



# Making Pipelines Last



## INVESTOR PRESENTATION

**A technology that solves the largest problem in pipeline infrastructure.**

# Largest Problem in Pipeline Infrastructure

Pipeline corrosion costs just the oil & gas industry in North America more than \$8B USD per year.

Around 2 trillion gallons of fresh water are lost in the U.S. alone each year through pipeline leaks.



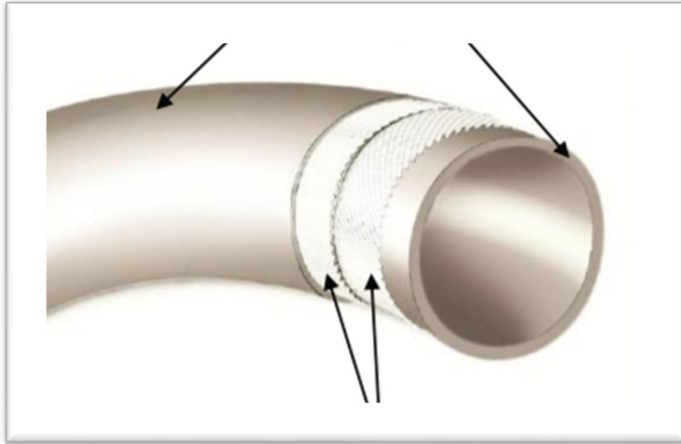


# Largest Problem in Pipeline Infrastructure

Internal corrosion accounts for 60 – 75% of corrosion-related pipeline failures.

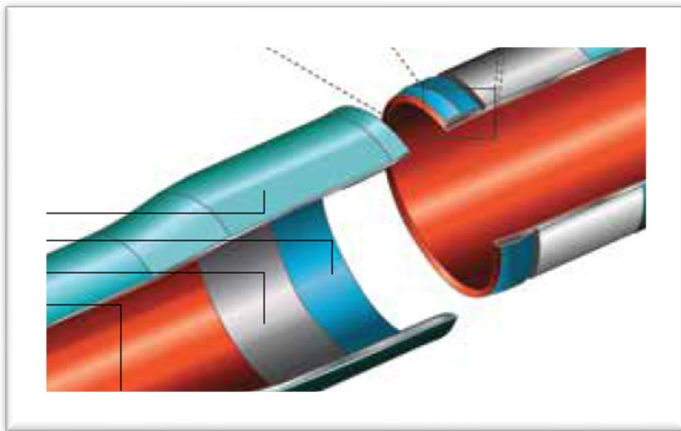
How to protect the interior of welded pipe joints from corrosion?





## Flexible Composite Pipe

- Plastic materials don't corrode
- Limited pressure rating
- Only up to 6" diameter



## Mechanical Interference Fit

- No welding, avoids problem of heat damaging internal coating
- Only up to 12" diameter
- Requires equipment that's not readily available



