



PRODUCT CATALOG

Pipeline Repair Products & Installation

We are proud exclusive distributors of CSNRI and Polyguard® products,
The leader of innovative composite repair and maintenance solutions.





ABOUT US



In-Line Pigging Solutions is a trusted supplier of advanced pipeline repair systems and pigging equipment. We are proud to be the exclusive Canadian distributor of CSNRI® and Polyguard®, two of the most recognized names in pipeline integrity solutions. In addition to pipeline repair and coating products, we also supply a full range of pigging essentials, including pigs, temporary launchers and receivers, transmitters, and tracking tools that are carefully curated for performance, reliability, and ease of use in the field.

TRAINING & SUPPORT

Our commitment doesn't stop at product delivery. Whether you need hands-on service or want to build internal expertise, we ensure your team is equipped for long-term success. In-Line Pigging Solutions offers full installation support, including direct product application, as well as operator training and workforce certification programs.

LET'S WORK TOGETHER

Need support finding the right solution for your project? Contact our sales team and learn more about how we can support your pipeline integrity and maintenance goals.

CONTACT US

CSA PERMANENT REPAIRS

Corrosion defect <80% of the nominal wall thickness of the pipe

- Where internal corrosion growth has not been arrested, the determination of the repair method shall include a CSNRI engineering assessment that considers corrosion abatement effectiveness and the inspection interval.

Gouge, groove, or arc burn <80% of the nominal wall thickness of the pipe

- The stress concentrator (gouge, groove, arc burn, or crack) shall be removed by grinding prior to the CSNRI composite repair install.

Dent defect not on a circumferential weld

- Dent depth must be no more 15% of the outer diameter
- Stress Concentrators must be removed prior to the CSNRI composite repair install.

Pipe body surface crack < 80% of the nominal wall thickness of the pipe

- The stress concentrator (gouge, groove, arc burn, or crack) shall be removed by grinding prior to the CSNRI composite repair install.
- Cannot be in a dent
- Grind defect <80% of the nominal wall thickness of the pipe.

CSA TEMPORARY REPAIRS

Temporary Repairs are based on a CSNRI engineering assessment

- The assessment shall consider the type of service, the nature and extent of the defect, the material properties, and the class location. The assessment shall indicate the inspection method(s) and interval, the period of time for which the temporary repair shall be used, and any reductions necessary to the normal operating pressure. A record containing engineering assessment information for the temporary repair shall be kept for as long as the repair remains in service.

Composites can be used as a temporary repair for ripples, wrinkles, buckles, cracks & anomalies

- This should only be done if proper testing and sound engineering can be provided and extrapolated out to the design life
- These repairs can provide a design life and if the repairs ever change to permanent within CSA Z662, they can be reevaluated for permanency



PIPELINE REPAIRS

In-Line Pigging Solutions is proud to offer the full suite of CSNRI products, delivering best-in-class composite repair solutions.

A+ / A+Max	04
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ClockSpring	08
Snap Wrap	10

PIPELINE COATINGS

In-Line Pigging Solutions is proud to offer Polyguard pipeline coatings, known for industry-leading corrosion protection and long-term reliability.

12	Polyguard RD-6
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A+ WRAP

PRODUCT DESCRIPTION

A+ Wrap and A+ Max are factory saturated, bi-directional fiberglass composite solutions for on-site permanent repair of corroded and dented pipelines. This repair product eliminates field saturation, resin and fabric measuring, and compressing installation time to provide the highest repair quality and efficacy.



