CYG Let`s make it safer

Radiation Cross-Linked Polyethylene Heat-Shrinkable Sleeve

The heat shrinkable sleeves, which are developed &manufactured by Chang yuan Group for anti-corrosion of pipeline, they are the composition of radiation cross-linked polyethylene backing and high shearing strength melt adhesive and have the function of Shape Memory. The hot melt adhesive is squeezed into the joint by the shrink power to form a perfect surface. The products are ideal material for corrosion prevention and insulation and they perform well at water-proof, anti chemic corrosion and anti-aging.

Application:

The layer polyethylene(3-PE),two layers polyethylene(2-PE),Three layers polypropylene(3-PP),fusion bonded epoxy (FBE),coal tar enamel(CTE), insulated jacket.

- Joint coating and repairing of service pipe or drainpipe of PE,PP-R and PVC
- Anti corrosion of profiled fittings ,such as elbows, siphons, tees and insulation flanges
- The products made by CYG have passed the tests operated by the Comprehensive Laboratory of Scientific& Chemical Center of PetroChina Pipeline Company and Anti-corrosion and Thermal Insulation Product Quality Supervision Testing Center of China National Petroleum Corporation. All the tests results are satisfied with standard of the Oil& Natural Gas Industry.SY/T0413-2002 and GB/T23257-2009

Type and Symbol of the heat shrinkable sleeve

F R □ □ □ X □-A/B

- A/B: **Thickness of the adhesive(mm)**
- B: **Thickness of the backing (mm)**
- A: **Width of the sleeve(mm)**
- □: **¢ Out dia of the pipeline (mm)**
- X: ~~**Length of the tape(m)**~~
- □: ~~**Structure symbol**~~
  - **P: Denotes closure patch**
  - **K: Denotes reinforced**
  - **S: Denotes tape**
  - **X: Denotes patch**
- □: ~~**Derived symbol**~~
  - **D: Denotes tape**
  - ~~**Heat shrinkable**~~
- R: **Radiation cross-linked**
- F: **P R**

Product performance

Test item	Test Method	Performance
A: Backing		
Tensile strength	GB/T1040/ASTM D638	≥17MPa
Elongation at break(23℃)	GB/T1040/ASTM D638	≥400%
Vi cat softening point	GB/T1633/ASTM D1525	≥90℃
Brittleness temperature	GB/T5470/ASTM D2671C	≤-65℃
Dielectric strength	GB/T1408/ASTM D147	≥25MV/m
Volume resistivity(23℃)	GB/T1410/ASTM D257	≥1x10^{13}Ω.m
Environmental stress crack	GB/T1842	≥1000h
Chemical resistance		
10%HCI(immerge for 7 days)	GB/T1040 /ASTM D638	≥85%
10%NaOH(immerge for 7 days)	GB/T1040 /ASTM D638	≥85%
10%NaCI(immerge for 7 days)	GB/T1040 /ASTM D638	≥85%
Thermal aging(150℃,21D)		
Tensile strength	GB/T1040/ASTM D638	≥14MPa
Elongation at break	GB/T1040/ASTM D638	≥300%
B:Adhesive		
Softening point	GB/T4507/ASTM E28	≥90℃
Lap shear	GB/T7124/ASTM D1002	≥1MPa
Brittleness temperature	ASTM D2671C	-15℃
Peel strength		
Heat-shrinkable sleeve/steel	GB/T2792/ASTM D1000	≥70N/cm
Heat-shrinkable sleeve/primer	GB/T2792/ASTM D1000	≥70N/cm
Heat-shrinkable sleeve/PE layer	GB/T2792/ASTM D1000	≥70N/cm
Non-solvent epoxy primer		
Shear of cured primer	SY/T0041	≥5MPa
Cathodic disbanding(65℃,48h)	SY/T0413 Appendix B	≤10mm

Annotation: Chemical Resistance includes tensile strength and maintenance rate of elongation at break.