Sus Coating Various Test Data

2p Accelerated weathering test
3p Adhesion Test、Coating Strength Test
4p Neutral Salt Water Spray Test

～ Special Technology That Prevents Deterioration ～

Sus-Coating

Extended service life for water storage tanks

Primerless direct application

Protected with stainless steel (SUS316L)

Physical Properties & Specifications

Product PS500

Trademark No. 6687088

Patent No. 4796326

Specifications

- Polyolefin resin coating
- Stainless steel pigment (SUS316L)

Effects

- Direct application possible on PP, PE, FRP, PVC, etc.
- Upon application, stainless steel pigments overlap in a scale-like pattern, blocking light, air, and moisture
- Total light transmittance 0% (JIS K7105)

Test Items		
Base Color		Silver Gray
Viscosity (CPS/25°C)		420
Specific Gravity		1.22
Particle Size (Single Coating Layer)		30μm or less
Non-Volatile Content (150° C x 30 min)		53%
Drying Time	Touch Dry	5-10 min
	Semi-Cured	1 hour
	Fully Cured	24 hours
Pencil Hardness		2H
Crosshatch Adhesion Test (1mm,100/100)		Pass
Impact Test: DuPont Method 500g x 50cm		No cracking or peeling in coating layer
Flex Test: 2mm Φ x 90°		No cracking or peeling in coating layer
Heat/Cold Resistance (100° C ⇔ -40° C / 100 cycles)		No cracking or peeling in coating layer
Water resistance (2,000 hours)		No abnormalities such as cracking, peeling, or rust formation on coating layer
Accelerated weathering test (AIS Super UV Tester equivalent to 15 years outdoor exposure)		No abnormalities such as cracking, peeling, or rust formation on coating layer
Salt spray test: Sodium chloride solution 5wt% (35° C ± 2° C), 1,000 hours		No abnormalities such as cracking, peeling, or rust formation on coating layer

Test solution	Coating on FRP, PP, PE
Hydrochloric acid 36wt%	Good
Nitric acid 67.5wt%	Good
Sodium hydroxide 40wt%	Good
Ammonia water 28wt%	Good
Anionic surfactant 3wt%	Good
Strong alkali	Good
Weak alkali	Good
Alcohol	Good
Xylene	Swelling/peeling
Ketone	Swelling/peeling
Ester	Swelling/peeling
Ether	Swelling/peeling
Aromatic hydrocarbons	Good
Aliphatic hydrocarbons	Good
Mineral oil	Good
Salt water	Good
Chlorine	Good
Fluorine	Good
Carbon Dioxide	Good
Hydrogen Sulfide	Good
Nitric Acid Gas	Good
Sulfurous Acid Gas	Good

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Accelerated weathering test

【 Central Nippon Expressway Company Limited Test Results 】

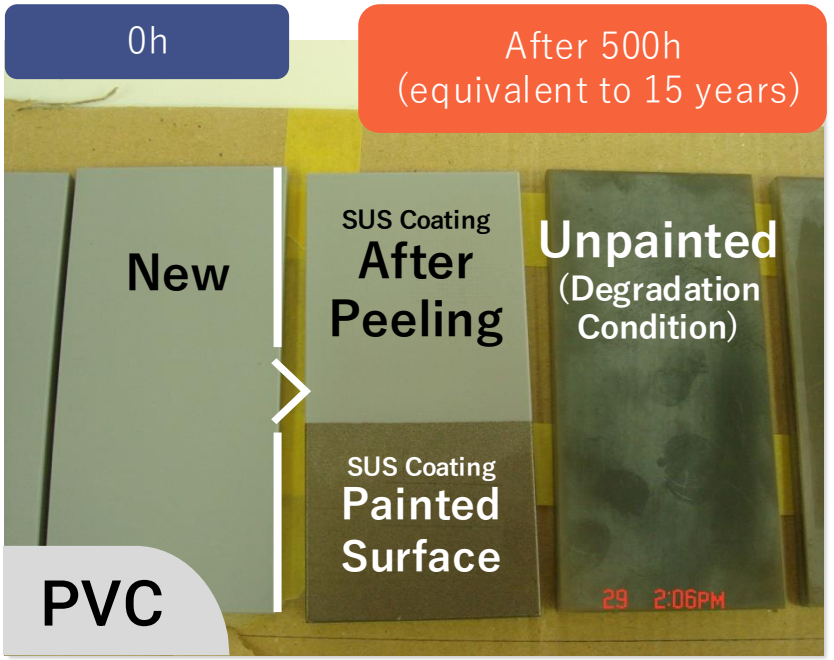
Test Equipment	iSuper UV Tester (Iwasaki Electric Co., Ltd.)
Test Duration	500 hours
Process	Irradiation 6H → Condensation 2H, repeated