A+ WRAP

- + Small diameter pipes
- + Soil-to-air interfaces
- + Corrosion and dents
- + Complex geometries

A+ MAX WRAP

- + Large pipes
- + Severe corrosion
- + Severe dents
- + Aggressive cyclic fatigue

COMPLIANCE

- + US CFR 192 and CFR 195
- + CSA Z662
- + ASME B31 standards
- + ISO 24817
- + ASME PCC-2 Article 401

HIGHLIGHTS

- + Permanent repair with no disruption to pipeline operation during installation
- + Repair can land on areas where Type B sleeves cannot be welded
- + Ideal for laminations, metal loss, and thin wall pipe
- + Install, re-coat and backfill on the same day to save operators time and money
- + Easily applied on condensation and underwater
- + Conforms to any shape including elbows, tees, flanges and bends
- + In-line pigging solutions support for installation and training

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TECHNICAL DATA SHEET



A+ WRAP TECHNICAL DATA

PROPERTY	CIRCUMFERENTIAL DIRECTION		AXIAL DIRECTION	
	A+ Wrap	A+ Max	A+ Wrap	A+ Max
Tensile Strength	53.25 ksi (367 MPa)	65.31 ksi (450 MPa)	23.81 ksi (164 MPa)	12.67 ksi (87 MPa)
Tensile Modulus	3.68 Msi (25.4 GPa)	4.68 Msi (32.2 GPa)	1.75 Msi (12.1 GPa)	1.22 Msi (8.4 GPa)
Ply Thickness	0.014"	0.027"		
Glass Transition Temperature	260°F (126°C)			
Hardness	75			
Max Recommended Application Temperature	120°F (50°C)			
Shelf Life	24 months			

CURING SCHEDULE

(C)	(F)	SET TIME (HRS)	CURE TIME (HRS)
10	50	5.2	24
16	60	3.45	15
24	75	2.3	5.5
32	90	2	4.25
49	120	1	3



REPAIR SYSTEM COMPONENTS

Filler: EPN-101, ESN-202, EPN-242

Primer: PPR-220, PPR-290

Prepreg: AP-FP, APM-FP

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COMPLIANT WITH

- + US CFR 192 and CFR 195
- + CSA Z662
- + ASME B31 standards
- + ISO 24817
- + ASME PCC-2 Article 401





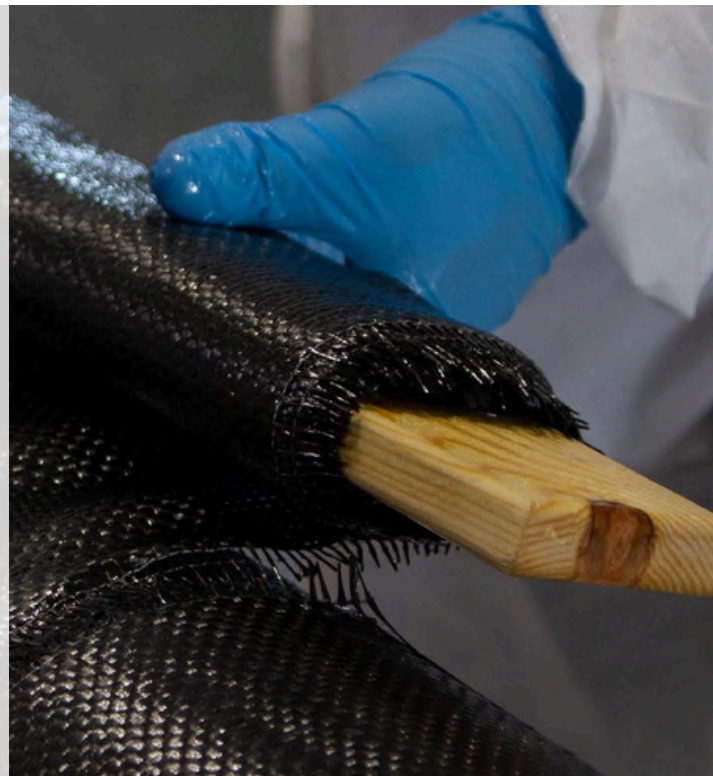
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ATLAS

PRODUCT DESCRIPTION

Atlas is the most tested carbon fiber composite solution for the permanent repair and rehabilitation of pipelines and piping systems. Engineered to restore pipelines to their original strength, Atlas addresses both common and complex anomalies, while ensuring full compliance with all relevant regulations, codes, and standards.



