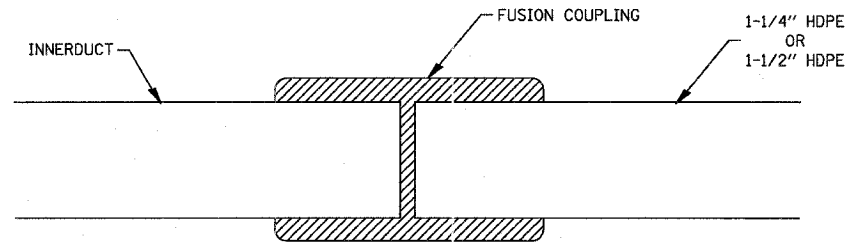
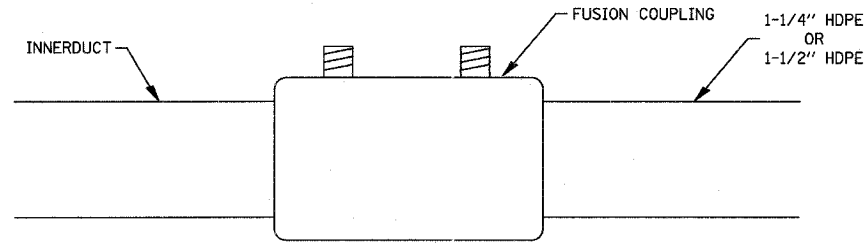


F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	141 / 201	•	46	42
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
•OGLE / WINNEBAGO				



NOTE:  
 IN A PROPER ELECTROFUSION JOINT, MOLTEN MATERIAL FLOWS TO THE COLD ZONE WHERE IT SOLIDIFIES AND FREEZES OFF THE ESCAPE PATH. WITH THE MOLTEN MATERIAL CONTAINED, MELT PENETRATION WILL BUILD INTERFACE PRESSURE. WIRE WINDINGS WILL FLOW IN A DESIGNED AND CONTROLLED PATTERN AND A PROPER BONDING OF MATERIALS CAN BE OBTAINED.