Equivalent Outdoor Exposure

Equivalent to 15 Years

Substrate Observation

Glass Fiber Exposed



Chalking

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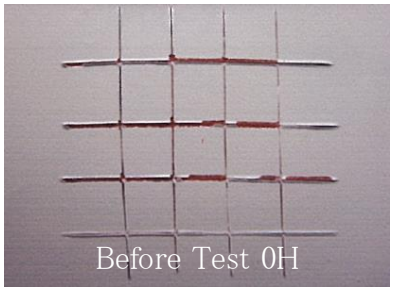
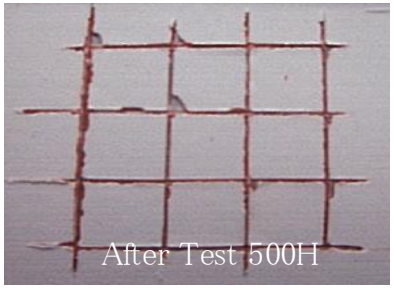
※Photo of a PVC test specimen.

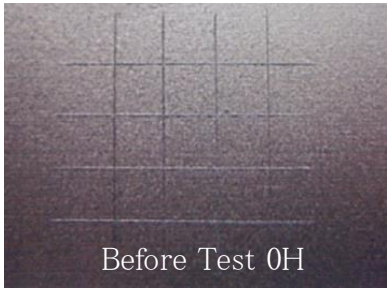
Adhesion Test

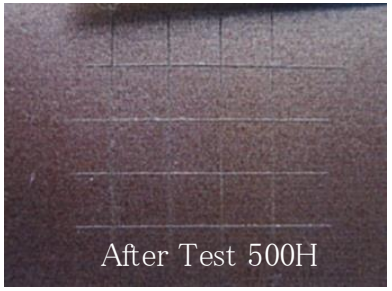
Fluoropolymer Coating





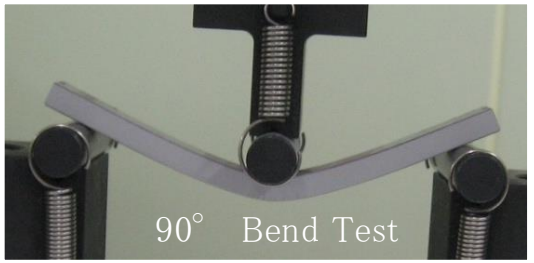
SUS Coating





⇒Fluoropolymer coating showed primer exposure and coating delamination
⇒SUS Coating remained unchanged because of adhesion to substrate

Coating Strength Test



Fluoropolymer Coating

SUS Coating

⇒Fluororesin Coating showed surface cracking when substrate failed
⇒SUS Coating showed no surface change even when substrate failed

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Neutral Salt Water Spray Test

【East Japan Railway Company Test Results】

JR East Japan Elevated Bridge Seismic Steel Heavy Corrosion Protection

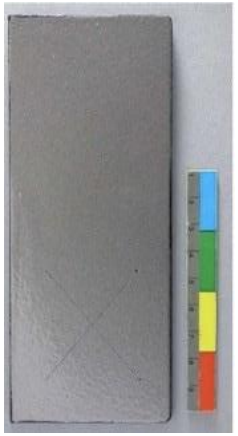
1440 hours
Equivalent to 15 years of seawater immersion

Test Specimen Visual Inspection Results

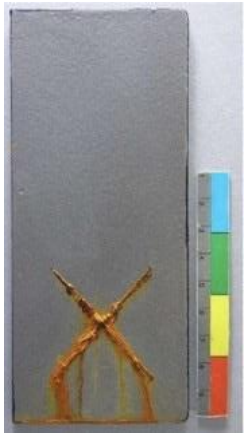
No.	Coating System	Rust seepage from cut section	Blistering at cut section	Rust formation at edge	Blistering at edge	Rust formation on general area	Blistering on General Areas
I	BMU-2-7	×	△	×	×	○	△
II	T-7	×	×	○	×	○	○
III	Current Standard	△	△	○	△	○	△
IV	Ultra Patch	△	○	×	×	○	○
V	Titanium Foil Sheet	△	○	△	×	○	○
VI	Reference	×	△	×	△	○	△
VII	SUS Coating (PS500)	△	○	○	○	○	○

○：Good △Some deformation (Slightly poor condition) ×：Significant deformation (Poor condition)

Discussion: Some rust visible on edges where coating thickness is thin, but no issue


Initial


500 hours


1000 hours


1440 hours

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