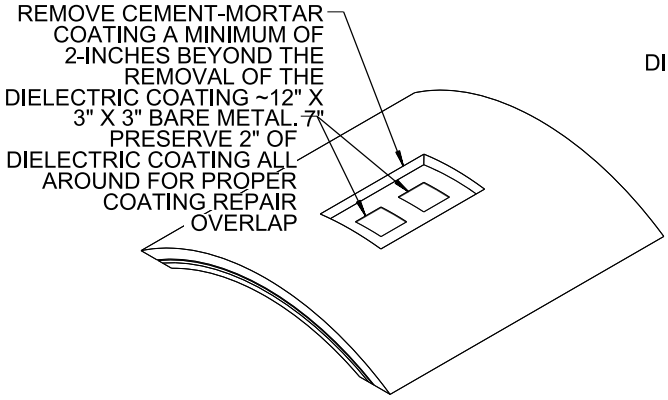
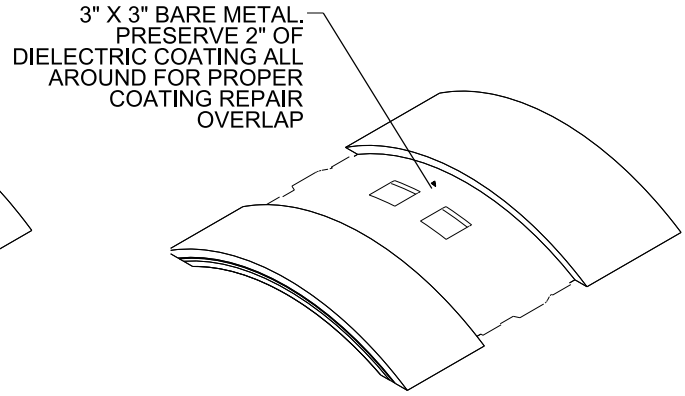
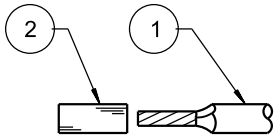
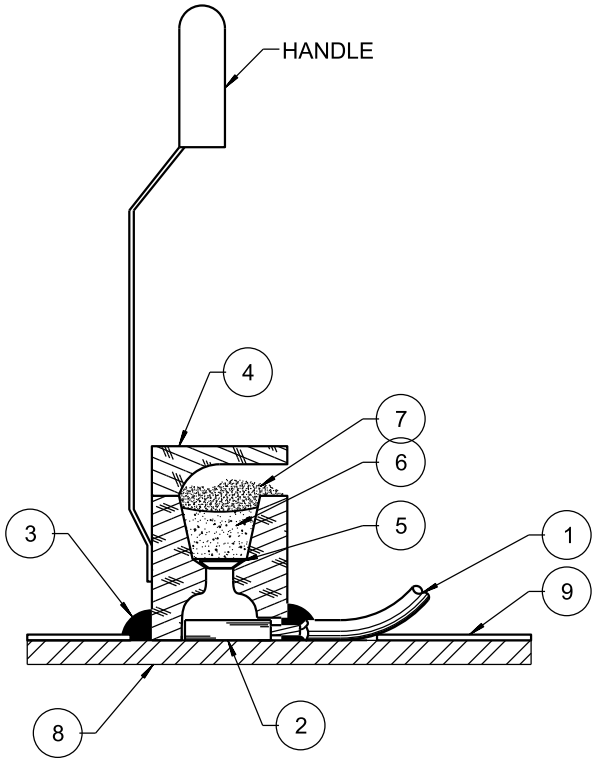


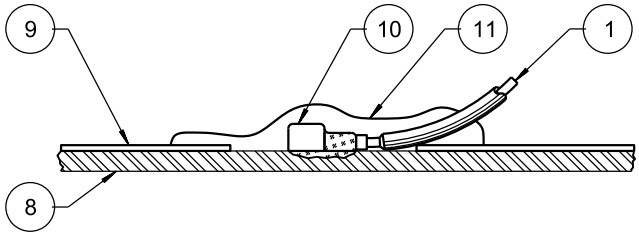
WIRE ATTACHMENT BETWEEN PIPE JOINTS MID-SPAN



WIRE ATTACHMENT AT PIPE JOINT PREFERRED LOCATION







COMPLETED WIRE TO PIPE CONNECTION

MATERIAL LIST

1. WIRE: SIZE, INSULATION, AND COLOR AS REQUIRED
2. SLEEVE: AS REQUIRED BY MANUFACTURER
3. MOLD SEALANT: AS REQUIRED
4. GRAPHITE MOLD
5. STEEL DISK
6. WELDING POWDER
7. STARTING POWDER
8. METALLIC STRUCTURE
9. EXISTING DIELECTRIC COATING
10. WELD NUGGET OR PIN BRAZE
11. EXOTHERMIC/PIN BRAZE COATING REPAIR: VISCOTAQ COATING PATCH OR EQUAL

