



HOBART INSTITUTE
OF WELDING TECHNOLOGY

WELDING TRAINING MATERIALS CATALOG

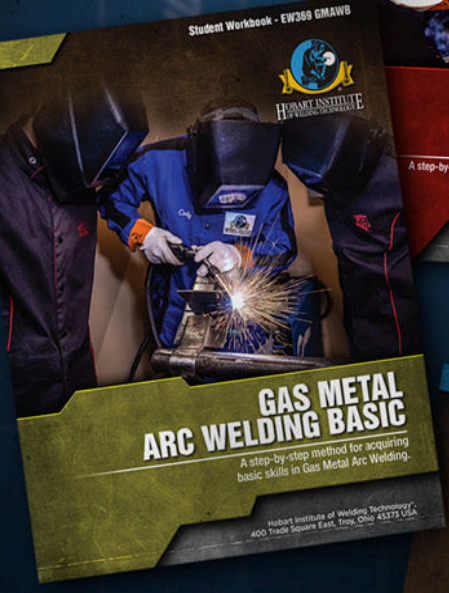
2024



**SHIELDED METAL
ARC WELDING BASIC**
A step-by-step method for acquiring
basic skills in Shielded Metal Arc Welding



**FLUX CORED
ARC WELDING**
A step-by-step explanation of how to weld medium carbon steel plate
and pipe using the Flux Cored Arc Welding Process.



**GAS METAL
ARC WELDING BASIC**
A step-by-step method for acquiring
basic skills in Gas Metal Arc Welding.



**INTRODUCTION TO
METAL FABRICATION**

An Explanation of the Fabrication Process
and Commonly Applied Methods

Hobart Institute of Welding Technology,
400 Trade Square East, Troy, Ohio 45373 USA



**GAS TUNGSTEN
ARC WELDING BASIC**
A step-by-step method for acquiring the basic skills required to weld carbon steel,
stainless steel and aluminum in all positions with the Gas Tungsten Arc Welding Process.



**OXYACETYLENE WELDING,
CUTTING AND BRAZING**
A step-by-step explanation of how to weld,
flame cut and braze with the Oxyacetylene Process.

Hobart Institute of Welding Technology,
400 Trade Square East, Troy, Ohio 45373 USA

**COMING
SUMMER
2024**

Hobart Institute of Welding Technology
400 Trade Square East, Troy, Ohio 45373 USA

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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 Objective: To become familiar with the important safety rules associated with all phases of welding	1 Hr.	• DVD 1, Topic 3 (11 min. 13 sec.) • Student Workbook, Topic 3, Page 13. • Welding jacket or welding leathers, 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). AND/OR Oral Quiz	Introduce this topic by paraphrasing the following: Every year, hundreds of peoples' lives are changed forever because they, or someone they work with fails to follow proper safety procedures. 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. This next topic deals with the things you need to do to pro- A complete script of recommended things to say (bold) and questions to ask (indented) along with suggestions, notes & cautions for implementing each topic.

Recommended practice time for each topic.

Topic number, name and objective from workbook.

Complete list of materials required to implement each topic.

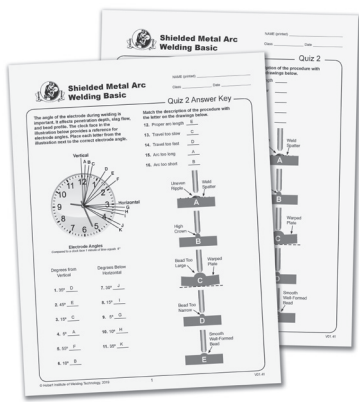
Suggested testing methodology for each topic.

• DVDs



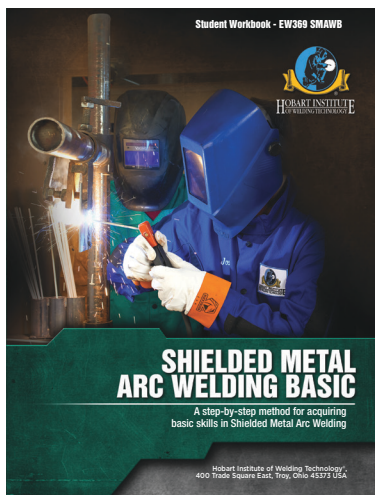
• Answer Keys for Written Test

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.)



