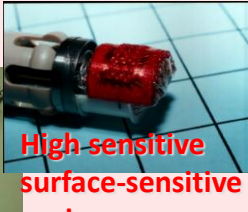


Evaluation & Life Prolongation of Artifacts and Human beings

EMAT/EC dual Probe



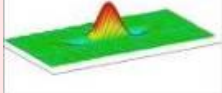
High sensitive surface-sensitive probe



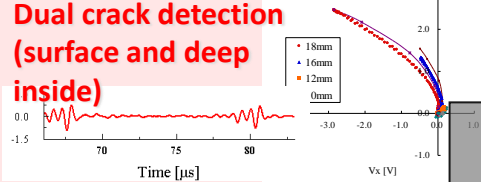
Crack reconstruction



NDE of cast iron (hardness measurements)



Dual crack detection (surface and deep inside)

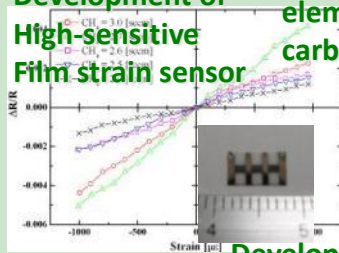


Inspection

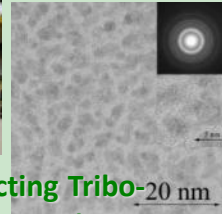
PVD-CVD Hybrid deposition



Development of High sensitive Film strain sensor



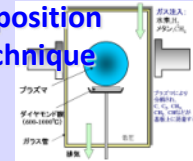
Conducting Tribo-20 nm elements utilizing carbon-nanocomposites



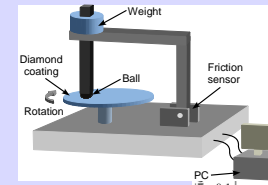
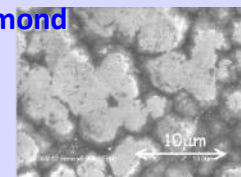
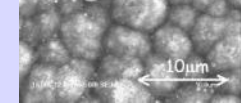
Development of highly adhesive coatings



Diamond deposition Technique

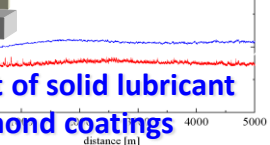


Partly-polished diamond coating



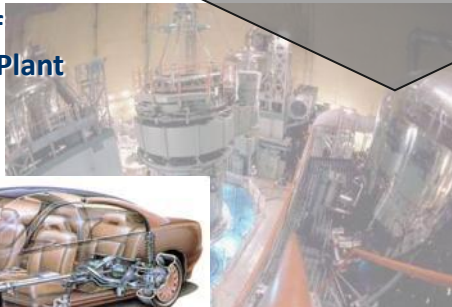
UCVD diamond polished on TiC Substrate (Ra=0.25µm) 01, SUS440C (r=1.5mm) ad: 1N, Contact Pressure: 14Mpa red: 0.20 m/s, Sampling rate: 1.0 Hz etc. 15-25deg. C 311 1440C

Development of solid lubricant utilizing diamond coatings

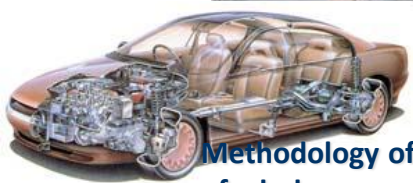


Life Prolongation

Maintenance of Nuclear Power Plant



Methodology of the inspection of whole car components by NDT



Advanced Systems Evaluation Laboratory, IFS, Tohoku Univ.

Biocompatible coating technology for artificial joint



Sensor & monitoring from inside body



Dust-free novel solid lubricant



Carbon-based solid lubricants for space