

Craft: Boilermaking

Module Number: 34201-11

Module Title: Boiler Systems and Components



Contren® Learning Series

TRAINEE NAME: _____

TRAINEE SOCIAL SECURITY NUMBER: _____

CLASS: _____

TRAINING PROGRAM SPONSOR: _____

INSTRUCTOR: _____

Rating Levels: (1) Passed: performed task (2) Failed: did not perform task
Also, list the date the testing for each task was completed.

Recognition: When testing for the NCCER Standardized Craft Training Program, be sure to record Performance testing results on Training Report Form 200, and submit the results to the Training Program Sponsor.

Objective	TASK	RATING
1, 2	1. Identify at least four different kinds of boilers as determined by the instructor.	
3, 4	2. Identify at least twelve boiler components as determined by the instructor.	

Craft: Boilermaking

Module Number: 34202-11

Module Title: Identifying and Installing Valves



Contren® Learning Series

TRAINEE NAME: _____

TRAINEE SOCIAL SECURITY NUMBER: _____

CLASS: _____

TRAINING PROGRAM SPONSOR: _____

INSTRUCTOR: _____

Rating Levels: (1) Passed: performed task (2) Failed: did not perform task
Also, list the date the testing for each task was completed.

Recognition: When testing for the NCCER Standardized Craft Training Program, be sure to record Performance testing results on Training Report Form 200, and submit the results to the Training Program Sponsor.

Objective	TASK	RATING
1	1. Identify types of valves that start and stop flow.	
2	2. Identify types of valves that regulate flow.	
3	3. Identify valves that relieve pressure.	

continued

Craft: Boilermaking

Module Number: 34202-11

Module Title: Identifying and Installing Valves



Contren® Learning Series

Objective	TASK	RATING
4	4. Identify valves that regulate the direction of flow.	
5	5. Identify valve actuators.	
8	6. Given a select number of valves, match the valve to its given application.	
9	7. Interpret valve markings and nameplate information.	

Craft: Boilermaking

Module Number: 34203-11

Module Title: Pipe Hangers and Supports



Contren® Learning Series

TRAINEE NAME: _____

TRAINEE SOCIAL SECURITY NUMBER: _____

CLASS: _____

TRAINING PROGRAM SPONSOR: _____

INSTRUCTOR: _____

Rating Levels: (1) Passed: performed task (2) Failed: did not perform task
Also, list the date the testing for each task was completed.

Recognition: When testing for the NCCER Standardized Craft Training Program, be sure to record Performance testing results on Training Report Form 200, and submit the results to the Training Program Sponsor.

Objective	TASK	RATING
1	1. Identify types of pipe hangers and supports.	
4	2. Identify types of connecting units and attachments.	
1	3. Identify types of pipe support.	
2	4. Read and interpret support drawings and symbols.	

continued

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Craft: Boilermaking

Module Number: 34203-11

Module Title: Pipe Hangers and Supports



Contren® Learning Series

Objective	TASK	RATING
4	5. Install nonexpanding concrete fasteners.	
4	6. Install expanding concrete fasteners.	
5	7. Lay out and mark the cut lines required to fabricate a one-piece 45-degree angle iron bracket.	
5	8. Lay out and mark the cut lines required to fabricate a one-piece 30- by 60-degree angle iron bracket.	
6, 7	9. Identify spring can support types.	
9	10. Read and interpret spring can support detail sheets.	
9	11. Install spring can supports.	
10	12. Adjust and remove the travel stops from a spring can support.	

Craft: Boilermaking

Module Number: 34204-11

Module Title: Drawings and Detail Sheets



Contren® Learning Series

TRAINEE NAME: _____

TRAINEE SOCIAL SECURITY NUMBER: _____

CLASS: _____

TRAINING PROGRAM SPONSOR: _____

INSTRUCTOR: _____

Rating Levels: (1) Passed: performed task (2) Failed: did not perform task
Also, list the date the testing for each task was completed.

