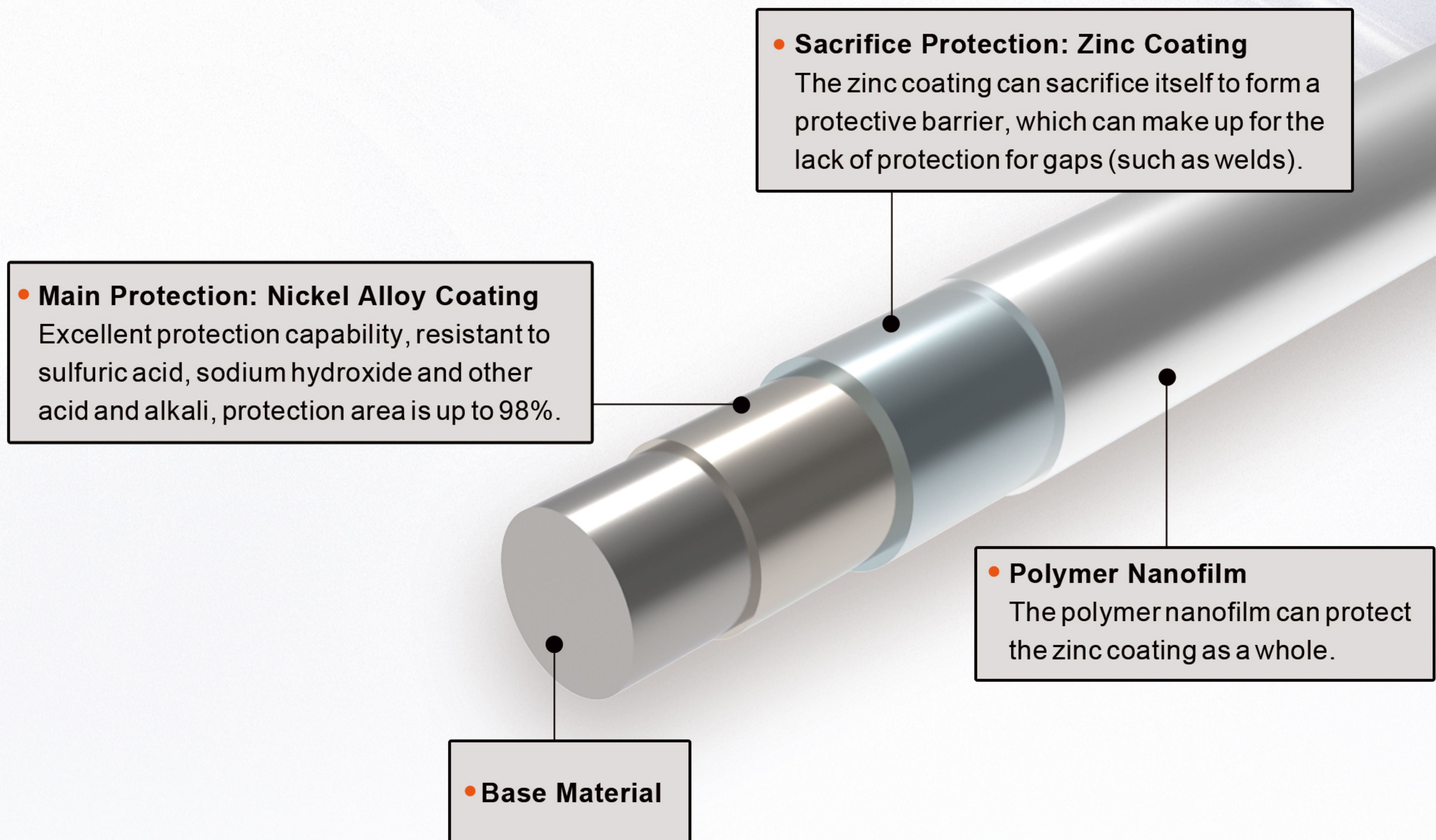


Zinc-nickel Plated Cable Tray



Industrial Applications

Offers corrosion resistance that exceeds standard hot-dip galvanizing, making it adaptable to various environmental conditions.