## Human Patches Each Joint

- Slower construction = high cost
- Quality issues
- Dangerous



## Robot Paints Each Joint

- Slow & expensive = high cost
- Quality issues

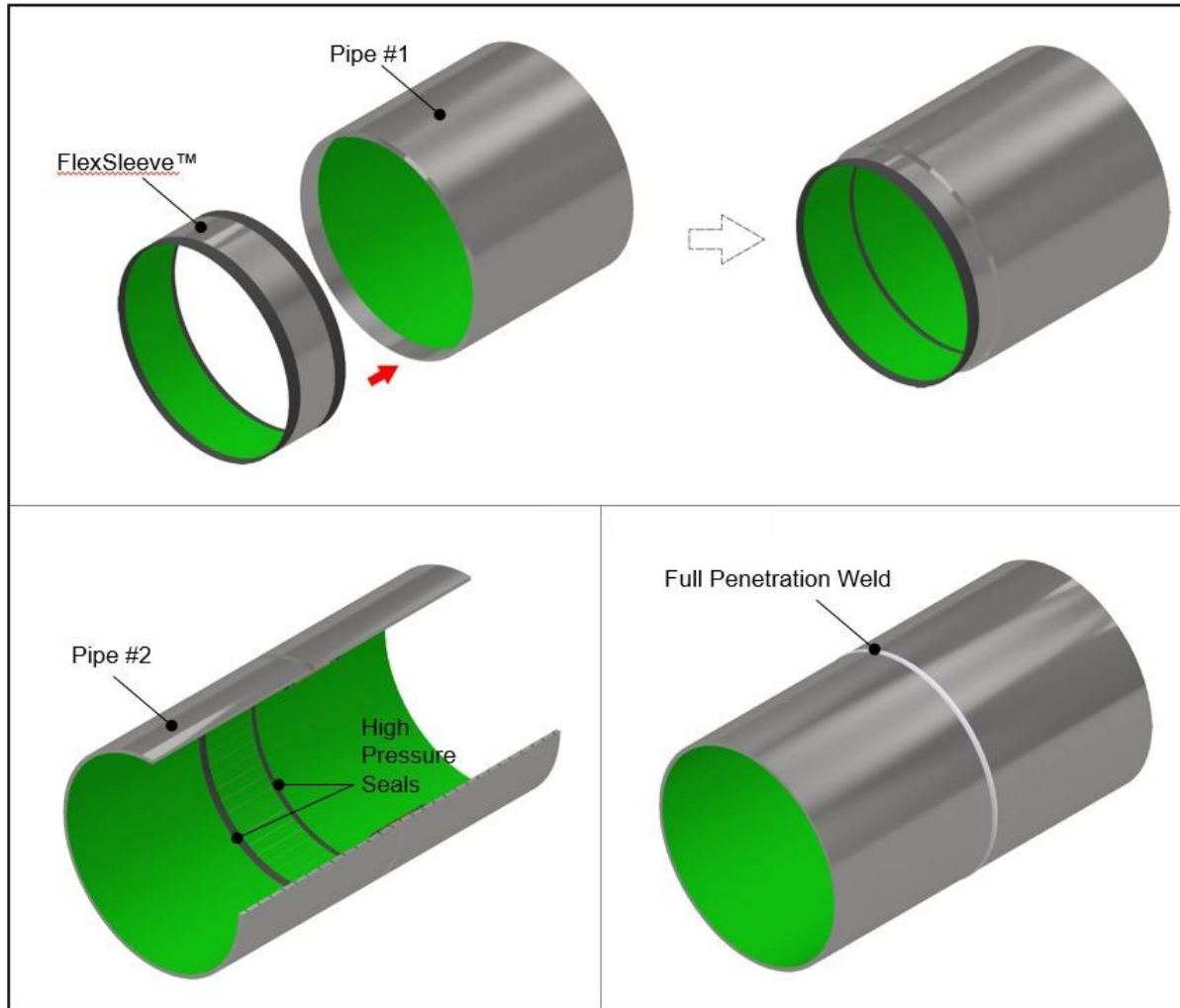


## HDPE Liner

- High cost
- Quality issues
- Longevity issues

# The FlexSleeve™ Solution

A flexible, corrosion-resistant sleeve that seals off the weld zone from corrosion and permits fast, standard pipeline construction methods.





# Disruptive Advantages

## Construction Rate (meters/day)

Welding w/ FlexSleeve

1500

Joint Coating w/ Robot

200 - 500

Reference:  
42" diameter x 340km desal  
water pipeline

## Cost of FlexSleeve vs. Bolted Joints

FlexSleeve

X

Flanged Joints

3X

Reference:  
30" diameter FlexSleeve  
vs.  
30" dia. Class 600 flanges  
(bolted mechanical joint)

## Cost of FlexSleeve vs. Bare Pipe (over 30 years)

Internally Lined w/ FlexSleeve

1 pipeline  
30 years

Thick, Unlined Bare Steel

1st pipeline  
10 years

2nd pipeline  
10 years

3rd pipeline  
10 years

Reference:  
Abrasive slurry pipeline  
28" diameter x 0.5" pipe wall  
thickness, polyurethane lined  
vs.  
28" diameter x 1.25" pipe wall  
thickness, unlined  
(replaced due to corrosion)

## Domestic Water

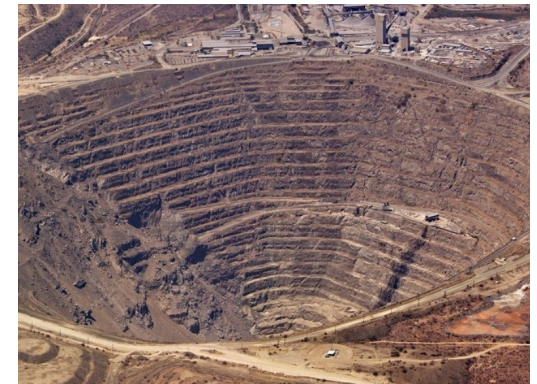
- Continental Water
- Desalinated Water

## Oil & Gas

- Produced Water
- Sour Gas & Oil
- Seawater & CO<sup>2</sup> Injection
- Process Water

## Mining

- Process Water
- Tailings Slurry
- Coarse Ore Slurry
- Concentrate Slurry
- Solution Mining (Brines)





# Target Market: Desal Water Pipelines

The background of the slide is a photograph of dry, cracked earth with some sparse green grass and small plants growing in the cracks.

