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Product Name :
Power Transmission And Distribution

Product Code :
LBNY-0005-1590003



Description :

The major advantage of AC three-phase over DC power systems is that the electrical power is generated economically in large power stations relatively far from the end users, transported at high voltage over long distances with very little power loss and finally made available to the consumers providing them with two different levels of voltage depending on the application needs. Today, the public electric power is supplied almost exclusively using three-phase systems with frequency of 50 or 60 Hz, depending on the country.

Technical Specification :

The major components of electric power transmission and distribution systems are:

Transmission lines: overhead power lines are mainly used to transmit electrical energy from the power stations to the consumers. However, in densely populated areas the power can only be supplied via cables.

Transformers: step up transformers increase the generated voltage to values suitable for high voltage transmission systems, isolation transformers are used to exchange power between networks, and step down transformers decrease the voltages to medium voltage level and further down to low voltage to be distributed to the consumer.

Busbars, disconnectors and power circuit breakers: they are the main components found in a switching station used for power distribution.

Various voltage levels are used for transmitting power; the levels are determined by the amount of power and the distance; the higher the transmission voltages, the lower the currents as well as the transmission losses. However, it must also be considered that network investment costs increase with the voltage.



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