

132 KV/ 33 KV Substation

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Abstract: *This Paper presents designing of 132/11 kV substation. For healthy operation of the system, the system should be balanced. The single line diagram is used for the substation to understand its electrical system. The electrical equipment are represented by the symbols in a one-line diagram. The single line diagram is required so that we can understand the electrical system of the substation. The designing of single line diagram is necessary as it displays the right power distribution route from entering power source to each downstream load including the rating of each electrical apparatus. The single line diagram is a diagram in which the single line represents the three-phase power system. For maintaining and controlling, the power supply Substation apparatus are required. Reliability of the system is also dependent on Substation equipment sizing. By calculating the equipment sizing, we are able to find the rating of the equipment used in the substation. By doing equipment sizing the reliability of the system also, increases. The sizing of equipment is done so that the rating of equipment used in the substation can be selected. For different rating like 132kv, 11kv, The sizing of equipment like Lightning arrester, Wave trap, CVT, Current transformer, Isolator, Circuit breaker, Transformer etc. have been calculated.*

Keywords: Single Line Diagram, Lightning arrester, Wave trap, CVT, Current transformer, Isolator, Circuit breaker, Transformer

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