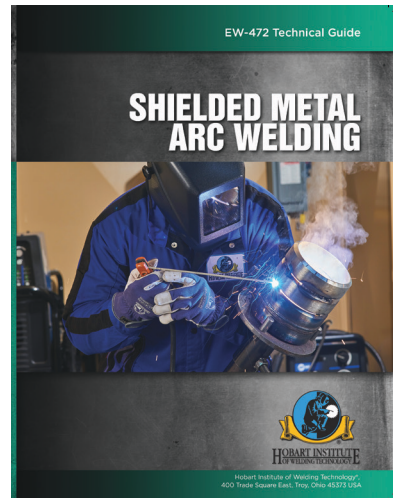
• One Student Workbook

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



• One Technical Guide

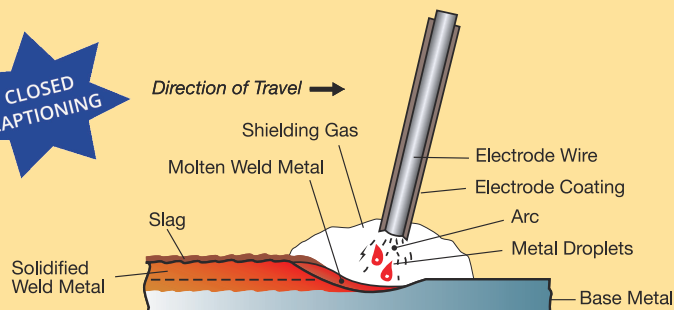
An individual resource for instructors and students, each technical guide contains process specific information on equipment, process variables, weldability, pre- and post-weld procedures, shielding gases, electrodes, safety and more.



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
Site License	V01.50	\$500.00

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
Site License	V02.50	\$500.00

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
Site License	V05.50	\$500.00

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 80
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
Site License	V03.50	\$500.00

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
Site License	V06.50	\$500.00

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

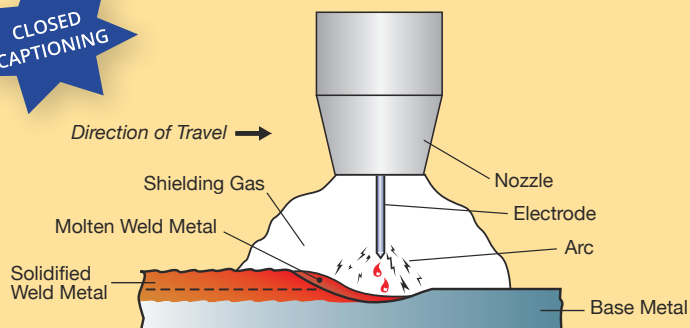
1. Shielded Metal Arc Welding Pipe Downhill - Course Overview
2. Introduction to Shielded Metal Arc Welding Pipe - Downhill
3. Safety & Health of Welders
4. Weld Quality: Reading the Puddle - Downhill Travel
5. Preparation & Assembly of a 6" Open Root Pipe Joint - Downhill
6. Single V-Groove Weld, Butt 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
Site License	V04.50	\$500.00

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.



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
Site License	V11.50	\$500.00

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
Site License	V010.50	\$500.00

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

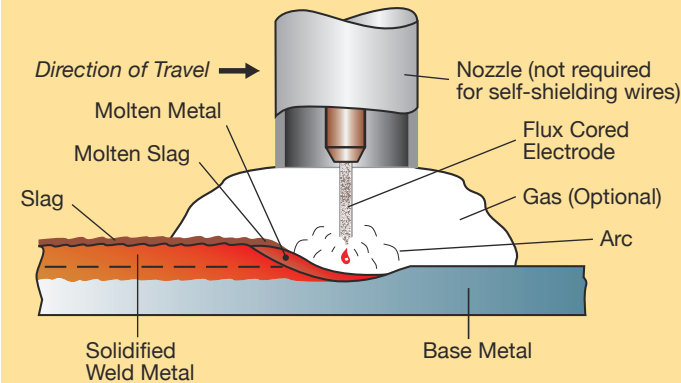
Topics

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
Site License	V015.50	\$500.00

