

PARKERIZING GROUP

THAI TECHNICAL CENTER MODERN LABORATORY



Key features ;

- Surface morphology
- Qualitative analysis($_{5}B-_{92}U$)
- Line analysis
- Mapping analysis

Scanning Electron Microscopy and Energy Dispersive Spectrometry (SEM/EDS)

◆ SEM is normally used to observe sample surface and microstructure at magnifications from 8X to 300,000X.

◆ EDS is combined with SEM instrument to analyze small area of sample ($_{5}B-_{92}U$)

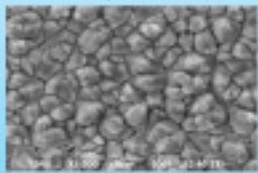


Fig.1 SEM image of Zinc phosphate on SPCC

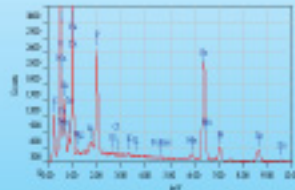


Fig.2 EDS analysis peak of Zinc phosphate on SPCC



Key features ;

- Qualitative analysis ($_{4}Be-_{92}U$)
- Quantitative analysis
- Line analysis
- Mapping analysis

Electron Probe Micro Analyzers (EPMA)

◆ EPMA is an electron beam micro analysis technique that can be used to analyze small area (1-100 μ m) of sample.

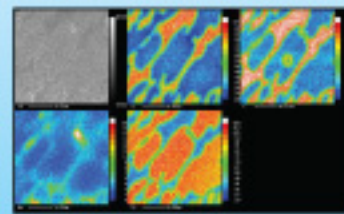


Fig.3 Mapping images of cast iron

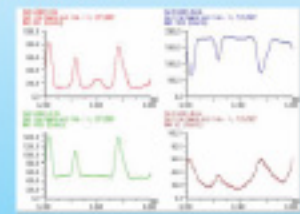


Fig.4 Line profile of cast iron



Key features ;

- Qualitative analysis ($_{3}Li-_{92}U$)
- Chemical state analysis
- Depth profile analysis

X-ray Photoelectron Spectroscopy (XPS)

◆ XPS is a surface chemical analysis technique that can be used to analyze the surface chemical of material within approximately 1-10 nm from top surface.

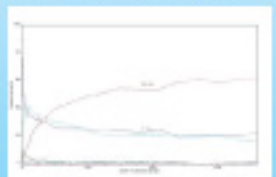


Fig.5 Depth profile on Al

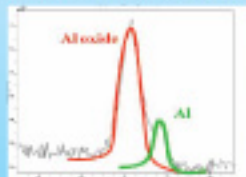


Fig.6 Chemical state on Al



Key features ;

- Salt spray test
- Dry test
- Wet test (Humidity test)
- Dipping test
- Low temperature test(-20°C)

Combined Cyclic Corrosion Test (CCT)

◆ CCT is testing instrument that designed to evaluate corrosion resistance or paint performance by simulate the effects of various environmental conditions.



Fig.7 CCT samples



Key features ;

- Qualitative analysis
- Quantitative analysis

Inductively Coupled Plasma Spectroscopy (ICP-OES)

◆ ICP-OES is an inorganic chemical analysis technique that can be used to analyze inorganic element in solution.

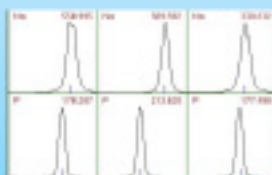


Fig.8 ICP profile



Key features ;

- Qualitative analysis
- Quantitative analysis
- Functional group analysis

Fourier Transform Infrared Spectroscopy (FTIR)

◆ FTIR is an organic chemical analysis technique that can be used to analyze chemical bond (Functional group) of sample such as polymers, textiles, oils, paper, etc.

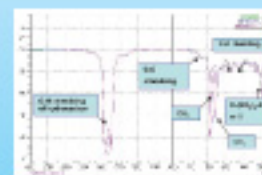


Fig.9 FTIR pattern

“WE ARE PROUD TO SUPPORT OUR CUSTOMERS”



NIHON PARKERIZING CO.,LTD.
THAI PARKERIZING CO.,LTD.