

CLOCK SPRING®

Application Note Bend Repair

Clock Spring® provides hoop reinforcement for pipe damaged by corrosion or other blunt defects by wrapping tightly around the pipe and sharing the hoop load. Defects in bends require special consideration to ensure that the following design requirements are met (Figure 1a, b, c).

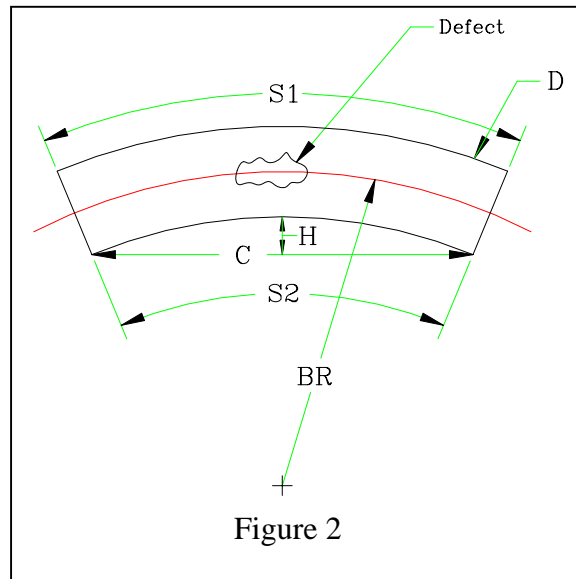
1. The repair area shall have the installed Clock Spring® units extend a minimum of 2 inches (51 mm) beyond both ends of the defect.
2. The gap between the Clock Spring® and the intrados of the bend shall not exceed 0.187 inches (4.8 mm).
3. The gap between adjacent Clock Spring® units on the extrados of the bend shall not exceed 0.5 inches (12.7 mm).
4. The width of each Clock Spring® unit shall not be less than 2.5 inches (63.5 mm).



Figures 1a, b, c Bend Repairs

The design of the bend repair requires specific information about the bend. In addition to pipe grade, diameter, wall thickness, class location, defect length, defect width and defect depth; provide:

(S1 and S2)
Or
(C and H)
Or
BR.
See Figure 2.



Installation Requirements:

1. ONLY Certified Installers may install Clock Springs.
2. Install Clock Spring® units in accordance with standard Clock Spring® repair procedures.
3. Start the installation of Clock Spring® units from the middle of the defect moving outwards.
4. In addition to applying filler material to all cavities and tented areas, ensure that filler is applied to both the intrados and extrados area of the pipe contacting the Clock Spring® unit.

Simply the smartest pipeline repair decision you can make!

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