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

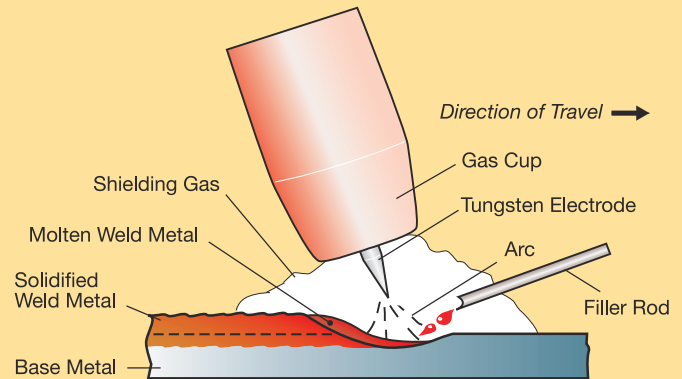
1. Flux-Cored Arc Welding - Course Overview
2. Introduction to Flux-Cored Arc Welding
3. Safety & Health of Welders
4. Equipment Setup, Adjustment & Maintenance
5. Fillet Welds, T-Joints, Horizontal, Vertical & Overhead Positions (Gas & Self-Shielded)
6. Electrode Classification & Selection
7. Single 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
Site License	V12.50	\$500.00

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
Site License	V20.50	\$500.00

Gas Tungsten Arc Welding 2-Inch Pipe

Complete Course: 2 DVDs (1 hr. 30 min);
1 Instructor Guide; 1 written test, 50 copies each

ITEM NO.
DV22

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
Site License	V22.50	\$500.00

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

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

ITEM NO.
DV26

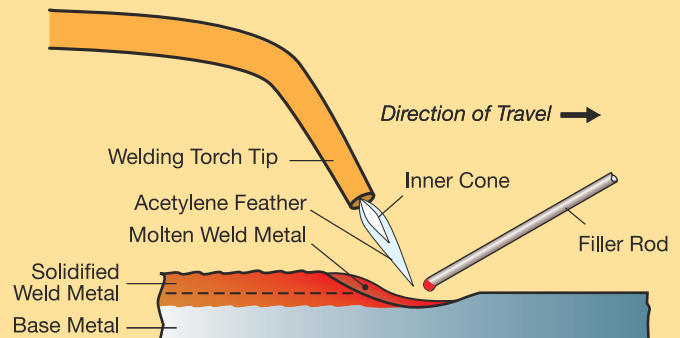
Topics

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
Site License	V26.50	\$500.00

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);
1 Instructor Guide; 4 written tests, 50 copies each

ITEM NO.
DV30

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
Site License	V30.50	\$500.00

Welding Procedures & Qualification

Complete Course: 1 DVD (26 min);
1 Instructor Guide; 1 written test, 50 copies

ITEM NO.
DV86.3

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
Site License	V86.35	\$500.00

Welding Discontinuities & Defects

Complete Course: 1 DVD (1 hr. 12 min);
1 Instructor Guide; 1 written test, 50 copies

ITEM NO.
DV86.4

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
Site License	V86.45	\$500.00

Destructive Testing Methods

Complete Course: 1 DVD (43 min);
1 Instructor Guide; 1 written test, 50 copies

ITEM NO.
DV86.5

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
Site License	V86.55	\$500.00

Nondestructive Testing Methods

Complete Course: 1 DVD (45 min);
1 Instructor Guide; 1 written test, 50 copies

ITEM NO.
DV86.6

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
Site License	V86.65	\$500.00

Visit our website at
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
Site License	V85.50	\$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 DVD (11 min.)	DV91.0	\$85.00
Site License	V85.50	\$500.00

Basic Metallurgy

1 DVD (40 min)

ITEM NO.
DV40.0

Included in complete GTAW course (DV20.0)

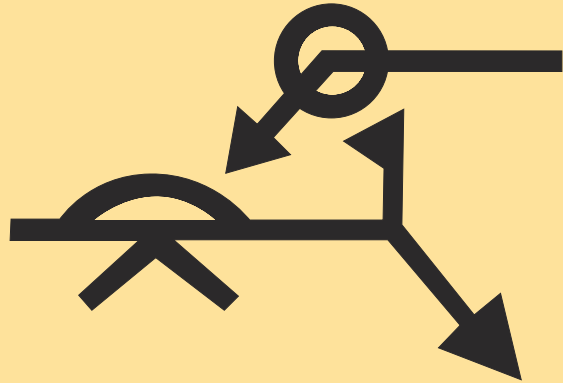
Topics

- 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

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



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
Site License	V81.50	\$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
Site License – Pipe Layout for Pipefitters & Welders.....	V82.50	\$500.00

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
Site License	V83.50	\$500.00

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

SITE LICENSE (SL)

In response to requests to place DVD's on company and school intranets (private networks) a site license (SL) at an additional cost of \$500.00 per program is now available for each complete training course purchased from Hobart Institute of Welding Technology (HIWT). Complete training courses may contain multiple DVD's. A separate site license is required for each program you intend to distribute.

