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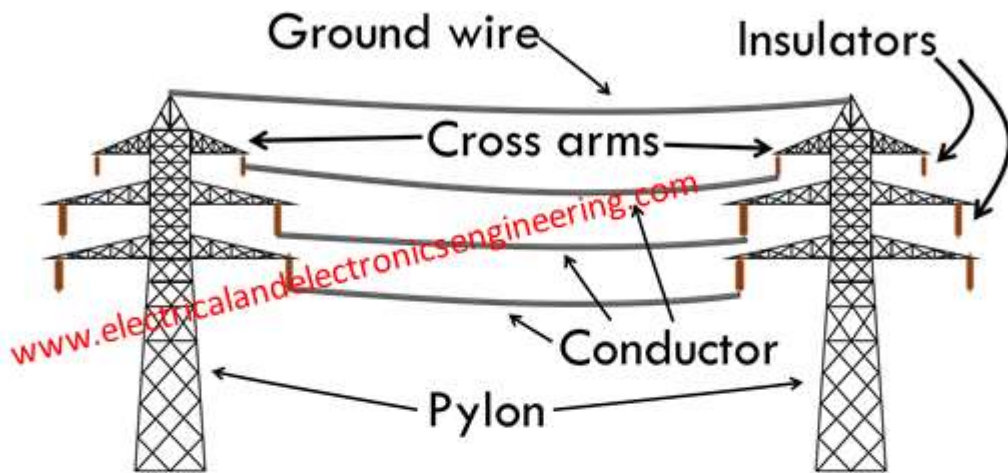
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# **Components of Transmission Lines**

## Transmission Line Components



1. Pylon (Pole)
2. Conductors
3. Cross arms
4. Insulators
5. Ground wire
6. Spacers
7. Dampers
8. Voltage plates
9. Danger plates
10. Anti-climbing wires
11. Lighting arresters
12. Guy wire
13. Fuses
14. Transformers



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## Pylon

The pylon or pole is the main structure which carries the transmission line conductors. Figure below displays a high voltage pylon which contains three phase double circuits

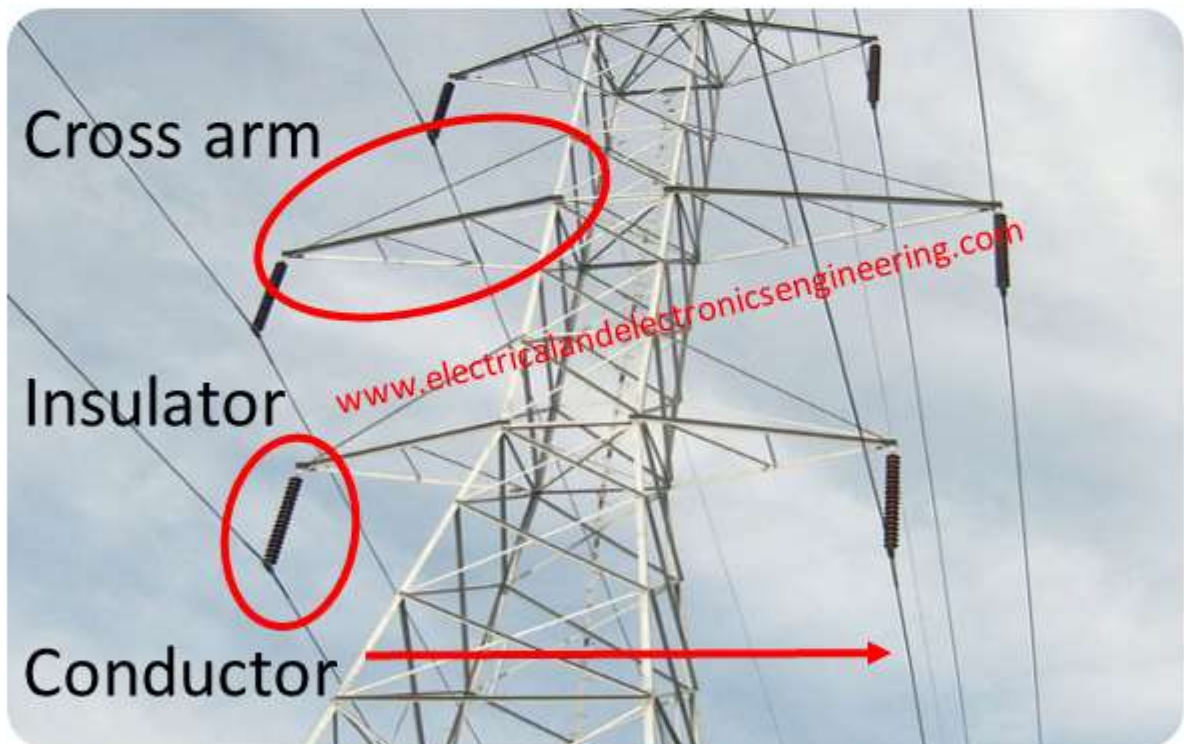


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# Conductors, Insulators and Cross arms

A cross arm is a part of pylon which extends in length and carries the conductors. Conductors are not directly connected to cross arms (Since it will blow down as a result of short circuit). Instead they are linked via insulators



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## Ground wire

The top most wire on transmission lines is ground wire, its purpose is to protect the transmission lines against lightning thunders



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# Spacers

For low voltage power transmission one single conductor per phase is enough, However for high voltage levels transmission lines contain 2, 4, 8, 16 or 32 conductors per phase. A spacer is employed for separating multiple conductors that are used for each phase



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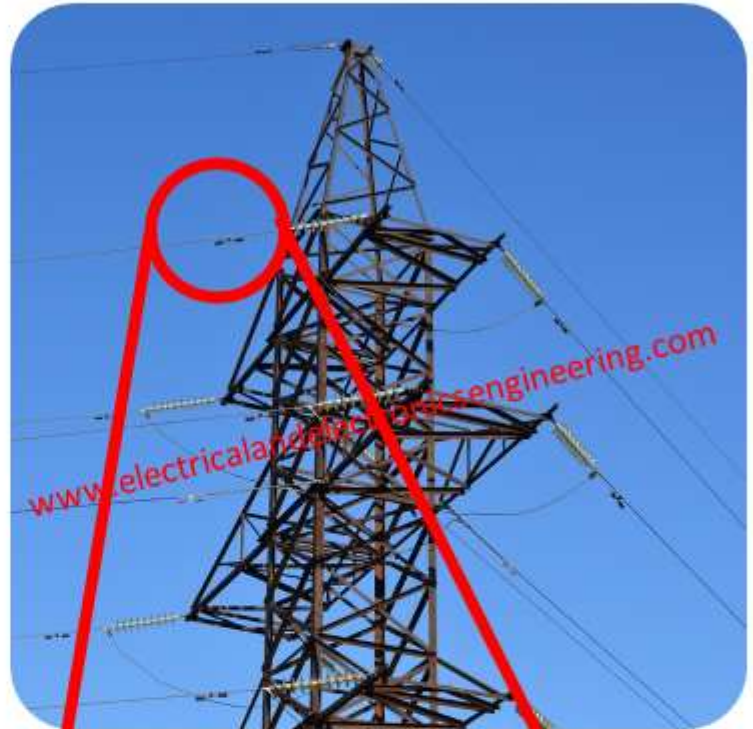
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# Damper

A damper is used for suppression of wind induced vibrations on transmission lines structures.

Dampers are installed at both ends of transmission lines near the pole supports

Figure here displays a close view of damper installed on pylon



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## Miscellaneous Items

Additionally transmission lines contain fuses, transformers, danger plates, anti-climbing wires, guy wire, and lighting arresters



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