

AMLT26 PLANT LAYOUT AND PROJECT FORMULATION OF TANNERY

1. Introduction To Plant Layout; Scope and Importance; Factors affecting Plant Layout; Approach to Designing, Organization for layout;
2. Data Acquisition and Analysis for basic layout; Planning for Layout, Developing and Installation of the Layout, Case Studies of plant layout.
3. Terms of reference, background of the project, background of the organization and status now and foreseen, location and suitability- capacity and target decision, building and shed etc., study of water, electricity, storage facilities and other environmental conditions,
4. Study of pollution control systems, study of availability of raw materials and proposed arrangement, determination of product mix,
5. Analytical study of raw material/ chemical/ product mix/ capacity, study of technical capabilities and input, types of machines required- both indigenous and imported,
6. Analysis of quality of machines making end products and keeping provision for flexibility, study of established machine manufacturer, appropriate charges of various operations per piece and output,
7. Study of organisational structure and manpower, marketing and market survey, total capital requirement, means of financing, cost estimation of buildings, scheme wise estimate of building, manpower requirement, wages calculation (direct wages),
8. Management/staff requirement (including fringe benefits), indirect salary and wages, calculation of total estimated overheads, estimation of Breakeven points,
9. Assumption of projected profitability, list of plant and equipment and prices thereof, energy requirements and capacity of plant & equipment, boilers, estimated electrical installation,
10. Statement of projected profitability, details of taxation, projected cash flow statement, details of depreciation (preparation of cost of running individual machines),
11. Set up of industrial characteristics: production parameters, structural parameters,
12. Key Co-efficient: Productivity/man, yield in terms of flow space, yield per hide, power factor, consumption of chemicals, consumption of fuel, consumption of electricity,
13. Unit consumption of chemicals, hides/skins per worker, output per worker in terms of weight, availability of electricity from plant generators, water consumption,
14. Water consumption per kg. Of input, transformation, weight of individual machines, output of machines, boiler output in respect to hides/ kg.,
15. Relationship to flow space to heating area of boilers, output in terms of flow space, relationship of flow space to horsepower,
16. Processing capacity of the horsepower installation, output of the compressors,
17. Relationship of water consumption to flow space, relationship of drum capacity to flow space.

Reference Books:

1. Leather Processing & Tanning Technology Handbook- NIIR Board of Consultants & Engineers