APPLICATIONS

- + External corrosion and pitting
- + Dents, gouges, and scratches
- + Weld defects and manufacturing flaws
- + Wrinkle bends and deformations
- + Cracks and conditional abnormalities

HIGHLIGHTS

- + Permanent repair with minimal disruption to pipeline operation during installation
- + No hot works, increased safety compared to welding
- + Flexible repair system can be installed on complex geometries and low clearance areas
- + Can be installed over non-injurious hard spots and laminations with low install risk
- + Less time in the ditch for cost-effective installation and labor
- + Low installation risk, reducing repair length, cost and time compared to steel sleeves

COMPLIANCE

- + US CFR 192 and CFR 195
- + API 579/ASME FFS-1
- + CSA Z662
- + ASME B31 standards
- + ISO 24817
- + ASME PCC-2 Article 401
- + PDAM
- + SAEP-345 (9Com approved)

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TECHNICAL DATA SHEET



ATLAS TECHNICAL DATA

PROPERTY	CIRCUMFERENTIAL DIRECTION	AXIAL DIRECTION
Tensile Strength	166.7 ksi (1.15 GPa)	19.9 ksi (137.2 MPa)
Tensile Modulus	9.81 Msi (67.6 GPa)	2.95 Msi (20.4 GPa)
Ply Thickness	0.017" (0.43mm)	
Glass Transition Temperature	216°F (102°C)	
Hardness	85	
Max Recommended Application Temperature	140°F (60°C)	
Shelf Life	24 months	

CURING SCHEDULE

(C)	(F)	SET TIME (HRS)	CURE TIME (HRS)
10	50	18	24
16	60	15	20
24	75	4	6
32	90	3.5	5
49	120	1.5	2



REPAIR SYSTEM COMPONENTS

Filler: EPN-101, EPN-242
 Primer: PPR-220, PPR-290
 Resin: SFE-206
 Fabric: FCB-240, FEB-530

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COMPLIANT WITH

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CLOCKSPRING

PRODUCT DESCRIPTION

Clock Spring is a composite repair sleeve and reinforcement system, designed for high-pressure transmission pipelines. It consists of a pre-tensioned, pre-cured unidirectional e-glass composite coil, high-modulus filler, and a high lap-shear strength methyl methacrylate adhesive. Proven to withstand up to 8000 psi burst pressure, Clock Spring® has a 50+ year design life and over 30 years of field use, making it the industry's first permanent composite repair. Each 8-layer coil delivers greater failure pressure than pristine pipe and is engineered to restore structural integrity and permanently repair external anomalies. Suitable for metal loss up to 80% depth, deformation, mechanical damage, and mill defects. Available in 4" to 56" diameter kits.



APPLICATIONS

- + Corrosion
- + Gouges
- + Dents
- + Manufactured Defects

HIGHLIGHTS

- + Installs without disrupting operations
- + Two hours to backfill from installation
- + Enhances short-term and long-term safety
- + Marking band system makes repairs visible to in-line inspection tools
- + No environmental hazards
- + Easy transportation to site and no special tools to install
- + No hot work or heavy lifting
- + Can be installed underwater
- + Available in high-temperature system

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COMPLIANCE

- + US DOT CFR 192 and 195
- + CSA Z662
- + ASME PCC-2 Article 401
- + ISO 24817

TECHNICAL DATA SHEET



CLOCKSPRING TECHNICAL DATA

PROPERTY	VALUE
Nominal Thickness	0.065 inch (1.6 mm)
Complete 8-Layer System	0.5 inch (13mm)
Width	12 inch +/- 0.5 inch (305mm)
Lap Shear Strength	> 1,200 psi (8.27 MPa)
Compressive Strength	> 12,500 psi (86.18 MPa)

PROVEN HISTORY & LONG-TERM PERFORMANCE

Developed through a decade-long R&D program, Clockspring was the first composite repair system to gain widespread industry approval and is now recognized as the most tested, documented, and trusted solution of its kind. With more than 30 years of installation history across 75+ countries, Clock Spring has set the global standard for permanent composite pipeline repair.

