

Discussion on the Design Requirements of Biotechnological Vaccine
Manufacturing Space

蕭炎泉, 宋煦仁, 蔣志偉, 林海明

Construction Management

Architecture

ycshiau@chu.edu.tw

Abstract

The research and development of vaccines is an important element of the biotechnology industry. The vaccine industry is a high investment, high risk and high return biotechnology industry. The manufacturing of vaccine products demands stringent quality requirements for the manufacturing environment, and all spaces are sterile clean rooms. This study will be concerned with the requirements of designing biological product pilot manufacturing and vaccine production spaces, including design principles for spatial design, compartment, HVAC, utility system planning, electrical alarm and monitoring, drainage and disinfecting and autoclaving system design. This study hopes to act as a guide for biological product industries to improve upon the current lack of information on vaccine manufacturing space planning and design, to meet the special requirements for biological safety levels, and to increase the safety of operating personnel and product, as well as increase the manufacturing capacity of vaccine research and development through improvement of hardware facilities.

Keyword : Vaccine Factory, Manufacturing Space, Sterile Clean Room