

WHR anti-corrosion heat shrink belt for pipeline

Description



Anti-corrosion heat shrinkable wrapping belt is also called anti-corrosion tape, polyolefin heat shrinkable wrapping belt, heat shrink belt, etc. This compound ribbon anti-corrosion material is made by irradiation cross-linked polyethylene sheet material(base material) and special heat melt adhesive.

Compared with common polyethylene, the polyethylene sheet material modified by cross-linked irradiation has high mechanical strength and long service life, corrosion resistance, aging resistance, environment press crack resistance. And the compound heat melt adhesive have strong bonding strength, good sealing and other good performance.

The product structure consist of three layers (also known as 3PE): The inner layer is two-compound no solvent epoxy resin base paint which coat on the steel pipe surface, the middle layer is anti-corrosion heat melt adhesive which have excellent performance, the outer base materials is low density polyethylene modified by irradiation. When using two-layer structure heat shrink belt (known as 2PE), don' t have to use epoxy resin base paint. At few case, use two-layer heat shrink(2PE) belt to coat the steel pipe, sealing heat melt adhesive coat the steel pipe, the outer layer is cross-linked polyethylene. Jacket anti-corrosion consist of foam jacket sleeve (inner layer),heat melt adhesive(middle layer) and base material(out layer).

The product is heat shrinkable wrapping belt designed for buried steel pipeline which works under 80 °C , Wrap the belt around the pipeline, it can be used for mending anticorrosion of large pipeline area damage, mending protection of the through sacrifice, and long time protection protection for different joint anti-corrosion protection.

Product applicaton

- 1, Oil and gas transmission pipeline.
- 2, Water supply and drainage pipeline.
- 3, Mending protection, pipeline elbow, bend pipe, three direct links, insulating flange
- 4, Apply to all kinds of different shape pipe fitting for anti-corrosion and mending.
- 5, Apply to all pipeline for anti-corrosion treatment.



Features & benefits

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Product dimension

- 1, Product size: Apply to all the DN100-DN1000 steel pipe.
- 2, Base material thickness: 1.0~1.2mm, adhesive layer thickness: 0.8~2.0mm
- 3, Product thickness: 2.0~3.0mm, can be adjusted according to customers' request.
- 4, General width: 50mm~300mm, the per roll length 20~30m.

Model/Size	Heat shrink belt width((mm)	Inner Diameter (mm)	length(m)		
			20	25	30
HWR50	50	Under ϕ 114	20	25	30
HWR75	75	Under ϕ 159	20	25	30
HWR100	100	Under ϕ 168	20	25	30
HWR150	150	ϕ 168-219	20	25	30
HWR200	200	ϕ 219-325	20	25	30
HWR250	250	ϕ 325-1016	20	25	30

Thickness range: 1.4-3.0mm, Common thickness: 1.6, 1.8, 2.0, 2.2mm

Specific size can be customized according to customers' request.

Product properties

Test standard	GB/T23257-2009(Buried steel pipe polyethylene anti-corrosion technology standard)						
Test item			Unit	Test result	Technical index	Test method	
Base material							
Tensile strength	Axial direction		MPa	35	≥17	GB/T1040.2-2006	
	Circumference direction		MPa	28.3	≥17		
Elongation at break	Axial direction		%	456	≥400	GB/T1040.2-2006	
	Circumference direction		%	432	≥400		
Vicat softening point			℃	98.6	≥90	GB/T1633-2000	
Brittle temperature			℃	<-65	≥-65	GB5470-1985	
Electrical strength			MV/m	28	≥25	GB/T1408.1-2006	
Volume resistance			Ω.m	2.1×10 ¹⁴	≥1×10 ¹³	GB/T1410-2006	
environment stress cracking resistance (F50, 50℃)			h	>1000	≥1000	GB/T1842-1999	
Resistance to chemical medium corrosion (7d)	10% HC1	Axial direction	Tensile Strength	%	88.4	≥85	GB/T2357-2009
			Elongation at break	%	102	≥85	
		Circumference direction	Tensile Strength	%	95.3	≥85	
			Elongation at break	%	125.6	≥85	
	10% NaOH	Axial direction	Tensile Strength	%	168	≥85	
			Elongation at break	%	96.6	≥85	
		Circumference direction	Tensile Strength	%	112	≥85	
			Elongation at break	%	96.3	≥85	
	10% NaCl	Axial direction	Tensile Strength	%	98.5	≥85	
			Elongation at break	%	89.4	≥85	
		Circumference direction	Tensile Strength	%	123	≥85	
			Elongation at break	%	106.3	≥85	
Heat aging resistance	Axial direction		Tensile Strength	MPa	112	≥14	GB/T1040.2-2006
			Elongation at break	%	96.3	≥300	

(150°C, 168h)	Circumference direction	Tensile Strength	MPa	98.5	≥14	
		Elongation at break	%	89.4	≥300	
Heat melt adhesive						
Peel strength (Cohesive failure)	Epoxy resin primer		N/cm	99.4	≧70	GB/T2792-19
	Polyethylene		N/cm	88.2	≧70	98
Epoxy resin primer						
cathodic disbonding (65°C±3°C, 4h,1.5V)			mm	5	≧10	GB/T23257-2 009D
Shear strength after curing (23°C)			Mpa	12.5	≧5.0	GB7124