Recognition: When testing for the NCCER Standardized Craft Training Program, be sure to record Performance testing results on Training Report Form 200, and submit the results to the Training Program Sponsor.

Objective	TASK	RATING
1	1. Identify parts of a drawing:	
	• Title block	
	• Scales and measurements	
	• Symbols and abbreviations	
	• Notes	

continued

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Craft: Boilermaking

Module Number: 34204-11

Module Title: Drawings and Detail Sheets



Contren® Learning Series

Objective	TASK	RATING
	<ul style="list-style-type: none"> Revision blocks 	
	<ul style="list-style-type: none"> Coordinates 	
4	2. Interpret the following:	
	<ul style="list-style-type: none"> Drawing indexes 	
	<ul style="list-style-type: none"> Line lists 	
2	3. Identify the following types of drawings:	
	<ul style="list-style-type: none"> Plot plans 	
	<ul style="list-style-type: none"> Structural drawings 	
	<ul style="list-style-type: none"> Elevation drawings 	
	<ul style="list-style-type: none"> Equipment arrangement drawings 	
	<ul style="list-style-type: none"> P&IDs 	
	<ul style="list-style-type: none"> Isometric drawings 	
	<ul style="list-style-type: none"> Spool drawings 	
	<ul style="list-style-type: none"> Pipe support drawings and detail sheets 	
	<ul style="list-style-type: none"> Orthographic drawings 	

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Craft: Boilermaking

Module Number: 34204-11

Module Title: Drawings and Detail Sheets



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Objective	TASK	RATING
3	4. Make field sketches:	
	<ul style="list-style-type: none"> • Orthographic 	
	<ul style="list-style-type: none"> • Isometric 	

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Craft: Boilermaking

Module Number: 34205-11

Module Title: Fasteners and Anchors



Contren® Learning Series

TRAINEE NAME: _____

TRAINEE SOCIAL SECURITY NUMBER: _____

CLASS: _____

TRAINING PROGRAM SPONSOR: _____

INSTRUCTOR: _____

Rating Levels: (1) Passed: performed task (2) Failed: did not perform task
Also, list the date the testing for each task was completed.

Recognition: When testing for the NCCER Standardized Craft Training Program, be sure to record Performance testing results on Training Report Form 200, and submit the results to the Training Program Sponsor.

Objective	TASK	RATING
5	1. Install selected threaded fasteners.	
5	2. Install selected screws.	
5	3. Install selected anchors.	

Craft: Boilermaking

Module Number: 34206-11

Module Title: Welding Symbols



Contren® Learning Series

TRAINEE NAME: _____

TRAINEE SOCIAL SECURITY NUMBER: _____

CLASS: _____

TRAINING PROGRAM SPONSOR: _____

INSTRUCTOR: _____

Rating Levels: (1) Passed: performed task (2) Failed: did not perform task
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Recognition: When testing for the NCCER Standardized Craft Training Program, be sure to record Performance testing results on Training Report Form 200, and submit the results to the Training Program Sponsor.

Objective	TASK	RATING
4	1. Identify and interpret welding symbols on a drawing provided by the instructor.	

Craft: Boilermaking

Module Number: 34207-11

Module Title: Socket Weld Pipe Fabrication



Contren® Learning Series

TRAINEE NAME: _____

TRAINEE SOCIAL SECURITY NUMBER: _____

CLASS: _____

TRAINING PROGRAM SPONSOR: _____

INSTRUCTOR: _____

Rating Levels: (1) Passed: performed task (2) Failed: did not perform task
Also, list the date the testing for each task was completed.

Recognition: When testing for the NCCER Standardized Craft Training Program, be sure to record Performance testing results on Training Report Form 200, and submit the results to the Training Program Sponsor.

Objective	TASK	RATING
2	1. Identify various socket weld fittings.	
3	2. Interpret a socket weld drawing.	
4	3. Calculate pipe lengths from line drawings using the center-to-center method.	