**10% Annual Growth**  
in desalinated water production

**Middle East**  
1,000+ km/ yr. of new desal pipelines

**Chile**  
500+ km/ yr. of new desal pipelines

**Oil industry pipelines suffer internal corrosion from water, H<sub>2</sub>S, and CO<sub>2</sub>.**



**LPS is in partnership discussions with companies that wish to merge their internal lining technology with LPS' welded joint technology.**



Successful trial installation for offshore service  
January 2022



# First Major Project

More than 400 FlexSleeves have been installed and successfully tested in a 28" diameter x 92km domestic water pipeline in Brazil.

This serves as a critical case study that engineers are asking for.

See <https://www.linedpipesystems.com/award-winning-technology-used-in-brazil-water-pipeline/>



# Product Approvals

Product demonstrations and successful trials have been performed for water agencies, mining, and oil companies.

All have said that FlexSleeve far outperforms competitive technologies, and several have certified it for use in their pipelines.

See [https://youtu.be/dAfl2LuK5\\_s](https://youtu.be/dAfl2LuK5_s)







# FlexSleeve™ Total Available Market\* (USD)

	# joints / yr.	Avg. price / joint	FlexSleeve Total Available Market
<b>North America Domestic Water</b>	100,000	\$ 700	\$ 70,000,000
<b>North America Oil &amp; Gas</b>	150,000	\$ 500	\$ 75,000,000
<b>North America Mining</b>	30,000	\$ 700	\$ 21,000,000
<b>South America Domestic Water</b>	80,000	\$ 700	\$ 56,000,000
<b>South America Oil &amp; Gas</b>	100,000	\$ 500	\$ 50,000,000
<b>South America Mining</b>	30,000	\$ 700	\$ 21,000,000
<b>Mid East / North Africa Domestic Water</b>	150,000	\$ 700	\$ 105,000,000
<b>Mid East / North Africa Oil &amp; Gas</b>	150,000	\$ 500	\$ 75,000,000
<b>Europe Domestic Water</b>	100,000	\$ 700	\$ 70,000,000
<b>India/Southeast Asia Domestic Water</b>	100,000	\$ 700	\$ 70,000,000
<b>India/Southeast Asia Oil &amp; Gas</b>	100,000	\$ 500	\$ 50,000,000
<b>India/Southeast Asia Mining</b>	30,000	\$ 700	\$ 21,000,000
	<b>1,120,000</b>		<b>\$ 684,000,000</b>

\*Market size estimates are based on market intelligence and studies. These figures can be considered educated ballpark estimates.



