases, not used in this course.



## Oxyacetylene Welding, Cutting & Brazing

|                                                                                                |                         |
|------------------------------------------------------------------------------------------------|-------------------------|
| Complete Course: 4 DVDs (3 hrs. 6 min);<br>1 Instructor Guide; 4 written tests, 50 copies each | ITEM NO.<br><b>DV30</b> |
|------------------------------------------------------------------------------------------------|-------------------------|

*Recommended as an entry-level curriculum to teach cutting techniques & hand-eye coordination associated with good puddle control & filler addition.*

### Topics

1. Oxyacetylene Welding, Brazing & Cutting - Course Overview
2. Introduction to Oxyacetylene Welding, Brazing & Cutting
3. Oxyacetylene Welding Safety
4. Safety & Health of Welders
5. Equipment Setup, Operation & Shutdown
6. Weld Quality: Controlling the Welding Variables
7. Stringer Bead, Bead on Plate - With & Without Filler Metal, Flat Position
8. Fillet Weld, Lap Joint, Horizontal (2F) Position
9. Fillet Weld, Inside Corner Joint, Horizontal (2F) Position
10. Fillet Weld, Lap Joint, Vertical (3F) Position
11. Fillet Weld, Inside Corner Joint, Vertical (3F) Position
12. Square Groove Weld, Butt Joint, Vertical (3G) Position
13. Introduction to Oxyacetylene Flame Cutting
14. Standard Destructive Test, Visual Inspection & Guided Bend Test
15. Square Groove Weld, Butt Joint, Flat (1G) Position
16. Square Groove Weld, Butt Joint, Overhead (4G) Position
17. Square Groove Weld, Butt Joint, Horizontal (2G) Position
18. Application of Fuel Gases
19. Square-Groove, Bevel & Hole Cuts - Manual
20. Square-Groove, Bevel & Hole Cuts - Visual Inspection
21. Single V-Groove Weld, Butt Joint, Vertical (3G) Position
22. Single V-Groove Weld, Butt Joint, Flat (1G) Position
23. Single V-Groove Weld, Butt Joint, Overhead (4G) Position
24. Single V-Groove Weld, Butt Joint, Horizontal (2G) Position
25. Single V-Groove Weld, Butt Joint, (5G) Position, 2" Pipe
26. Single V-Groove Weld, Butt Joint, (6G) Position, 2" Pipe
27. Introduction to Soldering, Brazing & Braze Welding
28. Fillet Weld, Lap Joint, Square-Groove, Butt Joint, Braze Weld, Horizontal (2F) & Flat (1G) Position
29. Socket Joint, Brazed Copper (2F) Position
30. Socket Joint, Brazed Copper (5F) Position



# COMPLETE TRAINING COURSES

| Product            | Item No. | List Price |
|--------------------|----------|------------|
| Complete OAW ..... | DV30     | \$1,125.00 |

## Welding Procedures & Qualification

|                                                                                   |                           |
|-----------------------------------------------------------------------------------|---------------------------|
| Complete Course: 1 DVD (26 min);<br>1 Instructor Guide; 1 written test, 50 copies | ITEM NO.<br><b>DV86.3</b> |
|-----------------------------------------------------------------------------------|---------------------------|

### Topics

1. Purpose of Welding Procedures & Qualification
2. Welding Procedure Specifications
3. Procedure Qualification Records
4. Performance Qualification
5. Maintaining Qualification Records

| Product               | Item No. | List Price |
|-----------------------|----------|------------|
| Complete Course ..... | DV86.3   | \$500.00   |

## Welding Discontinuities & Defects

|                                                                                         |                           |
|-----------------------------------------------------------------------------------------|---------------------------|
| Complete Course: 1 DVD (1 hr. 12 min);<br>1 Instructor Guide; 1 written test, 50 copies | ITEM NO.<br><b>DV86.4</b> |
|-----------------------------------------------------------------------------------------|---------------------------|

### Topics

1. Weld Inspector Responsibilities Related to Discontinuities & Defects
2. Identification & Definition of Weld Discontinuities & Defects
3. Common Causes of Discontinuities related to Shape, Size & Contour
4. Common Causes of Discontinuities related to Internal Inconsistencies & Weld Metal Irregularities
5. Common Causes of Discontinuities related to Weld & Base Metal Properties

| Product               | Item No. | List Price |
|-----------------------|----------|------------|
| Complete Course ..... | DV86.40  | \$500.00   |

## Destructive Testing Methods

|                                                                                   |                           |
|-----------------------------------------------------------------------------------|---------------------------|
| Complete Course: 1 DVD (43 min);<br>1 Instructor Guide; 1 written test, 50 copies | ITEM NO.<br><b>DV86.5</b> |
|-----------------------------------------------------------------------------------|---------------------------|