**PROPER FUSION DETAIL**



**STANDARD JOINING PROCEDURES**

1. THE PIPE MUST HAVE A SQUARE EVEN CUT.
2. REMOVE ANY BURRS OR SHAVINGS FROM THE PIPE ENDS THAT MAY HAVE DEVELOPED DURING THE CUTTING PROCESS.
3. CLEAN PIPE ENDS INSIDE AND OUT WITH A CLEAN CLOTH TO REMOVE ANY DIRT OR CONTAMINATES.  
**PIPE PREPARATION AND CONTAMINATION ARE VERY IMPORTANT CONSIDERATIONS IN THE ELECTROFUSION PROCESS. THEREFORE, CAREFULL ATTENTION SHOULD BE GIVEN TO PROPER SCRAPING AND CLEANING PROCEDURES.**
4. SCRAPE PIPE ENDS TO REMOVE ANY OXIDATION OR SURFACE CONTAMINATION. FOR BEST RESULTS, SECURE TOOL ON PIPE AND MAKE TWO REVOLUTIONS.
5. REMOVE SCRAPING TOOLS AND CLEAN BLADE AREA WITH A CLEAN, DRY CLOTH. REPEAT THIS PROCEDURE SEVERAL TIMES DURING THE SCRAPING OPERATION TO REMOVE BUILD-UP OF MATERIAL.
6. CONTINUE SCRAPING UNTIL ONLY A VIRGIN SURFACE REMAINS.  
**CAUTION: AVOID ALL POSSIBLE RECONTAMINATION OF THE PREPARED SURFACE. DO NOT TOUCH INSIDE OF FITTING OR SCRAPED PIPE SURFACES WITH YOUR HANDS AS PERSPIRATION AND BODY OILS COULD CONTAMINATE JOINTING AREAS AND AFFECT JOINT PERFORMANCE.**
7. TO DETERMINE STAB DEPTH, MEASURE HALF THE LENGTH OF THE COUPLING AND MARK THE PIPE ENDS AN EQUIVALENT LENGTH. FOR EASE OF INSTALLATION, A STAB DEPTH INDICATOR AND INTERNAL FITTING STOPS ARE A MOLDED PART OF CENTRAL ELECTROFUSION COUPLINGS AND REDUCERS.
8. SLIDE FITTING ONTO PIPE UNTIL PIPE ENDS MEET WITH THE STOPS IN THE I.D. OF THE FITTING. CHECK MEASUREMENT MARK FOR PROPER STAB DEPTH.
9. MAINTAINING STAB DEPTH, PLACE INTO THE PROPER CLAMPING TOOL TO SECURE THE PIPE FROM MOVEMENT DURING THE FUSION CYCLE. FOR BEST RESULTS, ALIGNMENT CLAMPS SHOULD BE PLACED AS CLOSE TO THE FITTING AS POSSIBLE.
10. THE SEQUENCE PROCESSOR SHOULD BE CONNECTED TO AN ADEQUATE AC POWER SOURCE (110 VOLT).  
**NOTE: IF UTILIZING A GENERATOR, THE GENERATOR SHOULD BE ENGAGED BEFORE PLUGGING THE SEQUENCE PROCESSOR IN.**
11. THE SEQUENCE PROCESSOR WILL AUTOMATICALLY RUN A QUICK DIAGNOSTIC CHECK OF ITS OPERATIONAL FUNCTIONS (VOLTAGE INPUT/OUTPUT, ETC.) WHEN DIAGNOSTIC CHECK IS COMPLETE "ATTACH FITTING" WILL APPEAR ON THE VISUAL DISPLAY.
12. ATTACH LEADS FROM THE SEQUENCE PROCESSOR TO THE FITTING TERMINALS WHEN PROPER CONNECTION IS MADE, THE REQUIRED "FUSION CYCLE TIME" WILL APPEAR ON THE VISUAL DISPLAY.
13. PRESS START BUTTON TO BEGIN FUSION CYCLE. FUSION CYCLE TIME WILL COUNTDOWN ON THE VISUAL DISPLAY. PROPER VOLTAGE READ OUT SHOULD REMAIN BETWEEN 39.8 AND 40.2 VOLTS.
14. WHEN THE FUSION CYCLE IS COMPLETE, "FUSION COMPLETE AND RECOMMENDED COOLING TIME" WILL APPEAR ON THE VISUAL DISPLAY.
15. DISCONNECT LEADS FROM FITTING. CLAMPING DEVICE SHOULD REMAIN IN PLACE TO SECURE PIPE AND FITTING DURING THE RECOMMENDED COOLING TIME. AFTER REMOVING CLAMP, ADDITIONAL COOLING TIME SHOULD BE ALLOWED BEFORE SUBJECTING THE JOINT TO BENDING, BURYING, PRESSURE TESTING, OR SIMILAR HANDLING AND BACKFILL STRESS.  
**NOTE: IN THE EVENT OF OUT-OF-ROUND PIPE, IT IS IMPORTANT TO ASSURE AN ADEQUATE AND EVEN SCRAPE IS ACHIEVED AROUND THE ENTIRE CIRCUMFERENCE OF THE PIPE. A RUBBER PIPE STOPPER CAN BE PLACED IN THE END OF THE PIPE TO AID IN ROUNDING THE AREA TO BE SCRAPED.**
16. MULTIPLE DUCTS FUSION ARE TO BE STAGGERED AND AFTER COMPLETION TO BE BOUND TOGETHER WITH TY-STRAPS (AT 5' SPACING) SO TO OCCUPY MINIMUM POSSIBLE SPACE AND THEN BACKFILLED.

**FUSION COUPLINGS DETAIL**

LOCATION OF CROSSING UTILITIES FOR REFERENCE ONLY, PLEASE CALL ALL APPLICABLE UTILITY LOCATORS FOR EXACT LOCATION PRIOR TO DIGGING OR TRENCHING.

PLOT DATE = 10/14/2008  
 FILE NAME = D:\ENGIN\86-0798-13\DOT\CA\SHA\SHIFRAC2.Dwg  
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