Enhances reliability by reducing the risk of equipment failure and downtime.

Advantages of Zinc-Nickel Plated Cable Trays

1 Superior Corrosion Resistance

Salt spray test result			
Electrogalvanizing ≥96 hours	Hot-Dip Galvanizing ≥720 hours	Powder Coating ≥480 hours	Zinc-Nickel Coating ≥720 hours

检测报告

编号 : NBIN2112014901SC_CN

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测试项目: 中性盐雾(NSS)试验

样品描述: 金属件

测试方法: GB/T 10125-2012

测试条件:

沉降盐液浓度: (50±5)g/L NaCl

试验箱温度: (35±2)℃

盐雾沉降率: (1.5±0.5)mL/(80cm²·h)

沉降盐液 pH 值 (25±2)℃: 6.5~7.2

暴露时间: 1000 小时

Surface Treatment Challenges

Electrogalvanizing: limited corrosion resistance due to thin zinc layer and uneven coating distribution on complex shapes.

Hot-Dip Galvanizing: uneven zinc deposits creates blotchy appearance and sharp spikes that can injure installation personnel and damage cables, may also distort thin or flexible materials.

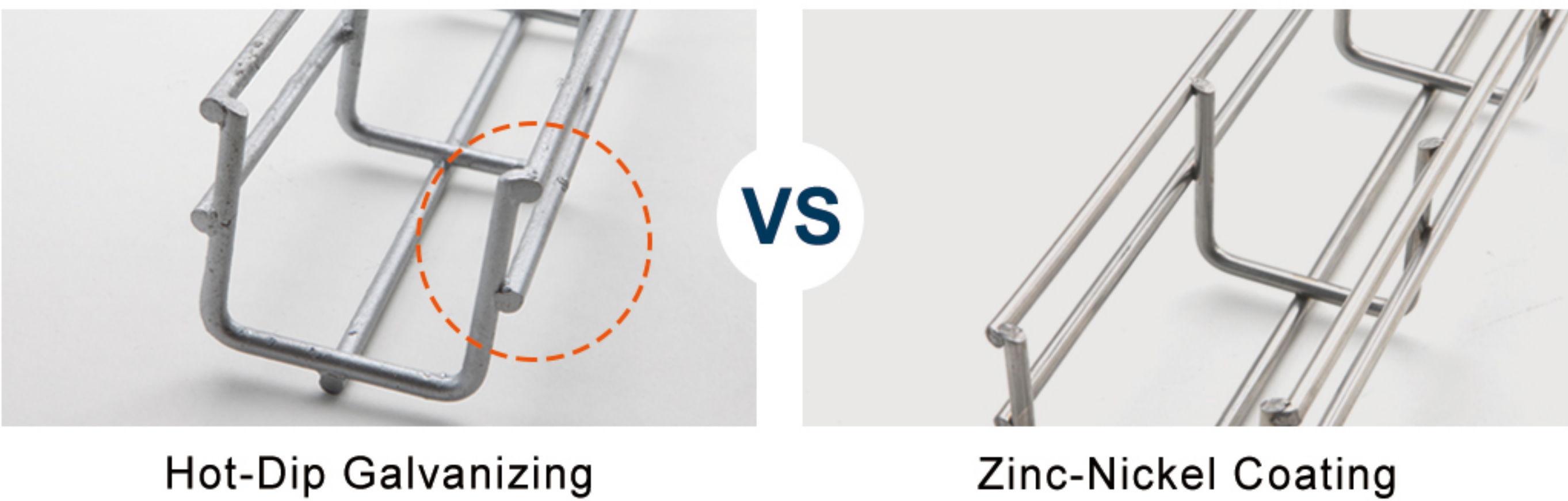
Powder Coating: easily damaged surface with limited corrosion resistance.

2 Pronounced Hardness Level

The coating hardness of zinc-nickel plating is three or four times harder than hot dip galvanizing.