### Topics

1. Introduction to Destructive Testing
2. Tensile Tests
3. Impact Tests
4. Guided Bend Tests
5. Nick Break Tests
6. Fillet Weld Break Tests
7. Etch Tests

| Product               | Item No. | List Price |
|-----------------------|----------|------------|
| Complete Course ..... | DV86.5   | \$500.00   |

## Nondestructive Testing Methods

|                                                                                   |                           |
|-----------------------------------------------------------------------------------|---------------------------|
| Complete Course: 1 DVD (45 min);<br>1 Instructor Guide; 1 written test, 50 copies | ITEM NO.<br><b>DV86.6</b> |
|-----------------------------------------------------------------------------------|---------------------------|

### Topics

1. Introduction to Nondestructive Testing
2. Principles of Visual Inspection
3. Principles of Liquid Penetrant Testing
4. Principles of Magnetic Particle Testing
5. Principles of Ultrasonic Testing
6. Principles of Radiographic Testing

| Product               | Item No. | List Price |
|-----------------------|----------|------------|
| Complete Course ..... | DV86.6   | \$500.00   |

**Visit our website at  
[www.welding.org](http://www.welding.org)  
for additional Instructor  
Guides and Tests**

**Student Workbooks  
are listed on Pages 12-13**

# COMPLETE TRAINING COURSES

## Common Arc Welding Processes

Complete Course: 2 DVDs (2 hrs. 10 min);  
1 Instructor Guide; 2 written tests, 50 copies each

ITEM NO.  
**DV85**

### Topics

1. Introduction to Common Arc Welding Processes
2. Safety and Health of Welders
3. Introduction to Shielded Metal Arc Welding
4. SMAW Electrode Selection
5. Introduction to Gas Metal Arc Welding
6. GMAW Metal Transfer and Shielding Gases
7. Introduction to Flux Cored Arc Welding
8. FCAW Electrode Classification and Selection
9. Introduction to Gas Tungsten Arc Welding
10. The Essentials of GTAW

| Product               | Item No. | List Price |
|-----------------------|----------|------------|
| Complete Course ..... | DV85     | \$500.00   |

## Arc Welding Safety

1 DVD (11 min)

ITEM NO.  
**DV91**

Covers the following areas of arc welding safety:

- Arc Radiation
- Air Contamination
- Compressed Gases
- Cleaning
- Electric Shock
- Fire and Explosion
- Other Welding Hazards
- Safety Data Sheets
- Safety Standards

| Product                                             | Item No. | List Price |
|-----------------------------------------------------|----------|------------|
| Safety and Health of Welders<br>DVD (11 min.) ..... | DV91.0   | \$85.00    |

## Basic Metallurgy

1 DVD (40 min)

ITEM NO.  
**DV40.0**

Included in complete GTAW course (DV20.0)

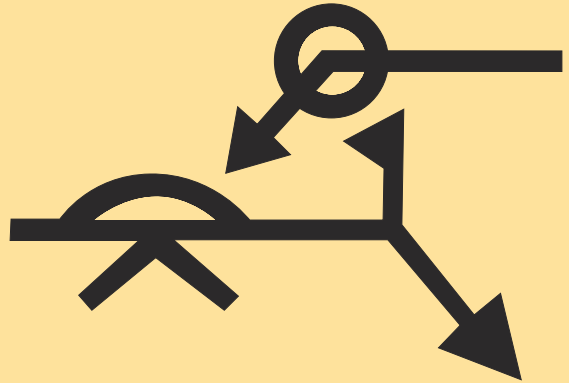
### Topics

- The metallurgy & weldability of carbon steel
- The welding characteristics of stainless steel
- The welding characteristics of aluminum

| Product                      | Item No. | List Price |
|------------------------------|----------|------------|
| Basic Metallurgy (DVD) ..... | DV40.0   | \$500.00   |

## Symbols For Welding, Blueprint Reading, Advanced Blueprint & Pipe Layout

These courses are designed to be used with Programmed Learning Courses on page 14.



