

RAILTECH

B O U T E T

© DELACHAUX GROUP

RAILTECH BOUTET, INC. THERMITE WELD TRAINING

# OF PARTICIPANTS	TRAINING DAYS
1 – 5	MINIMUM 2 DAYS
6 - 8	MINIMUM 3 DAYS
OVER 8	TBD (QUOTE)

NOTES:

- CONTACT RAILTECH BOUTET, INC. FOR TRAINING COSTS.
- A PURCHASE ORDER (P.O) IS REQUIRED BEFORE SCHEDULING A QUALIFICATION CLASS.
- CERTIFICATE AND I.D. ARE ONLY ISSUED ONCE PAYMENT HAS BEEN RECEIVED.
- TWO INSTRUCTORS MAY BE REQUIRED FOR 8 OR MORE WELDERS.
- EACH WELDER MUST ACTIVELY COMPLETE A SINGLE THERMITE WELD TO BE QUALIFIED.
- CERTIFICATION IS VALID FROM ONE YEAR OF CLASS COMPLETION.
- **PLEASE REVIEW ALL CHECKLISTS AND REQUIRMENTS FOR WELD TRAINING BEFORE SCHEDULING THE ACTUAL WELD TRAINING.**
- **RAILTECH BOUTET USES OXYGEN / PROPANE (LP) OR HYDRAULIC PREHEATER WELDING METHODS ONLY.**

25 Interstate Drive - P.O. Box 69

Napoleon, OH 43545

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www.railtechboutet.com

BASIC THERMITE WELDING TOOLS AND EQUIPMENT

ALIGNMENT TOOLS

- 1 36" MAGNETIC STRAIGHT EDGE
- 2 TAPER GAUGE
- 3 18" STRAIGHT EDGE

- 4 ALIGNMENT DEVICES:
 - GRADE B STEEL WEDGES
 - ALIGNMENT PLATES
 - A-FRAME ALIGNERS

NOTES:

TORCH SETUP

- 1 PRECISION TORCH STAND
- 2 THERMITE TORCH TIP
- 3 THERMITE TORCH BODY
- 4 IN-LINE PRESSURE GAUGES
- 5 3/8" I.D. GRADE "T" HOSES (50-100FT)

- 6 FLASHBACK ARRESTORS
NON QUICK-DISCONNECT
- 7 GAS PRESSURE REGULATORS
- 8 ADEQUATE FUEL:
 - OXYGEN
 - PROPANE (LP)

WELD / MOLD SETUP

- 1 CORRECT SIZE WELDING KIT/MOLDS
- 2 CJ CRUCIBLE
- 3 IGNITERS

- 4 CORRECT WELD CHARGE
- 5 PACKING SAND (MUD)
- 6 TUBE PASTE

MOLD HARDWARE

- 1 MOLD JACKETS
- 2 MOLD CLAMP

- 3 BASE PLATE
- 4 SLAG BASIN

TRACK / HYDRAULIC TOOLS

- 1 HYDRAULIC POWER SOURCE
- 2 SHEAR
- 3 PROFILE GRINDER

- 4 HAND/BICYCLE GRINDER
- 5 RAIL SAW w/ARM
- 6 SAW BLADES & GRINDING STONES

TRACK TOOLS

- 1 WELD DEMOLDER
- 2 CRUCIBLE FORK
- 3 450F TEMP STICKS / HEAT GUN
- 4 12LB SLEDGE HAMMER
- 5 HOT CUT CHISEL

- 6 SPIKE MAUL
- 7 SHOVELS / BALLAST FORK
- 8 CLAW BAR & NEEDLE BAR
- 9 TRACK JACK
- 10

When completing a Railtech Boutet thermite weld, please make sure you have the items listed on this page under each heading. If you have any questions regarding the welding tools and equipment list, please contact Railtech Boutet, Inc. to speak with a Welding Technician.

