

Design and Construction of a Stream Power Station

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Abstract: *The establishment of a steam power station follows a logical sequence of events, starting with the initial decision to construct such a plant. This decision is not always obvious, and can be made only after a study of the load requirements and the alternative means available for generating electricity. Depending on the capacity of the plant required the choice of generating plant will lie between Diesel engines, steam turbines or gas turbines. There are other alternative means, such as free-piston gas generators working in conjunction with gas turbine or nuclear plants, but the former type of plant is still in the development stages and, outside the United Kingdom, nuclear power stations are being installed only by well-developed networks on a semi-experimental basis. The final attainment of the power station generating electricity requires four (4) processes. These are: 1) A general survey of the network development to establish the required increase in plant capacity and determine the type of prime mover to be installed; 2) An economic survey to determine the scope of the new station, the rating of the machines and (in the case of a steam station) the steam conditions to be adopted; 3) The physical design of the power station; and 4) The administration of the work, i.e. arranging finance, conclusion of contracts and supervision of construction.*

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