## Symbols for Welding **UPDATED 20244**

Complete Course: 1 DVD (58 min)  
1 Instructor Guide

ITEM NO.  
**DV80**

### Topics

1. Communicating Welding Information
2. Fillet Welds
3. Weld Symbols For Length and Arrangement
4. Supplementary Symbols and Reference
5. Plug and Slot Welds
6. Spot, Stud and Seam Welds
7. Groove Weld Symbols
8. Backing, Back, Melt-Through and Surfacing Welds
9. Edge Welds and Combination Welds

**NOTE: DVD program is intended to be used with the Updated Symbols Programmed Instruction Packet**



# COMPLETE TRAINING COURSES

## Blueprint Reading for Welders & Fitters

Complete Course: 2 DVDs (1 hr. 22 min)  
1 Instructor Guide

ITEM NO.  
**DV81**

### Topics

1. Introduction to Blueprint Reading for Welders and Fitters
2. Review of Mathematics
3. Metrics and Metric Conversions
4. Review of Welding Symbols
5. Orthographic Views
6. Standard Drawing Lines and Symbols
7. Interpreting Blueprint Information
8. Surface and Centerline Relationships
9. Auxiliary Views
10. Scale Drawings
11. Dimensional Tolerance and Stock Allowance
12. Set-up Tools
13. Set-up Applications

| Product                                 | Item No. | List Price |
|-----------------------------------------|----------|------------|
| Complete Blueprint Reading Course ..... | DV81     | \$500.00   |

## Pipe Layout for Pipefitters & Welders

Complete Course: 2 DVDs (1 hr. 50 min)  
1 Instructor Guide

ITEM NO.  
**DV82**

### Topics

1. Introduction to Pipe Layout for Pipefitters and Welders
2. Review of Basic Shapes & Pipefitter Terminology
3. Review of Basic Mathematic Calculations
4. Review of Decimals
5. Review of Geometric Calculations
6. Angles & Angular Layout
7. Calculated Welded Offsets
8. Offsets Other than 45° & 90°
9. Welded Offsets
10. Multiple Turn Layouts
11. Two Piece Parallel Offsets
12. Offsets Around Obstructions
13. Rolling Offsets
14. Fabricated Tees
15. Lateral Tees
16. Circumferential Sleeves
17. Pipe Blanking
18. Elliptical Holes & Blind Flanges
19. Fabricating Brackets

| Product               | Item No. | List Price |
|-----------------------|----------|------------|
| Complete Course ..... | DV82     | \$1,195.00 |

## Advanced Blueprint Reading

Complete Course: 1 DVD (46 min)  
1 Instructor Guide

ITEM NO.  
**DV83**

### Topics

1. Development of Blueprints and Drawings
2. Standards, Codes and Specifications
3. Standard Plates and Shapes
4. Blueprint Reading
5. Calculating Measurements and Common Layout Tools
6. Pipe Essentials
7. Role of the Welder in Quality and Safety
8. Fabrication Tools

| Product                           | Item No. | List Price |
|-----------------------------------|----------|------------|
| Complete Advanced Blueprint ..... | DV83     | \$500.00   |

**Test are included with each student packet on page 14, not complete training courses.**



# WELDING TRAINING MATERIALS

## Student Workbooks

Workbooks follow the DVDs topic-by-topic and take a step-by-step approach to practice sessions, featuring objectives; set-up instructions; materials and machine settings; and summaries of essential theory with many illustrations. All destructive tests are based on AWS®, ASME or API codes.



### Oxyacetylene Welding

Consists of 30 topics which include 19 skill topics, 2 testing topics and 7 topics that cover essential theory. There is also course overview and introduction. 172 pages  
Item No. EW369OAW .....List Price \$25.00

### Shielded Metal Arc Welding Basic

Consists of 38 topics which include 29 skill topics with 8 of these topics covering essential theory and course overview, 4 testing topics and introduction. 188 pages  
Item No. EW369SMAWB .....List Price \$25.00

### Shielded Metal Arc Welding Structural

Consists of 19 topics which include 9 skill topics, 9 essential theory topics and course overview. 104 pages  
Item No. EW369SMAWA1 .....List Price \$25.00

### Shielded Metal Arc Welding Pre-Pipe

Consists of 19 topics which include 9 skill topics, 9 essential theory topics and course overview. 100 pages  
Item No. EW369SMAWA2 .....List Price \$25.00

### Shielded Metal Arc Welding 2 Inch Pipe Uphill

Consists of 15 topics which include 10 skill topics, 4 essential theory topics and course overview. 100 pages  
Item No. EW369SMAWPU2 .....List Price \$25.00

### Shielded Metal Arc Welding 6 Inch Pipe Uphill

Consists of 13 topics which include 6 skill topics, 5 essential theory topics and an introduction and course overview. 96 pages  
Item No. EW369SMAWPU6 .....List Price \$25.00

### Shielded Metal Arc Welding Pipe Downhill

Consists of 14 topics which include 6 skill topics, 2 testing topics, 4 essential theory topics and an introduction and course overview. 92 pages  
Item No. EW369SMAWPD .....List Price \$25.00