CASE STUDY

In 1995, a major natural gas operator used Clock Spring® to repair a pipeline with 63% wall loss. The repair was completed in under an hour without needing to shut down the line. 25 years later, the same pipe section was exhumed and tested:

- Held 1.5× MAOP (1455 psi / 100.3 bar) for 5 minutes
- Failed at 2180 psi (150.3 bar), outside the repaired zone
- Maintained tensile strength of 90,000 psi

At Inline Pigging Solutions, we stand behind Clock Spring® as a proven, permanent repair solution, proven by decades of global field use and unmatched performance.



COMPLIANT WITH

- + US DOT CFR 192 and 195
- + CSA Z662
- + ASME PCC-2 Article 401
- + ISO 24817

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SNAPWRAP

PRODUCT DESCRIPTION

SnapWrap is a multi-layered system of high-strength, corrosion-resistant fiberglass that forms a composite split sleeve. Designed for repair and reinforcement in tight quarters, on pipes that are difficult to access, and subsea pipes, it is installed with a high-performance adhesive and filler material. The split sleeves are available in ¾-inch to 56-inch diameters and can be applied quickly and easily, even in challenging environments such as underwater, in splash zones, and on pipe racks with limited clearance.



APPLICATIONS

- + Tight access areas
- + Process piping
- + Subsea and offshore risers
- + Low-pressure lines <1,000 psi
- + Local distribution and terminal pipelines

HIGHLIGHTS

- + Eliminates unplanned down time
- + Extends the life of aging and corroding assets
- + Prevents future external corrosion
- + No pipe cutting or welding
- + No special tools to install
- + No environmental hazards
- + No hot work

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COMPLIANCE

- + ASME B31G, B31.4 & B31.8
- + ASME PCC-2 Article 4.1, 4.2
- + API 570 Section 8.1.4
- + Non-welding Repairs (On-Stream)

TECHNICAL DATA SHEET



SNAPWRAP TECHNICAL DATA

PROPERTY	VALUE
Nominal Thickness	0.065 inch (1.6 mm)
Complete 8-Layer System	0.5 inch (13mm)
Width	12 inch +/- 0.5 inch (305mm)
Lap Shear Strength	> 1,200 psi (8.27 MPa)
Compressive Strength	> 12,500 psi (86.18 MPa)
Shelf Life	12 months from manufacturing date (w. recommended storage conditions)

STORAGE

Shelf life is based on continuous storage between 50°F (10°C)- 72°F (22°C). Keep container tightly closed. Store out of direct sunlight in a cool dry area.

TEMPERATURE	CONSIDERATIONS
32°F (0°C)	Do NOT Freeze
50°F (10°C) - 72°F (22°C)	Recommended
72°F (22°C) - 95°F (35°C)	Decreased shelf life
95°F (35°C)	Quickly Diminishes Reactivity



COMPLIANT WITH

- + US DOT CFR 192 and 195
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- + ASME PCC-2 Article 401
- + ISO 24817

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POLYGUARD

PRODUCT DESCRIPTION

Polyguard RD-6 is a non-shielding anti-corrosion coating system designed for use on buried and submerged line pipe, rehabilitation projects, and new construction girth welds. The system consists of a liquid adhesive, a geotextile-backed protective coating, and an SP-6 outer wrap. Corrosion protection is provided by a polymer-modified coating layer, which is bonded to a strong, tightly woven polypropylene geotextile fabric to deliver non-shielding performance, high breaking strength, and low elongation.



APPLICATIONS

- + Buried pipelines
- + Submerged pipelines
- + Rehabilitation projects
- + New construction girth welds
- + For pipelines operating up to 145°F (63°C)
- + Pipes operating above 145°F require RD-6 HT
- + It can also be applied above ground when protected with the RD-6 UV overcoat

HIGHLIGHTS

- + Non-shielding coating
- + Fast & efficient no cure application
- + Resistant to soil stress
- + Resists disbondment from pipe even if surface is less than perfect
- + Allows for immediate backfill
- + Factory controlled thickness

