



Gas Turbine Combustion Tuning Technology Development in TPC

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Abstract

Lower pollution emissions in connection with high efficiency in combined cycle units and small staff required made gas turbine application technology attractive compared to the traditional coal based power generation. Taiwan Power Company's natural gas-fired combined cycle units could account for 36.3% of system capacity in 2012, and power plants include of Tungshiao #6, Sinta #5, South #4, and Datan #6.

Taiwan Power Company (TPC) is currently developing combustion stability tuning technologies to keeping existed gas turbine's availability for the power sector. This can minimize unplanned outages and maximize power generation availability.

Taiwan Power Research Institute (TPRI) of TPC is responsible for the development of GT performance diagnostics and combustion stability tuning technology to support power sector and its subsidiary combined cycle power plants. To achieve this mission, TPRI focus mainly on OEM tuning technology learning and developing it to fit our existed combustion turbines. Our GT diagnostics strategy targets to provide early detection and root cause analysis of abnormal operating conditions of power plant equipments to help improve plant availability and operations.

This presentation includes an introduction of the current gas turbine combustion tuning technology development and several cases in TPC.