

Netherlands

Revolutionising
the way energy
is transported

SoluForce[®]

NL



About SoluForce RTP (Reinforced Thermoplastic Pipe)



SoluForce RTP Proven technology (>5000km installed)

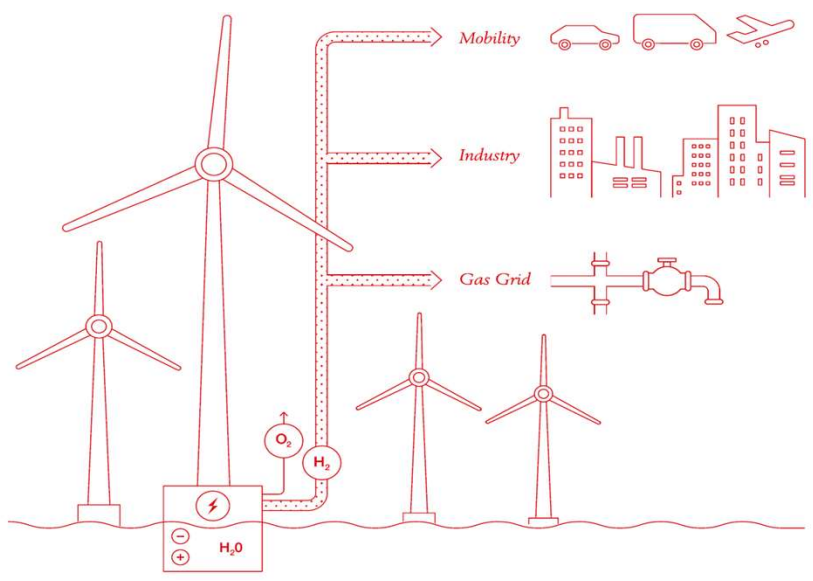


Our goal

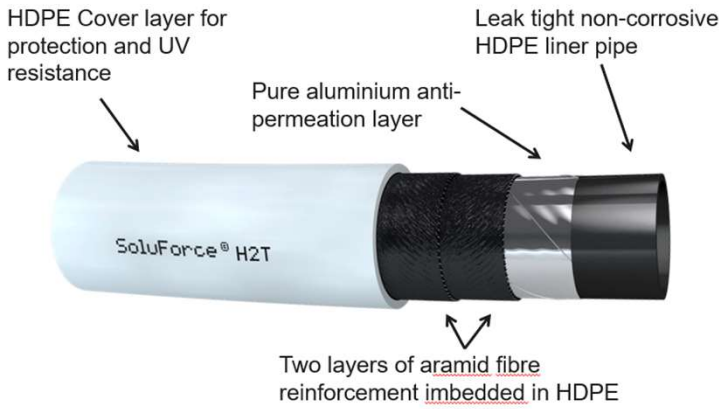
- To help **accelerate** the potential for **regional and local hydrogen distribution and transport networks** in an innovative, cost effective and (relative)low carbon impact manner.
- With our proven state-of-the art technology, and in collaboration with local partners and initiatives.



Hydrogen Valley NL: H2 transport



A certified hydrogen transport system



- Non-metallic fittings
- Completely non-corrosive
- Reliable, proven technology
- Computer controlled installation equipment
- Standard ANSI flange hook-up connections



Covenant certificate
K101779/01

Issued 2019-06-01
Replaces -
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SoluForce®
spoolable reinforced thermoplastic (RTP) industrial piping system for the transport of hydrogen

STATEMENT BY KIWA
With this Covenant certificate, issued in accordance with the Kiwa Regulations for Certification, Kiwa declares that legitimate confidence exists that the products supplied by **Pipelife Nederland B.V.** as specified in this Covenant certificate and marked with the Kiwa®-mark in the manner as indicated in this Covenant certificate may, on delivery, be relied upon to comply with Kiwa Covenant manual K15013 dated April 2018.

Ronald Karel
Kiwa

Publication of this certificate is allowed.
Advice: consult www.kiwa.nl in order to ensure that this certificate is still valid.