Please reference the Railtech Boutet, Inc. Aluminothermic Welding Catalog at www.railtechboutet.com or contact our offices at 419-592-5050 for more information

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BOUTET

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Thermite Welding Checklist

Welder: _____

Date: _____

Helper: _____

Weld #: 1 _____ 2 _____ 3 _____ 4 _____

Category	Item	S	U	Comments
Safety	Review All Safety Procedures & Equipment			
Tools & PPE	Tools & PPE organized			
Rail & Gap	Correct Weld Gap cut with Rail Saw			
	Gap Measurement: Head _____ Base: Field _____ Gauge _____			
Rail	Rail ends properly cleaned with torch and wire brush			
Alignment	Rail correctly crowned to .0 _____" / 0. _____"			
	Rail Gauge Face aligned properly			
	Rail Base aligned properly			
Molds	Molds checked for proper size and defects			
	Molds fitted to rail and checked/modified			
	Molds clamped and covered			
Mold Packing	Packed with packing sand/mud			
	Diverter plug checked			
Crucible	Crucible inspected			
Weld Charge	Weld Charge proper size			
	Weld Charge properly deposited into Crucible			
	Crucible Lid checked & Igniter set in crucible			
	Slag Basin set up correctly			
Preheat	Torch properly Aligned/Height			
	In-line gauges working properly			
	Oxygen Pressure checked and corrected			
	Propane Pressure checked and corrected			
	Correct Flame, 7/8" - 1", Feathered Tip			
	Rail ends observed for correct color			
	Rail ends observed for even preheat; CONSTANT OBSERVATION			
Rail ends NOT MELTED				
	Preheat Time: _____ M _____ S			
Ignition & Pour	Diverter Plug inserted correctly			
	Crucible aligned over mold correctly			
	Igniter lit & placed correctly			
	Safe & Correct pour			
	Tap Time: _____ S			
Demold	Crucible removed & safely disposed @ _____ M after pour			
	Slag Basin removed & safely disposed @ _____ M after pour			
	Mold Clamp removed & safely relocated @ _____ M after pour			
	Mold Jackets removed & safely relocated @ _____ M after pour			
	Mold Top checked & removed @ _____ M after pour			
	Risers bent over			
	Head riser removed properly			
Finishing Weld	Rough/Hot Grind properly & safely performed			
	Alignment tools removed @ 20 minutes			
	Rough/Hot Grind until 900°F			
	Remove base risers after 900°F			
Finish Grind	Grind UNTIL 600°F			
	At 400°F, continue Finish Grind			
	Grind to .015"			
Weld Info	Weld information on Field side of rail web			
	Name, Date, +/- Rail, Temp., Grinder Name			

STICKER

STICKER

STICKER

STICKER

FIELD WELD LOG

DATE _____

WELD NUMBER _____

WELDER _____

SUBDIVISION _____

MILEPOST _____

TRACK _____

RAIL N S E W

RAIL SECTION _____

RAIL TYPE STANDARD _____
 HEAD HARDENED _____
 FULLY HEAT TREATED _____
 CHROME ALLOY _____

AIR TEMP _____ RAIL TEMP _____

TAP TIME _____

CHARGE INFO (ATTACH STICKER)

MOLD INFO (SIDE OF BOX)

ADD / SUBTRACT RAIL _____

CONTACT MTM IF ADDED

NOTES:

DATE _____

WELD NUMBER _____

WELDER _____

SUBDIVISION _____

MILEPOST _____

TRACK _____

RAIL N S E W

RAIL SECTION _____

RAIL TYPE STANDARD _____
 HEAD HARDENED _____
 FULLY HEAT TREATED _____
 CHROME ALLOY _____

AIR TEMP _____ RAIL TEMP _____

TAP TIME _____

CHARGE INFO (ATTACH STICKER)