### Gas Metal Arc Welding Basic

Consists of 24 topics which include 19 skill topics and 5 essential theory topics. 96 pages  
Item No. EW369GMAWB .....List Price \$25.00

# WELDING TRAINING MATERIALS

## Gas Metal Arc Welding Advanced

Consists of 15 topics which include 9 skill topics, 4 essential theory topics, an introduction and overview 77 pages  
Item No. EW369GMAWA.....List Price \$25.00

## Gas Tungsten Advanced

Consists of 17 topics which include 8 skill topics, 4 testing topics, an introduction and overview 77 pages  
Item No. EW369GTAWA .....List Price \$25.00

## Gas Metal Arc Welding Pipe

Consists of 13 topics which include 6 skill topics, 5 essential theory topics, an introduction and overview. 76 pages  
Item No. EW369GMAWP.....List Price \$25.00

## Welding Procedures & Qualification

An explanation of the steps necessary to develop procedure and performance qualifications. 38 pages  
Item No. EW512-3 .....List Price \$25.00

## Flux Cored Arc Welding

Consists of 18 topics which include 13 skill topics, 4 essential theory topics, an introduction and overview. 94 pages  
Item No. EW369FCAW.....List Price \$25.00

## Welding Discontinuities & Defects

An explanation of the welding discontinuities and defects in relation to welding procedure variables. 38 pages  
Item No. EW512-4 .....List Price \$25.00

## Gas Tungsten Arc Welding

Consists of 33 topics which include 23 skill topics, 9 essential theory topics, and a course overview. 94 pages  
Item No. EW369GTAW .....List Price \$25.00

## Destructive Testing

An explanation of destructive testing and results obtained. 44 pages  
Item No. EW512-5 .....List Price \$25.00

## Gas Tungsten Arc Welding 2 Inch Pipe

Consists of 10 topics which include 5 skill topics, 4 essential theory topics, and course overview. 52 pages  
Item No. EW369GTAWP2 .....List Price \$25.00

## Nondestructive Testing

An explanation of nondestructive testing and results obtained. 34 pages  
Item No. EW512-6 .....List Price \$25.00

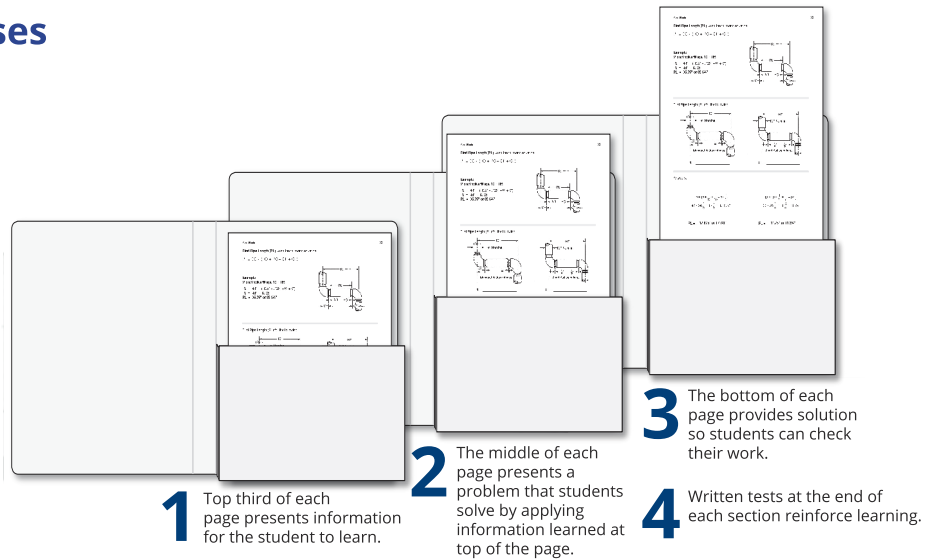
## Gas Tungsten Arc Welding 6 Inch Pipe

Consists of 15 topics which include 9 skill topics, 5 essential theory topics, and course overview. 96 pages  
Item No. EW369GTAWP6 .....List Price \$25.00

# WELDING TRAINING MATERIALS

## Programmed Learning Courses

These courses provide a simple, and yet complete method, for students to learn and understand the principles of welding symbols, symbols for nondestructive examination, blueprint reading and pipe layout. Each page is designed to teach a small amount of information which is reinforced through an action/problem and self-check (see illustration at right). Each page builds for the next as the student learns in an efficient and rewarding manner.