The site license, granted for a three year period, includes a signed document authorizing the electronic distribution of HIWT training materials to others within your organization's secure network. The intranet distribution of HIWT DVD's without a site license is prohibited.

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. EW369OAWList 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. EW369SMAWBList 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. EW369SMAWA1List 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. EW369SMAWA2List 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. EW369SMAWPU2List 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. EW369SMAWPU6List 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. EW369SMAWPDList 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. EW369GMAWBList Price \$25.00

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 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

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

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. EW369GTAWList 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. EW369GTAWP2List 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. EW369GTAWP6List 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

Welding Procedures & Qualification

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

Welding Discontinuities & Defects

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

Destructive Testing

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

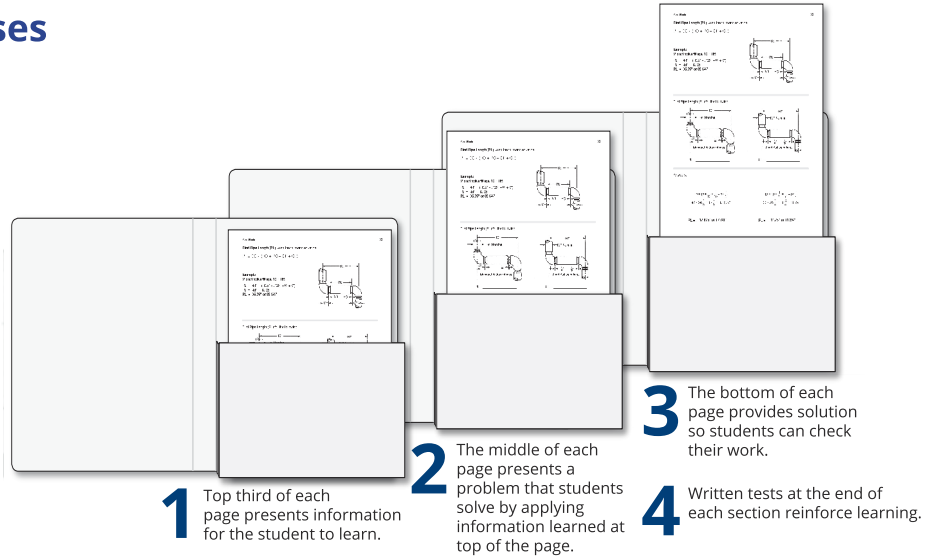
Nondestructive Testing

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

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.

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

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

Pipe Layout for Pipefitters & Welders

This 10 section, self-study programmed learning course includes: pipefitter terminology, mathematics & plane figures, angles and angular layout, calculated welded offsets, tees, laterals & circumferential sleeves, pipe blanking, elliptical holes, brackets and pipe flanges. Based in part on Thomas W. Frankland's "The Pipe Fitters and Pipe Welder's Handbook," and "Pipe Trades Pocket Manual." 10 Tests are included with each student packet. 237 pages.

Product	Item No.	List Price
Pipe Layout for Welders & Fitters	EW-517	\$45.00
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-385List 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-473List 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-492List Price \$29.00

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

Item No. EW-607List Price \$20.00

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

Item No. EW-480List Price \$29.00



WELDING TRAINING MATERIALS

General Welding Books

Pocket Welding Guide, 32nd 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 PagesList 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-676List Price \$29.25



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 \$29.25

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 10 section, self-study, programmed learning course from the Hobart Institute of Welding Technology includes pipefitting terminology, mathematics & plane figures, angles and angular layout, calculated welded offsets, tees, laterals & circumferential sleeves, pipe blanking, elliptical holes, brackets and pipe flanges. 10 tests are included with each copy.

237 pages.

Item No. EW-517 List Price \$45.00

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 \$220.00

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 \$104.00

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 \$220.00



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 \$454.00

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 \$708.00

Welding Inspection Tools

V-WAC Gauge

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

Item No. EW454 List Price \$40.00



Fillet Weld Gauge

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

Item No. EW-453 List Price \$40.00



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
- 5 Methods of Control
- Travel Speed
- The Fire Tetrahedron
- Fire Extinguisher Ratings

To See pictures of our wall posters, visit our website at www.welding.org

Industrial Sectors Using Welding



Welding Institute of Welding Technology
 201 U.S. Road, Suite 100, #101 • Dallas, TX 75241 • Phone: 800-333-4444 • www.welding.org

Individual Posters

Size: 11" x 17" \$7.00 each

Sciences in a Weld

Item No. EW914

Welding & Joining Processes

Item No. EW915

Industrial Sectors Using Welding

Item No. EW916

Spark Testing of Metals

Item No. EW917

Iron-Carbon Equilibrium Diagram Poster

Item No. EW918

Changes in Carbon Steel Poster

Item No. EW919

Pearlite/Martensite Poster

Item No. EW920

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Shipping charges for continental U.S. only:
Shipping is based on weight of product and number of boxes.

