

46ESS-03: Intake Systems and Inlet Filtration for Industrial Gas Turbines

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Intake systems of Industrial gas turbines have been well known will give impact on the overall gas turbine performance. The intake systems appeared in many various configurations. Within the intake system different inlet filtration techniques can be adopted. Design option of Intake systems and inlet filtration equipment will be primarily affected by the environment condition on where the gas turbine installed. Apart from filtering the process air, the intake can be adopted as a cooler to increase system performance. For example, by using evaporative cooling technique, it will reduce air inlet temperature and therefore will decrease compressor power requirement. This paper will review on various types of intake system and inlet filtration of Industrial gas turbines. Secondly, increase and effect on the performance by inlet treatment will be discussed. Lastly, the change on the overall performance of an industrial gas turbine due to inadequate intake system design will also be evaluated.