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Craft: Boilermaking

Module Number: 34207-11

Module Title: Socket Weld Pipe Fabrication



Contren® Learning Series

Objective	TASK	RATING
4	4. Calculate pipe lengths from line drawings using the center-to-face method.	
4	5. Calculate pipe lengths from line drawings using the face-to-face method.	
5	6. Align a 90-degree elbow to the end of a pipe.	
5	7. Square a pipe into a 90-degree elbow.	
5	8. Align a flange to the end of a pipe.	
5	9. Align a 45-degree elbow to the end of a pipe.	
5	10. Align pipes joined by a coupling or tee.	
5	11. Install a socket weld valve.	

Craft: Boilermaking

Module Number: 34208-11

Module Title: Butt Weld Pipe Fabrication



Contren® Learning Series

TRAINEE NAME: _____

TRAINEE SOCIAL SECURITY NUMBER: _____

CLASS: _____

TRAINING PROGRAM SPONSOR: _____

INSTRUCTOR: _____

Rating Levels: (1) Passed: performed task (2) Failed: did not perform task
Also, list the date the testing for each task was completed.

Recognition: When testing for the NCCER Standardized Craft Training Program, be sure to record Performance testing results on Training Report Form 200, and submit the results to the Training Program Sponsor.

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Objective	TASK	RATING
1	1. Identify various butt weld fittings.	
2	2. Interpret a butt weld drawing.	
3	3. Clean a beveled pipe end, using a portable grinder.	

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Craft: Boilermaking

Module Number: 34208-11

Module Title: Butt Weld Pipe Fabrication



Contren® Learning Series

Objective	TASK	RATING
4	4. Calculate pipe lengths from line drawings, using the center-to-center method.	
4	5. Calculate pipe lengths from line drawings, using the center-to-face method.	
4	6. Calculate pipe lengths from line drawings, using the face-to-face method.	
6	7. Align straight pipe.	
6	8. Align a pipe to a 45-degree elbow.	
6	9. Align a pipe to a 90-degree elbow.	
6	10. Square a pipe into a 90-degree elbow.	
6	11. Align a pipe to a flange.	
6	12. Align a pipe to a tee.	
6	13. Install a butt weld valve.	

Craft: Boilermaking

Module Number: 34209-11

Module Title: Tube Weld Preparation and Fitting



Contren® Learning Series

TRAINEE NAME: _____

TRAINEE SOCIAL SECURITY NUMBER: _____

CLASS: _____

TRAINING PROGRAM SPONSOR: _____

INSTRUCTOR: _____

Rating Levels: (1) Passed: performed task (2) Failed: did not perform task
Also, list the date the testing for each task was completed.

Recognition: When testing for the NCCER Standardized Craft Training Program, be sure to record Performance testing results on Training Report Form 200, and submit the results to the Training Program Sponsor.

Objective	TASK	RATING
2	1. Identify the proper techniques for gaining tube access.	
3	2. Remove a tube and prepare a panel for tube replacement.	
3	3. Cut, prepare, and fit tube into panel for welding.	

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Craft: Boilermaking

Module Number: 34210-11

Module Title: Air Carbon Arc Cutting and Gouging



Contren® Learning Series

TRAINEE NAME: _____

TRAINEE SOCIAL SECURITY NUMBER: _____

CLASS: _____

TRAINING PROGRAM SPONSOR: _____

INSTRUCTOR: _____

Rating Levels: (1) Passed: performed task (2) Failed: did not perform task
Also, list the date the testing for each task was completed.

Recognition: When testing for the NCCER Standardized Craft Training Program, be sure to record Performance testing results on Training Report Form 200, and submit the results to the Training Program Sponsor.

Objective	TASK	RATING
2	1. Select and install CAC-A electrodes.	
3	2. Prepare the work area and CAC-A equipment for safe operation.	
4	3. Use CAC-A equipment for washing.	
4	4. Use CAC-A equipment for gouging.	
4	5. Perform storage and housekeeping activities for CAC-A equipment.	

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