

Proceedings of the 2nd Annual World Conference
of the Society for Industrial And Systems Engineering
Las Vegas, NV, USA
November 5-7, 2013

Predictive Maintenance of HVAC Systems

R Ahluwalia and N Lenkala

West Virginia University
Morgantown, WV, USA

Corresponding author's Email: rashpal.ahluwalia@mail.wvu.edu

Abstract: Heating, Ventilation and Air Conditioning (HVAC) systems are most essential for smooth operation of any enterprise. HVAC system failure can cause significant financial loss and/or collateral damage. In order to avoid catastrophic failures and to maintain appropriate environment for equipment and personnel, a predictive maintenance strategy is required. Such strategy can also reduce overall cost of maintenance and extend infrastructure life. This paper presents an approach to predictive maintenance of a HVAC system. It includes continuous data collection, database development, system components identification, fault tree construction, risk assessment, and predictive maintenance plan development.

Keywords: Predictive Maintenance, HVAC, Fault Trees, Database