

Wrapping Bends with RD-6

Many factors affect the application of RD-6 when applied onto radius bends. When feasible machine application of RD-6 is recommended on long radius bends. Hand application is acceptable when machine is not practical or on small diameter pipes.

1. Surface preparation of steel substrate:
 - a. Solvent Cleaning is recommended to provide a clean contaminant free surface (suggested solvents include MEK, Toluene, Acetone, Alcohol). Use solvents that will not deposit residual contaminants on the surface being cleaned, such as those that contain heavier hydrocarbons (e.g. mineral spirits, kerosene, diesel fuel).
 - b. Minimum surface preparation shall be wire-brushed. An abrasive blast may be specified by the pipeline owner. Loose scale, rust and other foreign matter should be removed.
 - c. The substrate shall be at least 5°F (3°C) above the dew point temperature before and during the application process. Preheating of the pipe may be required to meet these conditions.
 - d. Surface preparation contaminants must be removed prior to liquid adhesive application.
2. Surface preparation of adjacent anti-corrosion coatings: (e.g. cutbacks, repairs)
 - a. The mainline, factory applied, or existing coating shall be prepared by abrading the surface prior to application of the 600 Liquid Adhesive.
 - b. Use 60-80 grit sandpaper until surface is well scratched.
3. Liquid Adhesive Application:
 - a. Preheating of the application area is recommended when pipe temperatures are below 70°F (21°C). Optimal surface temperature of the substrate during application is 70-100°F (21-38°C).
 - b. Do not thin liquid adhesive.
 - c. Stir or shake 600/601 liquid adhesive for 30-60 seconds before using.
 - d. Apply a thin, even coat of liquid adhesive with brush or roller to a clean and dry substrate.
 - e. The liquid adhesive must extend 1-2" past the leading and trailing edges of the RD-6 Coating.
 - f. Allow the liquid adhesive to dry prior to application of RD-6.
4. RD-6 Application to Bends:
 - a. It is recommended to apply RD-6 using a Polyguard-approved machine such as the Wrapster. Hand-application may be used when machine application is not practical.
 - b. Begin application of the RD-6 before the centerline radius of the bend at the 3:00 or 9:00 position on the pipe and end at the 3:00 or 9:00 position after the radius. In either hand or machine application adequate tension must be applied so that the coating conforms to the surface. Increased tension will be required on short radius bends to provide a smooth wrinkle free application.
 - c. Coating is spirally wrapped with compound side applied directly onto the dry/tacky liquid adhesive. A 50% overlap must be maintained around the circumference.
5. SP-6 Outerwrap Application:
 - a. SP-6 OUTERWRAP is recommended over the RD-6 coating in the area of the bend.

- b. Begin and end the application of the SP-6 at the 3:00 or 9:00 position ending at the 9:00 or 3:00 position such that the leading and trailing ends are facing down. The SP-6 Outerwrap should extend past the RD-6 a minimum of 1 inch (25mm).
 - c. SP-6 Outerwrap is spirally applied with a minimum 1 inch overlap.
 - d. Apply with enough tension to achieve a smooth surface while covering the entire applied section of RD-6 coating.
 - e. Wrap enough ½ inch-1 inch (13-25mm) wide fiber-reinforced packing tape around each end of the applied SP-6 Outerwrap to hold it in place. When using cradles during pipe installation, wrap SP-6 from the trailing end to the leading end.
6. Inspection and Repair:
- a. The coated pipe should be inspected with a holiday detector.
 - b. Polyguard recommends setting the holiday detector at 4000 volts for a single layer application of RD-6 and at 8000 volts when applied with a 50% overlap.
 - c. If holiday detecting after the application of the SP-6 Outerwrap increasing the voltage by 2000 volts for each layer of the SP-6 Outerwrap is recommended.
 - d. All holidays and damaged or defective coating shall be repaired immediately.
 - e. Small or pinhole type holidays can be repaired in the RD-6 by applying liquid adhesive over the holiday area and let dry to touch,
 - f. Starting with RD-6, at the 3 o'clock position on the coated pipe surface and while covering the repair area, a minimum of 1 inch (25 mm) on all sides of the repair, make a complete wrap of 1-1/2 revolutions around the coated pipe surface, ending at the 9 o'clock position. This will make sure the tape laps on both sides are in a downward direction.
 - g. If outerwrap is being used apply a layer of unbonded outerwrap over the repair area and attach with fiber reinforced strapping tape.
 - h. For larger holidays or where coating is damaged that exposes pipe, remove damaged coating and smooth edges before repair is made.
 - i. If a hole or large void area occurs, fill in the area with a patch of RD-6 or 606 Filler tape to make sure bridging of the void does not occur.
 - j. If the damaged area is large enough that it requires a material patch larger than 6 inches (152 mm) x 12 inches (305 mm), Fill in the area with a patch of RD-6 or 606 Filler tape to make sure bridging of the void does not occur, then spiral wrap the pipe with RD-6, to include the damaged area.
 - k. Apply an outerwrap as in above.
 - l. All coating repairs shall be reinspected.