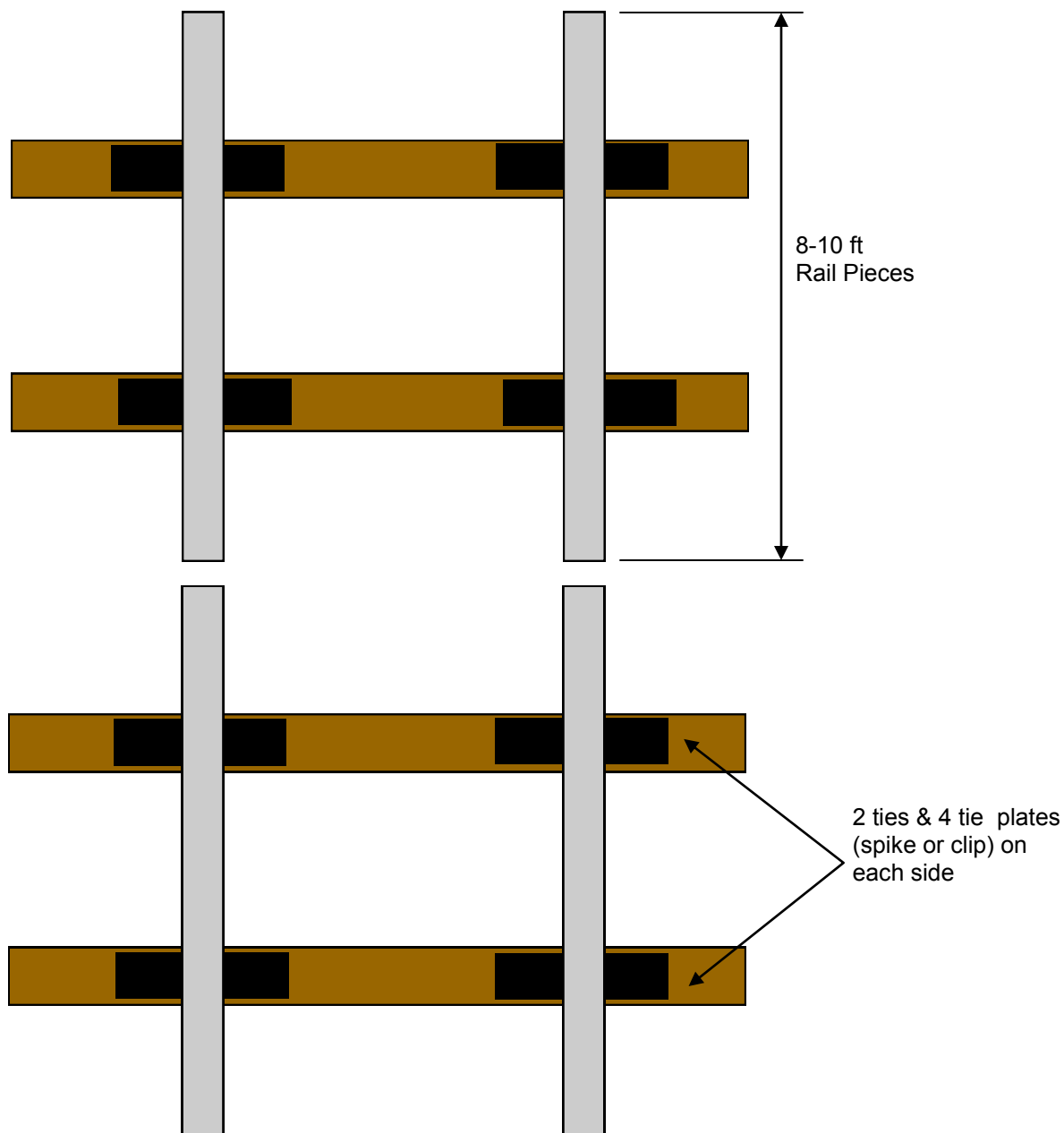
MOLD INFO (SIDE OF BOX)

ADD / SUBTRACT RAIL _____

CONTACT MTM IF ADDED

NOTES:

