

The faults in Thermoelectric Power Station and the Role of Non Destructive Tests in the diagnosing processing

ABSTRACT

Prassianakis K.I.¹, Papadopoulos Myron², Giorziatos Nicola³

¹*Professor, NTUA*

²*ElectMech.eng.P.P.C*

³*Naval eng.P.P.C*

Generally, the preventive/prognostic maintenance of Thermoelectric Power Stations through Non Destructive Tests (N.D.T.) has been demostreted a very strong tool for the Turbomachine and Electromachines Technology.

The preventive, prognostic & intervening maintenance improves also the reliability, the safe functionality, the efficiency and the economy of conventional and nuclear Thermoelectric power stations.

The present work refers on two great categories of Faults of Power Stations:

- (a) Faults/Damages from Corrosion and Erosion
- (b) Faults/Damages from Fractiomechanical Fracture, specially in the below ELECTROMECHANICAL SYSTEMS:
 - (1) In Streamtubing of Boilers
 - (2) In Blades of Turbomachines
 - (3) In Shafts of Electromachines and Turbomachines

We will also analyse the above faults microphenomena via the relatives micro-mechanisms.