NOTE: The above shipping and handling charges apply only to the continental United States. Shipping charges for Alaska, Hawaii, and for international orders will be quoted upon request.

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Site License (SL):

In response to requests to place DVD's on company and school intranets (private networks) a site license (SL) at an additional cost of \$500.00 per program is now available for each DVD program purchased from Hobart Institute of Welding Technology (HIWT). DVD programs may contain multiple DVD's. A separate site license is required for each program intended for distribution.

The site license, granted for a three year period, includes a signed document authorizing the electronic distribution of HIWT training materials to others within an organization's secure network.

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There will be a restocking charge of 20% of the original net invoice

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Books: Any request for return must be received within thirty (30) days of the original invoice date. The original invoice number must be indicated on the request for return.

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DVD Warranty:

All Hobart Institute of Welding Technology DVDs are warranted for a period of ninety (90) days after invoice date against defects including dropout or loss of signal. This does not include mechanical operation of equipment components. DVDs have been inspected by the manufacturer and the duplicator. All questions involving warranty should be directed to the bookstore prior to returning any defective DVDs.

To avoid damage to the DVDs, they should be returned to their original cases after use. Maintenance of equipment should follow the manufacturers' instruction.

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Each of the products and services identified in these Terms and Conditions of Sale may be governed by additional terms and agreements that are hereby incorporated by reference as if fully rewritten herein. Prior to purchasing, please be sure to review all applicable agreements, privacy policies, and terms of use. Each may be made available upon request at orders@welding.org.

Prices:

All prices are in U.S. dollars. Prices subject to change without notice.



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.

HOBART INSTITUTE OF WELDING TECHNOLOGY GEAR

HIWT offers a variety of logo branded items.



Heather Red T-Shirt – PI55
Small logo front
S, M, L, XL, XXL
\$16.00



Navy Get-Wired T-Shirt – PI54
Front left chest and
full back print
S, M, L, XL, XXL
\$21.95



Dark Heather Gray T-Shirt – PI60
Front left chest and
full back print
S, M, L, XL, XXL
\$23.95



Dark Heather Gray Hooded Sweatshirt – PI61
Front left chest and
full back print
S, M, L, XL, XXL
\$42.95



Denim Shirt - PI04
W/ embroidered 3-color logo.
S, M, L, XL, XXL, XXXL
\$35.00



Polo Shirt
Dark grey - PI 66
Navy - PI 67
Snag-resistant, moisture, wicking Polo
w/ embroidered 3-color logo
M, L, XL, 2XL \$38.00



Black T-Shirt - PI40
W/ small logo on front &
large logo on back
M, L, XL, XXL
\$21.95



Kryptek Camo Highlander Cap – PI 70
W/ embroidered 3-color logo
\$16.95



Black Hooded Sweatshirt - PI23
W/ embroidered 3-color logo
M, L, XL, XXL
\$41.95



Grey Hooded Sweatshirt - PI01
W/ embroidered 3-color logo
M, L, XL, XXL
\$41.95



Black "Patch" Hat - PI72
6 panel adjustable mesh black
hat w/ logo patch
\$16.95



Two-Tone Garment Dyed Cap - PI34
In pebble/black.
One size fits all.
\$16.95

HOBART INSTITUTE OF WELDING TECHNOLOGY GEAR

Please visit our website www.welding.org for a complete list.



