



Girth Weld Repair Kits

This laminated steel sleeve system is designed to provide both hoop and axial strength performance. The system is comprised of three coils. There are two shoulder coils installed on each side of the girth weld and a bridging unit securely adhered to each shoulder unit. The high modulus filler material is applied directly to the cap of the girth weld and between the shoulder coils.

The hoop reinforcement component is calculated via a critical engineering assessment. The axial component is provided by utilizing sufficient axial length along the pipe combined with a high lap shear strength toughened adhesive to share axial stresses. This transfers stress to the laminated 60 KSI steel coils.

Strain dependent considerations are effectively addressed by the 60 KSI steel modulus and isotropic properties. The laminated thin layer coil design provides extremely high effective fracture toughness.

Specifications:

General Characteristics	<ul style="list-style-type: none">• Laminated Steel coil reinforcement system• MMA adhesive system• Two component epoxy filler material
System	<ul style="list-style-type: none">• Design failure stress ≥ 60 Ksi• Design Elastic modulus $\geq 25 \times 10^6$ psi
Steel	<ul style="list-style-type: none">• AISI 1010. ¼ hard tempered prime quality steel strip• .025 +/- .001 inches thick• 12 inches wide +/- .005 inches
Adhesive	<ul style="list-style-type: none">• Tensile strength 2500-3000 psi (ASTM D638)• Lap Shear 1800-2300 psi (ASTM D1002)• Max operating temperature 180° F
Filler Material	<ul style="list-style-type: none">• Compressive strength ≥ 12000 psi (ASTM D695)