Integrity Management: Extremely tough and impact resistant



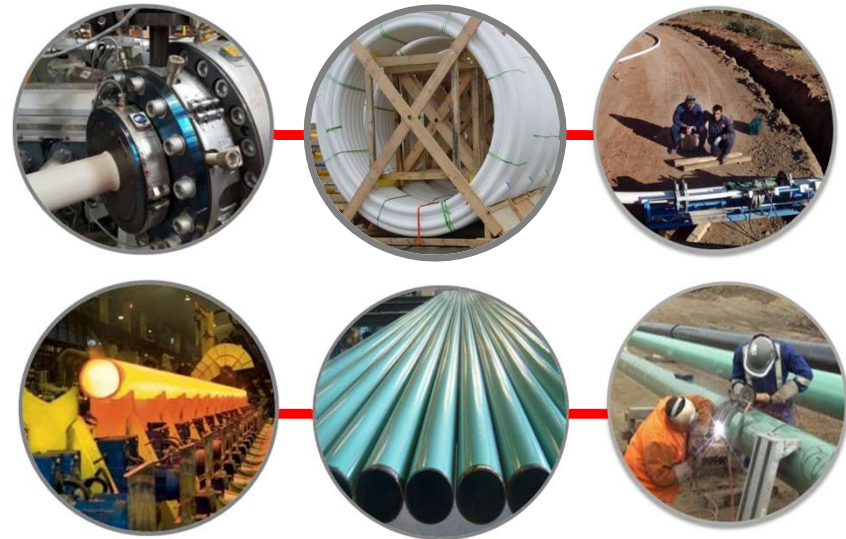
Decarbonizing the supply chain:

Carbon Footprint Break-down

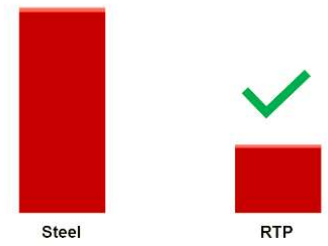
	Steel 6 Inch ASTM A106 Gr B	SoluForce 6 Inch H2T M570
Bill of materials	57,1	18,9
Manufacturing	13,9	2,3
Transport (1000 km)	1,7	0,4
Installation	3,2	1,6
Operation	~	~
End of Life (left behind)	~	~
Total	75,9	23,2

GWP in Ton CO2 eq. per 1000 m pipeline

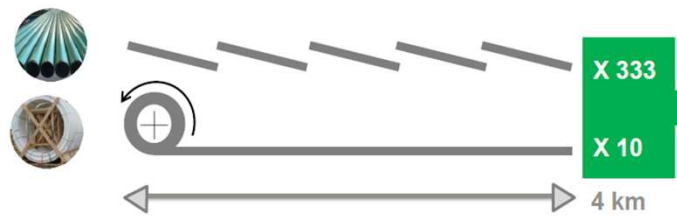
The less materials used in the same function, the more Eco-Economic benefits can be expected in all life-cycle steps



Global Warming Potential (CO2-eq)



Minimizing construction time



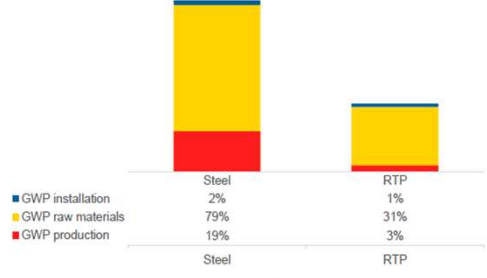
Installation costs
Twaron RTP
~28% compared to steel



- Transport:**
- > Truck trailer
 - > 185 km
 - > Steel: ~100 ton, 333 pieces
 - > RTP: ~20 ton, 10 coils

- Installation:**
- Site preparation
 - Trench opening
 - On-site transport
 - Bending
 - Positioning
 - Welding
 - Re-coating
 - Big Lift
 - Inspection
 - Trench closing
 - Site recovery

Installed Pipeline Carbon Footprint:



Five times less weight, pipe flexibility,
90% less and more simple connections
make RTP installation more comparable
with a cable installation process



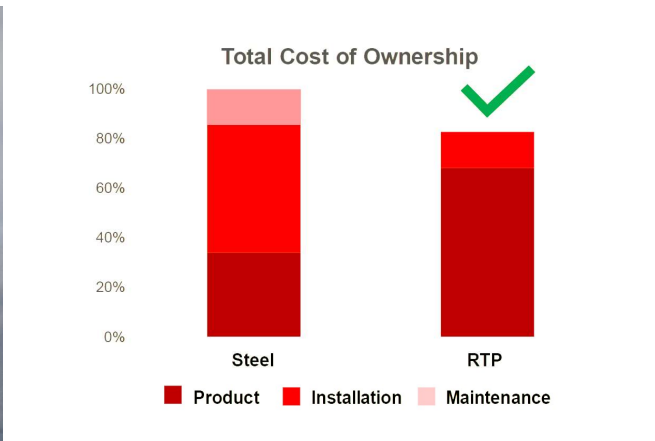
In summary USP's

Product:

- No embrittlement and fully non corrosive
- Flexible and Light
- Up to 4 times! lower CO2 eq. footprint compared to steel pipe production

Usage:

- Re-usable and maintenance-free
- Very easy to transport
- Fast and easy installation
- TCO > 20% lower than steel pipes



Ready & happy to collaborate with Israel!!



Netherlands

I would love to continue
the conversation.

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