Pocket Coolie - PI69
Black background w/ 3-color logo
\$4.00



Mesh Back Hat - PI64
Gray.
One size fits all.
\$16.95



Royal Blue T-Shirt - PI71
Front left chest and full back print.
S, M, L, XL, 2XL
\$19.95



Stainless Steel Tumbler - PI68
W/ 3-color logo
\$10.95



Waffle Beanie - PI38
Black ribbed edge in chrome w/
embroidered 3-color logo
\$12.95



Decoy Fleece Camo Hoodie - PI45
W/ embroidered 3-color logo
S, M, L, XL, 2XL, 3XL
\$60.00



**Black Long Sleeve
T-Shirt - PI52**
W/ logo on full back
(small logo on front)
S, M, L, XL, 2XL
\$19.95



**Red Long Sleeve
T-Shirt - PI51**
W/ logo on full back
(small logo on front)
S, M, L, XL, 2XL
\$19.95



Coffee Mug - PI21
White silk screened 3-color logo
on both sides. 8 oz.
\$8.95



Logo Patch - PI11
Embroidered 3-color logo.
4" x 2-3/4"
\$4.00



Window Decal - PI10
3-color logo silk-screened on clear
self-adhesive material.
\$2.00



Belt Buckle - PI09
Solid brass
w/ raised logo
\$8.00

HIWT COURSES

Would you like to learn a specific process or refresh your welding skills?

HIWT offers Individual Courses

Hobart Institute of Welding Technology offers individual courses in major arc welding processes. A list of courses is below.

www.welding.org or call 800.332.9448 for more information.

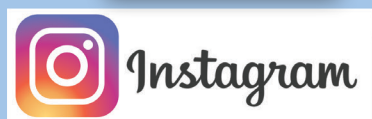
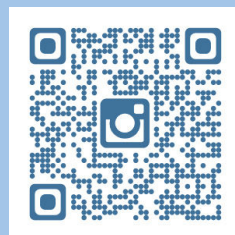
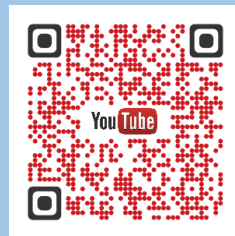
Course Number	Description
WTB101	Welding Technology & Blueprint Reading
WTB201	Advanced Blueprint Reading
OAW101	Oxyacetylene Welding, Cutting, & Brazing
SMA101	Shielded Metal Arc Welding Basic
SMA201	Shielded Metal Arc Welding Advanced
SMA301	Shielded Metal Arc Welding 6" Pipe 2G & 5G Uphill
SMA401	Shielded Metal Arc Welding 6" Pipe 6G Uphill
SMA402	Shielded Metal Arc Welding 2" Pipe 6G Uphill
SMA403	Shielded Metal Arc Welding 6" Pipe Downhill
SMA502	Shielded Metal Arc Welding Pipe Downhill API® 12-on-12 Branch
PLF101	Pipe Layout for Pipefitters & Welders I
PLF201	Pipe Layout for Pipefitters & Welders II
GTA102	Gas Tungsten Arc Welding Carbon Steel
GTA202	Gas Tungsten Arc Welding 2" Pipe
GTA203	Gas Tungsten Arc/Shielded Metal Arc Welding Pipe 6G Uphill
GTA204	Gas Tungsten Arc Welding Stainless Steel
GTA205	Gas Tungsten Arc Welding Aluminum
GTA301	Gas Tungsten Arc Welding Aerospace
GTA302	Gas Tungsten Arc Welding Stainless Steel 2" Pipe
GMA101	Gas Metal Arc Welding Basic
GMA201	Gas Metal Arc Welding Advanced
GMA202	Gas Metal Arc Welding 6" Pipe
GMA301	Gas Metal Arc Welding Industrial
FCA101	Flux Cored Arc Welding Basic
FCA201	Flux Cored Arc Welding Advanced
FAB101	Introduction to Metal Fabrication

Technical Training Courses

HIWT's Technical Training Courses are designed for welding professionals of all levels seeking to take their education to the next level. These courses offer CEU's toward the hours needed to maintain certifications, as well as expand knowledge on welding processes, visual inspection of welds and nondestructive testing of welds.

Course number	Description
VI400	Fundamentals of Visual Inspection
MET101	Fundamentals of Metallurgy
NW515	Welding for the Non-Welder
AWI520	Arc Welding Inspection
LP800	Liquid Penetrant & Magnetic Particle Inspection
CWS550	Preparation for AWS® CWS Examination Course
CWI540	Preparation for AWS® CWI® Certified Welding Inspector Examination Course
RCW545	Preparation for Recertification of CWI® Course
CWI540-C	Preparation for AWS® CWI® Code Endorsement

Check us out on social media!





HOBART INSTITUTE
OF WELDING TECHNOLOGY

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Toll Free: 1.800.332.9448 | **Phone:** 937.332.9500 | **FAX:** 937.332.9551



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Ohio State Board of Career Colleges and Schools Registration No. 64**

Hobart Institute of Welding Technology does not and will not discriminate on the basis of disability, race, color, religion, sex, national origin, or age.