## Symbols for Welding **UPDATED 2024**

The symbols for welding course is based on AWS® A2.4 Symbols for Welding and Nondestructive Examination Standard. This system of communication provides a vital link between the designer and the individuals responsible for producing and planning welding. 3 Tests are included with each student packet. 122 pages. **(Symbols packet is designed to be utilized with the updated DVD program.)**

| Product                  | Item No. | List Price |
|--------------------------|----------|------------|
| Symbols for Welding..... | EW-342   | \$27.00    |
| Key to test.....         | EW-343   | \$10.95    |

## Symbols for Nondestructive Examination

This course is designed to teach students how to interpret nondestructive examination symbols based on AWS® 2.4. The first part of the course serves as an introduction, which is deemed beneficial for those not familiar with welding symbols. 1 Test is included with each student packet. 38 pages.

| Product                                      | Item No. | List Price |
|----------------------------------------------|----------|------------|
| Symbols for Nondestructive Examination ..... | EW-457   | \$20.00    |
| Key to test.....                             | EW-458   | \$9.95     |

## Blueprint Reading for Welders & Fitters **UPDATED 2025**

The Blueprint Reading for Welders and Fitters course contains valuable information on mathematics and metrics, blueprint reading for the welder, blueprint reading for the fitter, setup tools, and set-up applications. 5 Tests are included with each student packet. 176 pages.

| Product                                         | Item No. | List Price |
|-------------------------------------------------|----------|------------|
| Blueprint Reading for Welders and Fitters ..... | EW-459   | \$29.00    |
| Key to test.....                                | EW-460   | \$11.95    |

## Advanced Blueprint Reading

This two packet course covers the design procedure; an interpretation of blueprints and shop drawings as well as applying this information; the use of measuring tools in layout and assembly; the basics of codes, specifications and standards and to be aware of the responsibility of a welder in quality control. 11 tests included with the packets. 185 pages.

| Product                                      | Item No. | List Price |
|----------------------------------------------|----------|------------|
| Advanced Blueprint Reading (2 Packets) ..... | EW-462   | \$53.00    |
| Key to test.....                             | EW-463   | \$11.95    |



# Student Workbook Package

## Introduction to Metal Fabrication **NEW**

This course provides a solid foundation in the principles and practices of metal fabrication, making it ideal for students and entry-level professionals. Topics include an Overview of Fabrication, Math Review, Trigonometry, Common Materials and Shapes, Layout, Material Reduction, Hole Making Operations, Arc Welding Selection, and Work Holding. The course includes three quizzes to reinforce learning and integrated projects that give students hands-on experience with real-world fabrication tasks. 270 pages.

| Product                                | Item No. | List Price |
|----------------------------------------|----------|------------|
| Introduction to Metal Fabrication..... | EW-809   | \$85.00    |
| Key to quiz .....                      | EW-811   | \$12.95    |

## Pipe Layout for Pipefitters & Welders **UPDATED 2025**

This course introduces students to the essential skills and knowledge needed for pipe layout and fabrication. Topics include Piping Systems and the Role of the Pipefitter, Math Review, Understanding Steel Pipe, Introduction to Fittings, Pipe Length Calculations, Piping Blueprints, and Layout and Fabrication Methods. The course features three quizzes to reinforce key concepts and an integrated project that provides hands-on experience with real-world pipe layout tasks. 286 pages.

| Product                                 | Item No. | List Price |
|-----------------------------------------|----------|------------|
| Pipe Layout for Welders & Fitters ..... | EW-518   | \$85.00    |
| Key to test .....                       | EW-519   | \$12.95    |

# WELDING TRAINING MATERIALS

## Technical Guides

These guides contain extensive welding information on individual welding processes and welding subjects. They supplement the student workbooks for welding training and have an application for manufacturing engineering and quality control. Books are in full color.

**Welding Guide** — Provides general welding information including common arc welding process descriptions, weldability of metals, non-destructive testing process descriptions, welding data charts and tables, and metric conversion. 117 pages.

Item No. EW-385 .....List Price \$29.00

**Gas Tungsten Arc Welding** — Covers the process in detail, equipment, applications, procedures, welding training and safety. 98 pages.

Item No. EW-470 ..... List Price \$29.00

**Shielded Metal Arc Welding** — Describes the SMAW process, procedures and applications, electrode selection charts, welding safety and explains the equipment used. 78 pages.

Item No. EW-472 ..... List Price \$29.00

**Gas Metal Arc Welding** — Provides an explanation of the GMAW process, equipment, applications, procedures, safety and welding symbols. 110 pages.

Item No. EW-473 .....List Price \$29.00

**Flux-Cored Arc Welding** — This guide describes the self-shielded and gas shielded processes, equipment, methods of application, safety and procedures. 98 pages.

