Sundar Chellamani, J Dev Drugs 2014, 3:3
http://dx.doi.org/10.4172/2329-6631.S1.005

OMICS Group Conferences
Accelerating Scientific Discovery

3rd International Summit on
GMP, GCP & Quality Control
September 25-26, 2014 Valencia Convention Centre, Spain

Sundar Chellamani

SysComm Project Management Limited, Ireland

Lowering facility operational cost by energy efficient HVAC system operation

HVAC systems are integral component in a health care industry with respect to clean room functionality and operations. HVAC systems energy usage may amount to more than 60% of overall plant energy usage. The HVAC system in a health care facility is operated highly inefficiently primarily owing to over design and over specification driven by facility validation and perceived regulatory compliance. Hence, the majority of the facilities worldwide operate at higher air change rates, higher clean room classifications, higher pressure difference between rooms, too much fresh air on the AHU, tighter tolerance to temperature and humidity and higher unidirectional velocity. The basis of validation is normally based clean room parameters specified by the designer when operational data of heat gains, particle loads, operational parameters etc. are not available. Once the facility is validated and operational, many facility do not optimize the clean room operational parameters based on available data from operating the clean rooms over a period of time. Hence, the HVAC systems are operated at higher operational costs with no added quality value to the facility. Hence, by proper design optimisation of key clean room operating parameters from operational records and by using techniques such as Quality Risk Assessment for the given process, the HVAC systems can be validated based on the product / process requirements. This can bring in considerable cost saving in HVAC operations which can in turn considerably reduce the operational cost of the facility.

Biography

Sundar Chellamani has completed Bachelor of Mechanical Engineering and Masters in Thermal Engineering from Bharadidasan University, India. He is the Technical Director of 'SysComm Project Management Limited', a cGMP and C&Q consultancy company based out in Ireland. Sundar is a highly capable Technical Engineer and Project Manager with hands-on experience for more than 26 years' practical experience out of which more than 14 years as a Process Mechanical Engineer primarily serving various roles in the field of C&Q with major 'Biotech/ Pharma/Medical devices' companies. He has presented technical papers in ISPE international conferences held in China and India. He has worked in India, Singapore, Ireland and China. He is also a Class II Certified Steam Engineer, accredited by the Ministry of Manpower, Singapore.

sundar.chellamani@syscomm.ie