

SYLLABUS :-

Physical properties of food materials and energy balance calculations for preliminary estimation of plant capacity and equipment sizes. Preparation of flow sheets for material movement and utility consumption in food plant. Materials of construction : welding and machining of stainless steel. Design of storage vessels for liquid food and grains. Pressure vessels design and design of vessel for drum drying. Performance characteristics and selection of fans, blowers, ejector compressors and vacuum pumps. Design of fluid conveyance system; pipe, sanitary pipe fitting and valves. Performance characteristics and selection of centrifugal and positive displacement sanitary pumps. Design of CIP system. Design of heat exchange equipment-plate, scraped surface and extended surface for heating and cooling of gas and liquid. Design of evaporator calandria, vapour separator and condenser, Design considerations for location of food plant. Equipment layout and ventilation in food process plants.