Item No. EW-492 .....List Price \$29.00

**Safety and Health of Welders** — A valuable guide to protection against the hazards associated with welding. 23 pages.

Item No. EW-607 .....List Price \$20.00

**Oxyfuel Welding, Cutting & Brazing** — This guide covers the process, equipment, and safety. 82 pages.

Item No. EW-480 .....List Price \$29.00



# WELDING TRAINING MATERIALS

## General Welding Books

**Pocket Welding Guide, 32<sup>nd</sup> Edition** — Known as the “Welder’s Bible”, and widely used by students, teachers, hobbyists and professionals as a handy reference, this updated edition features: overview of all welding processes, examples of good and bad weld beads, causes & cures of common welding problems, welding symbols, guidelines for the identification of metals & calculating filler metal consumption, oven storage & reconditioning of filler metals, shielding gases & their uses, AWS® filler metal classifications & comparative indices, GMAW welding parameters, complete listing of filler metals with operating ranges, filler metals selector guide for welding ASTM steels, troubleshooting guides for semiautomatic wire & equipment, welding terms & definitions, metric conversions tables, and more. 164 pages. 4” x 7” format.

Item No. EW-609 ..... List Price \$9.00

**WELDING: A Journey to Explore its Past by Andre A. Odermatt** – What is this simple but complex process called welding? When did it begin? This book is a humble attempt to answer just a few questions about the origins of welding. It is not a textbook or an academic paper. It aims to give the reader some basic knowledge of a few aspects of the history of welding and its problems and its contribution to society, from antiquity to modern times, from brazing and forging, to gas welding and electric welding.

Item No. EW-806 1st Edition 181 Pages .....List Price \$10.00

Item No. EW-807 2nd Edition 213 Pages.....ListPrice \$20.00

All proceeds go to the Andre A. Odermatt Scholarship

**Properties and Uses of Ferrous and Non-ferrous Metals by Weiss & Leuchtman.** 112 pages.

Item No. EW-220 ..... List Price \$24.95

**The Metal Trades & Welding Handbook** — A book covering all aspects of the metal trades from roping to welding. 581 pages.

Item No. EW-676 .....List Price \$31.25



## Pipe Welding & Pipe Layout Books

**Pipefitters Handbook** — A comprehensive reference including tables for pipe bends, offsets, mitered joints and other useful information for shop and field use. Leatherette bound. 444 pages.

Item No. EW-389 ..... List Price \$42.00

**Pipe Trades Pocket Manual by Frankland** — Tables for bending, offsets, miter turn fittings, elbow offsets, solving angles with steel square and more. Leatherette bound. 262 pages.

Item No. EW-390 ..... List Price \$32.00

**The Pipe Fitters and Pipe Welders Handbook by Frankland** — Pocket size booklet containing layout information for making all types of pipe joints. Leatherette bound. 194 pages.

Item No. EW-234 ..... List Price \$32.00

**Pipe Trades Handbook** — Covers basic data on tube and pipe, national standards, fittings, valves, joints, offsets, pipe layout, mathematics and pipe welding. 534 pages.

Item No. EW-696 ..... List Price \$31.25

**PipeFitters Bluebook** — Contains charts, tables, drawings, instructions on pipe joints and layout. 176 pages.

Item No. EW-697 ..... List Price \$25.00

**Pipe Layout for Pipefitters and Welders**

This course introduces students to the essential skills and knowledge needed for pipe layout and fabrication. Topics include Piping Systems and the Role of the Pipefitter, Math Review, Understanding Steel Pipe, Introduction to Fittings, Pipe Length Calculations, Piping Blueprints, and Layout and Fabrication Methods. The course features three quizzes to reinforce key concepts and an integrated project that provides hands-on experience with real-world pipe layout tasks. 286 pages.

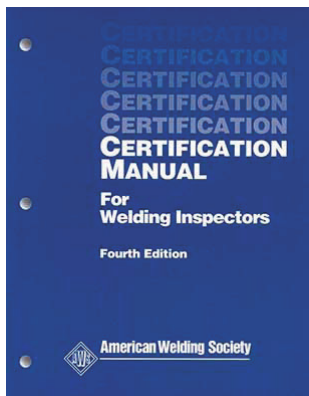
Item No. EW-518..... List Price \$85.00

Answer Key

Item No. EW-519 ..... List Price \$12.95



## AWS® Books



**Certification Manual for Welding Inspectors** — A great study aid for the AWS® CWI®/CWE® exam. Reduce those day-of-test jitters by putting yourself in command of the material that everyone must know to succeed on the CWI® exam. Over 360 questions and answers. 300 pages  
Item No. EW-475 ..... List Price \$228.00

**Welding Inspection** — Essential information for the CWI® on manual arc welding inspection techniques including destructive testing and nondestructive examination methods. 275 pages.