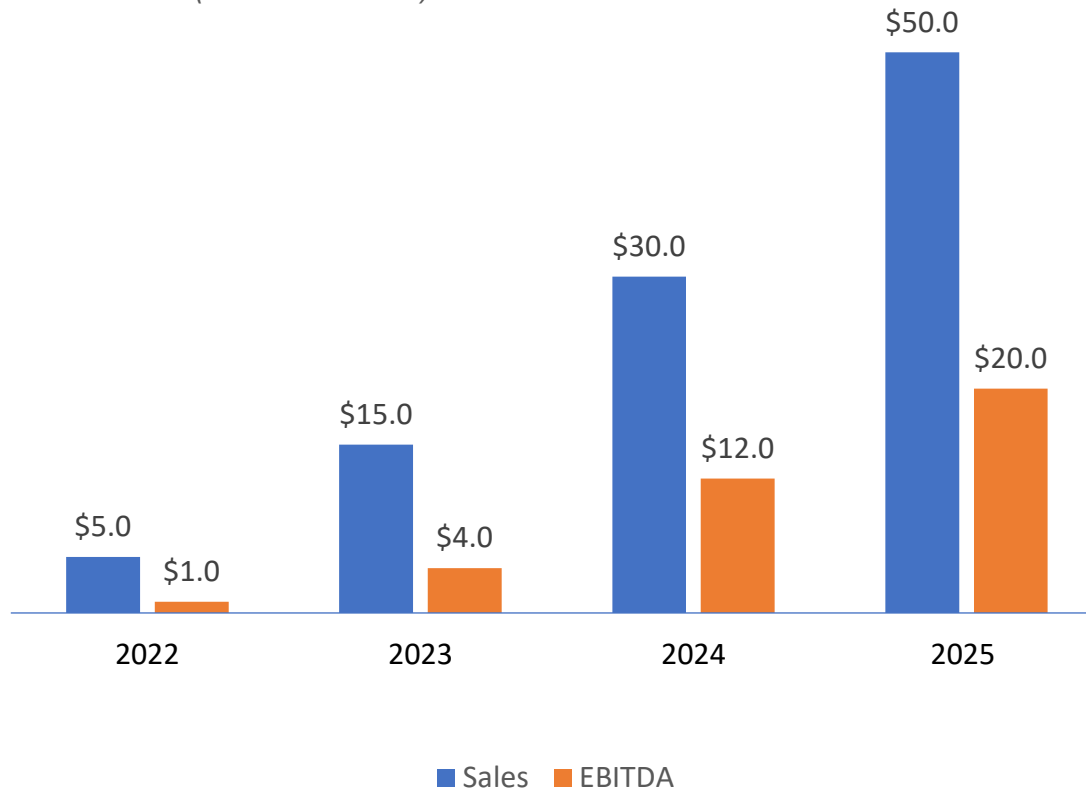
- **FlexSleeves are assembled from low-cost, readily available sheet metal. Competitor sleeves are machined from expensive, thick steel blanks.**
- **Superior functionality allows FlexSleeve™ to sell at or above competitor prices.**
- **Gross margins will exceed 40%, and potentially reach 70% as we automate manufacturing.**



# Budgetary Financial Projections

LPS technology represents a quantum leap from existing solutions.  
Demand will quickly grow once it catches on.

2022 – 2025 Revenue\* and EBITDA  
(USD in millions)





# Big Distribution Partners Evaluating FlexSleeve

Two large companies with a world-wide customer base for internal sleeves have trialed FlexSleeve, understand it's the future, and are taking steps to replace their existing product with ours.

A partnership with either of them would greatly accelerate market penetration and instantly increase LPS' valuation.







Raising Money to  
Scale Manufacturing

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# Strong Barriers to Entry

- \$3+ million USD over 5 years spent on product development, testing, & trials
- 2 patents issued. Multiple patents pending.
- Conservative industry = slow adoption but long viability





## **Ryan Sears, Co-Founder & CEO**

- General Manager and then President of Goodwest Linings & Coatings from 2001 until LPS was formed in 2017, during which time Goodwest grew 5-fold and became a reputable industry leader in the Southwest U.S.
- Innovation leader with particular strengths in business development, marketing, technical solutions, costing and forming trusted relationships with team members, partners, clients, and shareholders.



## **José Anísio de Oliveira e Silva, Co-Founder & CTO**

- Held instrumental roles in the engineering and construction of high-profile pipelines, including Engineering Manager for the 523km Bolivia to Brazil gas pipeline and 530km Anglo American Minas Rio Iron Ore Slurry Pipeline
- The inventor of patented LPS technology, his superior technical skills and pipeline construction knowledge are vital to the development and proper implementation of LPS technology.



## **Marian Hagler, General Counsel**

- Deep global experience in the development of natural resources and related infrastructure, including Global Major Projects (O&G and Mining) with Baker & McKenzie in Russia, Kazakhstan, North Africa, and the Middle East
- Excellent contract negotiating skills and provides important strategic analysis.





## **Jose Luis Calixto, Corporate Quality Manager**

- Formerly Lead Project Engineer & Senior Pipeline Designer with Ausenco.
- Extensive experience with engineering process management, quality control, & project management principles.



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## **Luiz Neuenschwander, Project Manager**

- 30+ year career in pipeline construction project management & quality management.
- Mechanical Engineer with excellent technical and analytical skills used in product development and manufacturing techniques.



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## **Ezechiel Decote, Project Quality Manager**

- Extensive oil & gas pipeline construction experience world-wide.
- Expertise in welding, non-destructive examination, hydro-static pressure testing, and steel fabrication.



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## **Patrick Sears, Supply Chain Manager**

- Formerly Vice President of Sales at Goodwest Linings & Coatings from 2003 – 2020, during which time sales grew 5-fold and Goodwest became a reputable industry leader in the Southwest U.S.
  - Extensive experience in client relations, project management, and corrosion protection.
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## Contact Information

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