

## 2015 IERE – CRIEPI Tokyo Workshop

### “Advanced Electric Power Management

### - Thermal Power Generation against Huge Impact by Renewable Energy Penetration -” Life evaluation technology for fossil power plant

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#### Abstract

Considering the economic operation of the unit, the Condition Based Maintenance (CBM) is an inevitable trend of development. At present, In order to achieve the state maintenance of the unit, especially for the key components of the unit, such as turbine rotor, cylinder, generator rotor, boiler, steam water separator, high temperature headers, steam pipe, high temperature superheater and reheater tube etc, life evaluation technology is the key point.

Most components of thermal power units were in high temperature and under high pressure status, the service condition is harsh. As the time running, components may occur creep damage, fatigue damage, oxidation, high temperature corrosion etc, the failure mode and its status for each components should be assessed.

The poster provides state assessment method both for a component of for a system, life evaluation methods for critical component which used in Chinese fossil power plant has been introduced. Also some special NDT Tech for boiler tube inner oxide thickness, stacking, Hydrogen damage which used in china has been showed in this poster.