Item No. EW-223 ..... List Price \$108.00

**Welding Terms and Definitions** — The comprehensive and official listing of welding and cutting terms and definitions. (A3.0M/ A3.0:2020) 148 pages.

Item No. EW-291 ..... List Price \$228.00

## Welding Codes & Specifications

**API Standard 1104, Standard for Welding Pipelines and Related Facilities 22nd Edition** — This code book published by the American Petroleum Institute provides the complete and detailed information needed by welders, inspectors and engineers. 162 pages.

Item No. EW-264 ..... List Price \$470.00

**AWS® Structural Welding Code, D1.1** — Complete structural welding code for buildings, bridges, and other welded structures. Welding engineers, inspectors and others involved with design and quality control of welded structures should have this book for guidance and reference. 634 pages.

Item No. EW-531 ..... List Price \$732.00

## Welding Inspection Tools

### V-WAC Gauge

Used to check undercut, crown heights, porosity and pits.

Item No. EW-454 ..... List Price \$44.00



### Fillet Weld Gauge

A valuable tool for measuring both convex and concave fillet weld dimensions.

Item No. EW-453 ..... List Price \$42.00



# WELDING TRAINING MATERIALS

## Wall Posters



**35" x 23" size for good shop or classroom visibility  
... Has plastic surface for durability, ease cleaning**

*Spiff up your shop or classroom, and send the "quality" message with a complete set of these attractive and instructive, full-color, welding-related posters.*

|                                             |        |          |
|---------------------------------------------|--------|----------|
| Shielded Metal Arc Welding (SMAW) .....     | EW-901 | \$18.00  |
| Types of Welds .....                        | EW-902 | \$18.00  |
| Gas Tungsten Arc Welding (TIG) (GTAW) ..... | EW-903 | \$18.00  |
| Gas Metal Arc Welding (GMAW) (MIG) .....    | EW-904 | \$18.00  |
| Flux Cored Arc Welding (FCAW) .....         | EW-905 | \$18.00  |
| Welding Positions .....                     | EW-906 | \$18.00  |
| Common Weld Joints and Symbols .....        | EW-907 | \$18.00  |
| Electrode Selection and Identificat.....    | EW-908 | \$18.00  |
| Plasma Arc Welding (PAW) .....              | EW-909 | \$18.00  |
| Oxyacetylene Welding (OAW) .....            | EW-910 | \$18.00  |
| Examples of Good and Bad Beads .....        | EW-911 | \$18.00  |
| Welding Discontinuities and Defects .....   | EW-912 | \$18.00  |
| Good and Bad Welds (FCAW) .....             | EW-913 | \$18.00  |
| Complete Set of Posters .....               | WP-13  | \$230.00 |

## WP11

Set of 11 Posters: \$45.00

Size: 11" X 17"

Set includes:

- Common Terms Applied to a Weld
- Arc Length
- Diagram of Shielded Metal Arc Welding
- Learn to Read the Puddle
- Electrode Angle
- Tungsten Electrode Preparation
- 5 Essential
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## Industrial Sectors Using Welding



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## **OL-001      Symbols For Welding Online Course** **.4 CEU                      \$89.00                      SELF-PACED**

This online version of Symbols for Welding course is based on the AWS® A2.4 Symbols for Welding and Nondestructive Examination Standard. This system of communication provides the vital link between the designer and the people responsible for producing and planning welding.

Within the online course you will have the opportunity to download the EW-342 Symbols for Welding Learning Packet and work on specific problems; view the Symbols for Welding videos which are broken down into topic sections; take each of the 3 required test. Each test may be taken two times.

Your password is good for a period of one year with unlimited log-ins during that time. Completion time for the course varies with each individual. Take into consideration the necessary time required to watch the videos in addition to the time needed to work through the learning packet and the time to take the test. You may start and stop at any point.

Upon purchase of the course, you will receive an email of your online receipt of purchase and a separate email with account access instructions and link to online course.

You may add the optional paper version of the Symbols for Welding Programmed Learning Packet (EW342) containing 113 pages, which will be mailed to you. Three test are included with each student packet.

## **OL-002      Visual Inspection Welding Online Course** **.4 CEU                      \$89.00                      SELF-PACED**

This course concentrates on the single most used method of welding inspection — what we can see with the naked eye. Anyone involved with arc welding inspection, quality control, engineering or supervision should know the fundamentals of what to observe, prior to, during and after welding.