OUT OF TRACK WELD QUALIFICATION PANEL SETUP

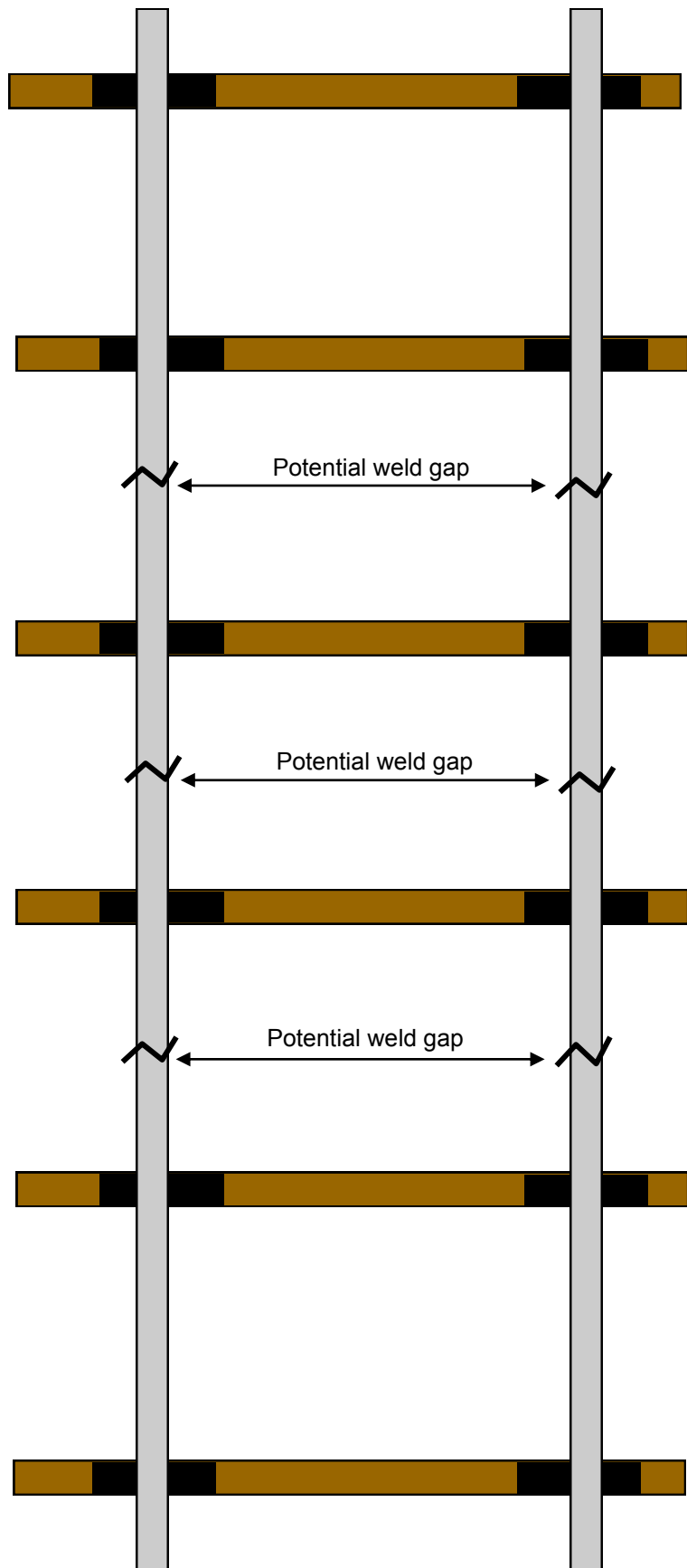


BE SURE KIT SIZE MATCHES RAIL SIZE FOR WELD TRAINING.

REVIEW ALL CHECKLISTS FOR PROPER EQUIPMENT AND HARDWARE.

CONTACT RAILTECH BOUTET, INC. FOR ANY QUESTIONS CONCERNING WELD QUALIFICATION.

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20-30 ft Rail Pieces to be cut for qualification

Ties & Tie Plates (spike or clip) on each side