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COMPLIANCE

- + NACE SP0109-2023
- + ANSI/AWWA C233-24
- + CSA Z245.30:22
- + ISO 21809-3

TECHNICAL DATA SHEET



POLYGUARD RD-6 TECHNICAL DATA



PROPERTY	ASTIM METHOD	TYPICAL RESULTS
Total Thickness (single layer)	D1000	1.27mm (0.05")
Breaking Strength	D1000	193 N/10mm W (110lb F/ " W)
Elongation at Break (%)	D1000	< 30%
Water Vapor Transmission	E96 procedure B	0.006 g/h m ² (0.009 grains/h ft ²)
Cathodic	G8	< 5mm radius (0.197" radius)
Disbondment	G42	< 10mm radius (0.4" radius)
Non-shielding Properties	Internal Polyguard	Pass (non-shielding)
Dielectric Strength	D149	> 12KV: 9.45 V/μm (> 12 KV: 240 V/mil)
Adhesion to Primed Surface	D1000 Method A	35 N/10mm width (20lb F/ " W)
Adhesion to Polyethylene	D1000 Method A	28 N/10mm width (16lb F/ " W)
Impact Resistance	G14	2.6 g/cm (23"/lb)

Does not shield cathodic protection currents

COMPLIANT WITH

- + NACE SP0109-2023
- + ANSI/AWWA C233-24
- + CSA Z245.30:22
- + ISO 21809-3

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IN-LINE PIGGING SOLUTIONS

In-Line Pigging Solutions is your trusted partner for ensuring the safe and reliable flow of energy across North America. Whether you need pipeline repair products, specialized field support, or full turnkey project management, our team will provide efficient, safety-focused solutions tailored to every stage of your project.



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PIPELINE REPAIR PRODUCTS BY CSNRI

Family Brand	Product Name	Defects Addressed	Additional Benefits	Per Ply Thickness	Max Temperature	Fabric Description	Resin Description
Clock Spring	Clock Spring	Metal loss and small deformations	Pre-Engineered for most defects	0.0625 in. (1.6 mm)	201°F (94°C)	Unidirectional Fiberglass 8 layers in one coil	Pre-cured Polyester
	SnapWrap		Installed with limited site access			Unidirectional Fiberglass Applied 1 layer at a time	
A+ Wrap	A+ Wrap	Metal loss and small deformations	Fast and easy on small diameters	0.014 in. (0.35 mm)	194°F (90°C)	Bi-directional fiberglass	Moisture-cured Polyurethane
	A+ Max		Intended for large diameters	0.027 in. (0.69 mm)		Tri-directional fiberglass	
Atlas	Atlas	Large deformation and crack/crack-like features	Focus on reducing hoop stress in pipe	0.017 in. (0.43 mm)	180°F (82°C)	Bi-directional carbon fiber	High-strength epoxy
	Atlas MT				331°F (166°C)		
	Atlas UA	Axial Dominated, large deformations, crack & crack like	Focus on reducing axial stress in pipe	0.016 in. (0.41 mm)	180°F (82°C)	Unidirectional (axial) carbon fiber	

DEFECT TYPE OVERVIEW	
Metal Loss:	Corrosion Internal wall loss Gouges Minor manufacturing defects Abrasion
Deformation	Plain Dents Dents on weld Dent with wall loss Buckles Ovality concerns Wrinkle Bends (hoop)
Crack / Crack Like:	Seam-weld anomalies SCC Plain body cracks Laminations Severe manufacturing defects SSWC Hard Spot Arc Bur
Axial Dominated	Girth weld anomalies CSCC Geohazards Bending loads Thermal cycling Wrinkle Bends (axial)

PIPELINE DEFECT MATRIX

Clock Spring																								
A+ Wrap																								
Atlas																								
	Metal Loss					Deformation*						Crack-Like*												
	External	Internal	Gouge	Girth Weld	Corrosion Near Seam Weld	Plain Dent	Dented Girth Weld	Dent w/ Interacting Metal Loss/Gouge	Buckle	Wrinkle, Ripple	Ovality	Seam Anomalies (LOF, Planar, Hook)	SCC	SSWC	Laminations	Arc Burns	Hard Spot	CSCC	Girth Weld					

*Permanency is dependent on defect size and cyclic profile

● Permanent (50+ years) ● Temporary ● Permanent only if defect is mitigated