Contains 5 video segments totaling a run time of 60 minutes.

During this course you will learn about common weld gauges, temperature indicators, marking repair welds, visual inspection prior to, during, and after welding, terminology of weld defects, general requirements for equipment and workmanship standards, and a visual inspection checklist.

At your own pace from your computer you will view videos and will be able to take (and retake) online competency exams.

## **OL-003      Welding Discontinuities & Defects Online Course** **.4 CEU                      \$89.00                      SELF-PACED**

This course concentrates on defects and discontinuities related to welding and is intended to assist anyone involved in arc welding inspection, quality control, engineering or supervision. The objective is to be able to identify and determine the common causes of weld discontinuities and defects.

Contains 5 video segments totaling a run time of 70 minutes. Quizzes are provided to measure progress along the way with a final test to obtain a certificate of completion.

### **\*IMPORTANT\***

**HIWT reviews each order for accuracy and to protect you and HIWT from fraud. After authorization and capture of your payment by HIWT personnel, you will be sent an email (typically within 1 business day) with access instructions for your course. Make sure to watch your incoming mail and spam folder. When you score 76% or higher, a Certificate of Completion will be issued for you to print that will contain the continuing education units earned for the online course. In addition, please add "welding.org" to your trusted/safe sender's list.**





## **OL-004      Destructive Testing Methods Online Course** **.4 CEU                      \$89.00                      SELF-PACED**

This course concentrates on the various destructive testing methods used to evaluate welds including tensile and impact tests, guided bend tests, nick break tests, fillet weld break tests, and etch tests. It is intended for those involved in welding inspection, quality control, engineering or supervision. The objective is to be able to perform tests and determine the weld defects.

Contains 7 video segments totaling a run time of 43 minutes. Quizzes are provided to measure progress along the way with a final test to obtain a certificate of completion.

## **OL-005      Nondestructive Testing Methods Online Course** **.4 CEU                      \$89.00                      SELF-PACED**

This course concentrates on the various nondestructive testing methods used to evaluate welds including visual inspection, liquid penetrant testing, magnetic particle testing, ultrasonic testing, and radiographic testing. It is intended for those involved in welding inspection, quality control, engineering or supervision. The objective is to be able to evaluate welds and determine the weld defects.

Contains 6 video segments totaling a run time of 45 minutes. Quizzes are provided to measure progress along the way with a final test to obtain a certificate of completion.

## **OL-006      Welding Characteristics Of Steel, Stainless Steel, & Other Metals** **.4 CEU                      \$89.00                      SELF-PACED**

This course will provide the non-metallurgist with basic knowledge of various metals and their weldability. Anyone involved with welding will benefit from better understanding of welding with different metals. Students will learn the basic principles of metal properties, heat input, preheating, postheating, selecting filler metals plus many more topics including:

- Welding stainless steels
- Welding tool and die steels
- Welding aluminum alloys
- Welding magnesium alloys
- Welding cast iron
- Hard surfacing
- Metals identification for welding
- Welding carbon and low alloy steels

**The course consists of 4 main topics:**

- 1.** The Metallurgy & Weldability of Carbon Steel
- 2.** The Welding Characteristics of Stainless Steel and Tool Steels
- 3.** The Welding Characteristics of Aluminum and Magnesium
- 4.** Welding Cast Iron and Hard Surfacing Welds

Each topic contains slide segments, video segments and quizzes. The total running time for the video segments is approximately 60 minutes. Once you have completed the 4 topic quizzes and achieved at least a 76% you will then be able to generate a certificate of completion.

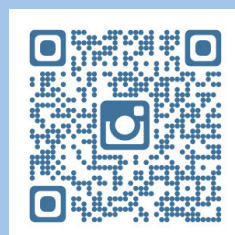
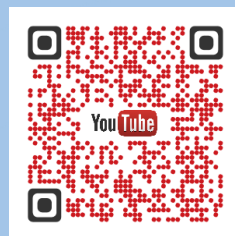
## **OL-007      Welding Procedures & Qualification** **.4 CEU                      \$89.00                      SELF-PACED**

This course concentrates on the steps typically followed when developing and qualifying Welding Procedure Specifications (WPS). Additionally, welder and welding operator performance qualification will be discussed.

Contains 1 main topic covering welding codes, procedures, and welder qualification plus 5 video segments totaling a run time of 25 minutes. Quizzes are provided to measure progress along the way with a final test to obtain a certificate of completion.

At your own pace from your computer you will view videos and will be able to take (and retake) online competency exams.

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on social media!*

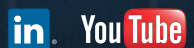




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