* SEE NOTES ON SHEET 2

REVISION	BY	APPROVED	DATE
ORIGINAL	BM	A. OSKOUI	12/03
UPDATED	KA	J. NAGELVOORT	01/12
REDRAFTED	CD	J. NAGELVOORT	09/18
UPDATED	EF	J. NAGELVOORT	10/19

CITY OF SAN DIEGO – STANDARD DRAWING

WIRE-TO-PIPE CONNECTIONS AND COATING REPAIR

RECOMMENDED BY THE CITY OF SAN DIEGO STANDARDS COMMITTEE

COORDINATOR R.C.E. 56523 10/10/19 DATE

DRAWING NUMBER **SDW-125**

NOTES:

1. SELECT PROPER MOLD BASED ON STRUCTURE GEOMETRY, ORIENTATION, AND MATERIAL TYPE.
2. CLEAN AREA OF METAL SURFACE WHERE WIRE IS TO BE ATTACHED AS SHOWN ABOVE FOR EACH EXOTHERMIC WELD CONNECTION. SOLVENT CLEAN SURFACE PER SSPC-SP1 BEFORE AND AFTER POWER TOOL CLEANING TO BARE METAL PER SSPC-SP-11.
3. REMOVE APPROX 1-1/4" OF WIRE INSULATION. ATTACH SLEEVE AS NECESSARY PER MANUFACTURER'S RECOMMENDATION.
4. DRY MOLD, METAL SURFACE, AND WIRE WITH PROPANE TORCH, HEATING THE SURFACES TO APPROXIMATELY 250°F AS NECESSARY.
5. INSERT THE STEEL DISK INTO THE MOLD AND ENSURE THAT IT'S PROPERLY SEATED BEFORE POURING THE LOOSE WELDING POWDER INTO THE MOLD. AFTER POURING THE WELD POWEDER, TAP THE BOTTOM OF THE CARTRIDGE TO LOOSEN THE COMPRESSED STARTING MATERIAL. POUR 1/4 TO 1/3 OF THE STARTING MATERIAL INTO THE MOLD. CLOSE THE LID AND PLACE THE REMAINING 2/3 TO 3/4 OF THE STARTING MATERIAL INTO THE SLOT ON THE MOLD COVER.
6. HOLD MOLD FIRMLY AGAINST PIPE WITH OPENING AWAY FROM THE OPERATOR. USE MOLD SEALANT AS NECESSARY TO PREVENT WELDMENT LEAKAGE. IGNITE WITH FLINT GUN.
7. ALLOW A MINIMUM OF 30 SECONDS FOR THE WELDMENT TO SOLIDIFY. REMOVE MOLD AND ALL WELD SLAG, SPLATTER, SHARP EDGES, AND BURRS WITH CHIP HAMMER AND METAL FILE. WIPE PIPE SURFACE WITH CLEAN, OIL FREE RAGS TO REMOVE ANY LOOSE DUST.
8. TEST STRENGTH OF CONNECTION BY STRIKING THE WELD NUGGET AT A 45° ANGLE WITH 1 LB HAMMER WHILE PULLING ON THE WIRE.
9. SOLVENT CLEAN SURFACE PER SSPC-SP1.
10. APPLY WELD PATCH, ENSURING THAT THE PATCH OVERLAPPS THE SHOP OR FIELD APPLIED DIELECTRIC COATING AND WIRE INSULATION BY 1" ON ALL SIDES. WORK PATCH MATERIAL UNDER WIRE TO CREATE A WATERTIGHT COATING REPAIR. ALL EXPOSED BARE METAL MUST BE COVERED.
11. ADJACENT WIRE TO PIPE CONNECTIONS SHALL BE A MINIMUM OF 5" APART.
12. **SEE SHEET 3** FOR PIN BRAZING ALTERNATIVE.

REVISION	BY	APPROVED	DATE
ORIGINAL	BM	A. OSKOUI	12/03
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CITY OF SAN DIEGO – STANDARD DRAWING

WIRE-TO-PIPE CONNECTIONS AND COATING REPAIR

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COORDINATOR R.C.E. 56523 10/10/19 DATE

DRAWING NUMBER **SDW-125**

NOTES:

1. CLEAN AREA OF METAL SURFACE WHERE WIRE IS TO BE ATTACHED, AS SHOWN ON SHEET 1 FOR EACH PIN BRAZE CONNECTION. MINIMUM SPACING BETWEEN WELDS WILL BE A NOMINAL 5". SOLVENT CLEAN SURFACE PER SSPC-SP1 BEFORE AND AFTER POWER TOOL CLEANING TO BARE METAL PER SSPC-SP-11.
2. STRIP WIRE INSULATION FROM WIRE AND ATTACH A M1 OR M2 COMPRESSION TERMINAL OR APPROVED EQUAL. ALL MECHANICALLY CRIMPED LUGS MUST ALSO BE SOLDERED.
3. LOAD THE BRAZING GUN WITH A DIRECT BRAZING PIN AND FERRULE. THREADED TYPE CONNECTIONS ARE FOR ABOVE-GROUND USE ONLY.
4. BRAZE THE WIRE TO THE PIPE. PINS WITH EXTRA SOLDERING MATERIAL ARE REQUIRED FOR DI OR CI PIPE.
5. TEST THREADED CONNECTION BRAZE BY BREAKING OFF THE PIN'S PLAIN PROTION OF THE SHANK WITH A 1 LB HAMMER.
6. FOR DIRECT CONNECT PIN BRAZES, TEST THE STRENGTH OF CONNECTION BY BREAKING OFF THE SHANK OF THE PLAIN PIN WITH A 1 LB HAMMER.
7. SOLVENT CLEAN SURFACE PER SSPC-SP1.
8. APPLY WELD PATCH, ENSURING THAT THE PATCH OVERLAPPS THE SHOP OR FIELD APPLIED DIELECTRIC COATING AND WIRE INSULATION BY 1" ON ALL SIDES. WORK PATCH MATERIAL UNDER WIRE TO CREATE A WATERTIGHT COATING REPAIR. ALL EXPOSED METAL MUST BE COVERED.
9. ADJACENT WIRE TO PIPE CONNECTIONS SHALL BE A MINIMUM OF 5" APART.
10. REFER TO SHEET 1 FOR COMPLETED WIRE-TO-PIPE CONNECTION.

MATERIAL LIST

(1) WIRE: SIZE, INSULATION, AND COLOR AS REQUIRED

(2) WIRE LUGS: M1 OR M2. M2 LUGS MUST BE SOLDERED AFTER CRIMPING TO WIRE

(3) BRAZING PIN: DIRECT CONNECT FOR BURIED APPLICATIONS

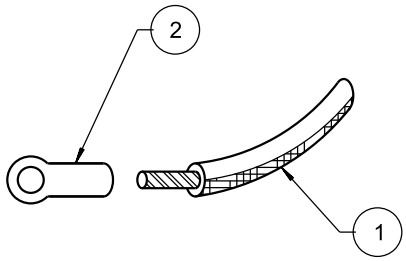
THREAD CONNECT FOR ABOVE-GRADE APPLICATIONS

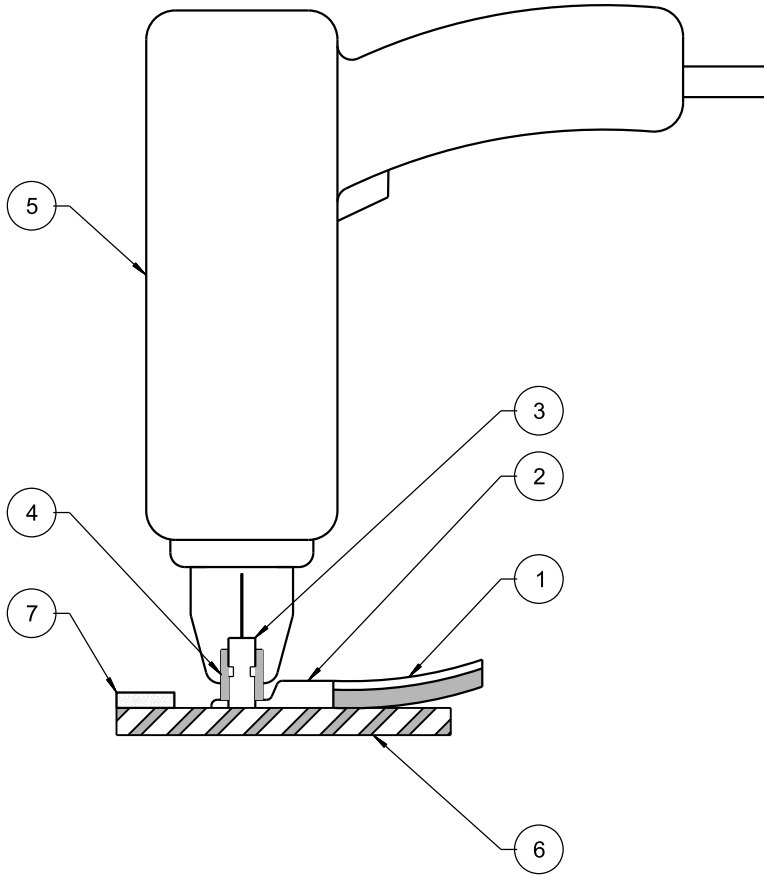
(4) FERRULE

(5) PIN BRAZING GUN

(6) METALLIC STRUCTURE

(7) EXISTING DIELECTRIC COATING





PIN BRAZE WIRE-TO-PIPE CONNECTION

REVISION	BY	APPROVED	DATE
ORIGINAL	BM	A. OSKOUI	12/03
UPDATED	KA	J. NAGELVOORT	01/12
REDRAFTED	CD	J. NAGELVOORT	09/18
UPDATED	EF	J. NAGELVOORT	10/19

CITY OF SAN DIEGO – STANDARD DRAWING

WIRE-TO-PIPE CONNECTIONS AND COATING REPAIR

RECOMMENDED BY THE CITY OF SAN DIEGO STANDARDS COMMITTEE

COORDINATOR R.C.E. 56523 10/10/19 DATE

DRAWING NUMBER **SDW-125**