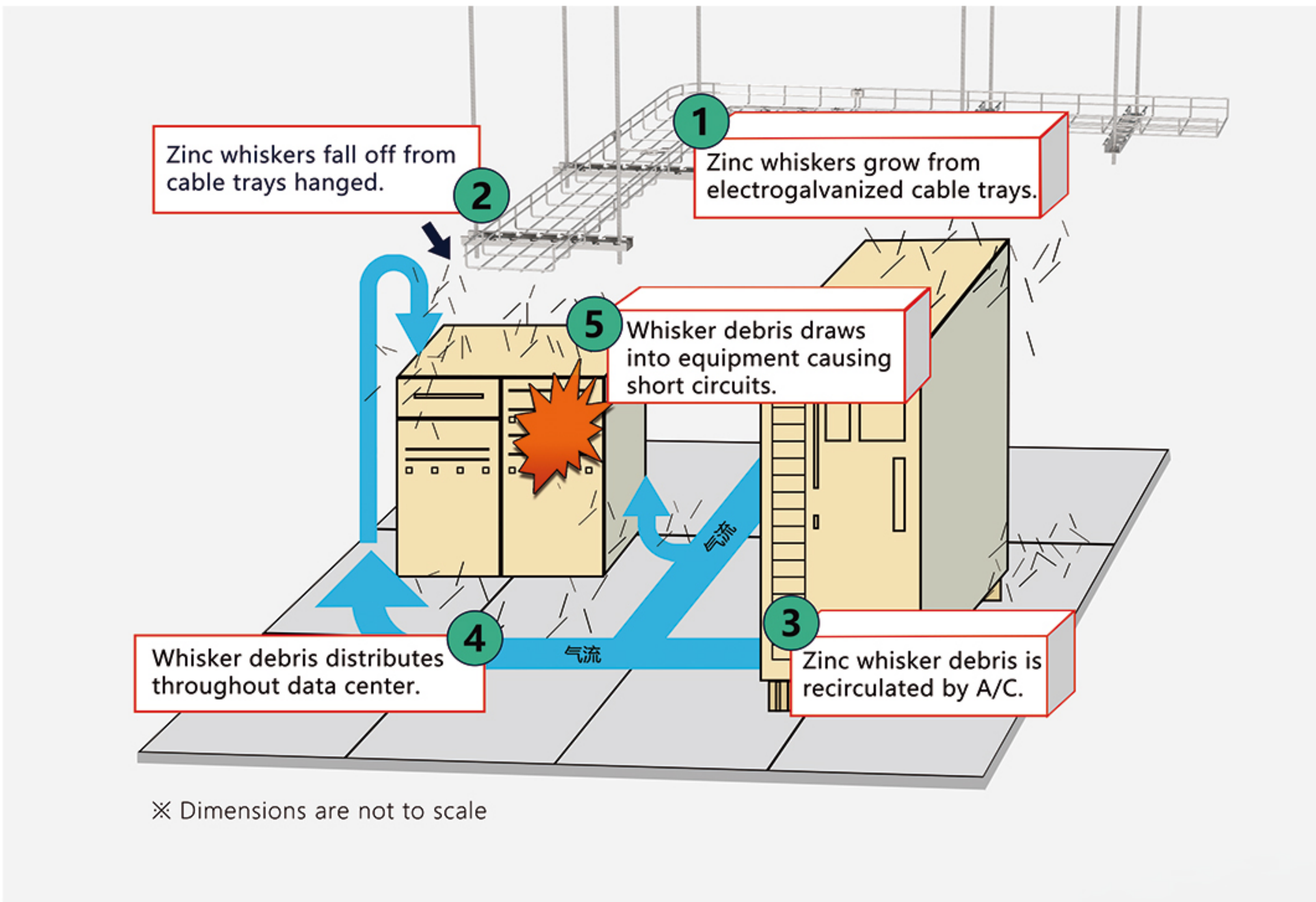
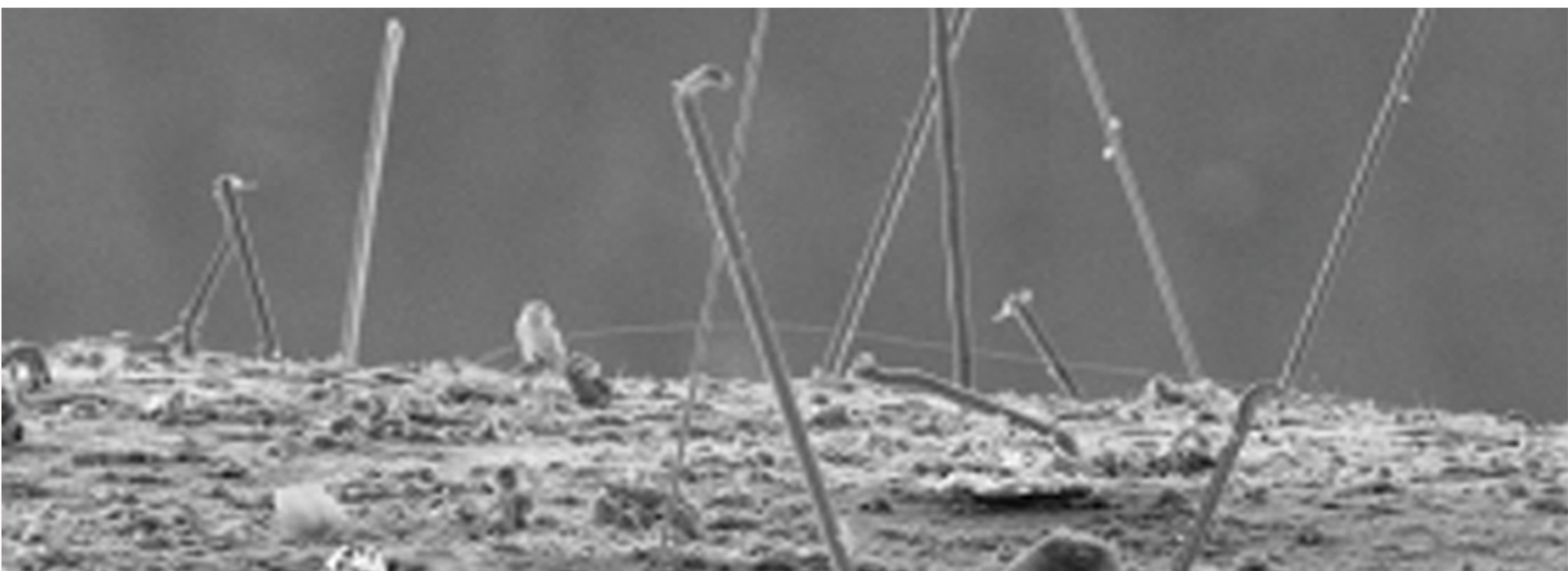
Vickers Hardness (HV)	Electrogalvanizing	Powder Coating	Hot-Dip Galvanizing	Zinc-Nickel Coating
	80~100	40~60	110~170	480~500

3 Sleek and Polished



4 Reduces Zinc Whisker Risk by over 90%

Zinc-Nickel plated cable trays with polymer outer coating effectively prevents zinc whisker growth, reducing the risk of electrical shorts and equipment failure by over 90%, enhancing device reliability.



What Are Zinc Whiskers?

Zinc whiskers are crystalline filaments caused by molecular stress that appear over time on steel surfaces electroplated with zinc.
Length: up to 10mm, typically ~1mm.
Thickness: from 0.006 to >10 μm, typically ~1 μm.

Why Are Zinc Whiskers in Data Centers Dangerous?

Conductivity and Short Circuits: Zinc whiskers' conductivity can lead to device short circuits by bridging electronic components.
Long-term Equipment Damage: Without detection and remediation, zinc whiskers can lead to more severe equipment damage, data corruption, and operational disruptions over time.