PARAMOUNT
WIRES & CABLES

Medium Voltage Covered Conductor

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Paramount Cables

has technical expertise & extensive experience in manufacturing covered conductors, ensuring superior quality and reliability.

THE COMPANY

Paramount Communications Ltd. part of the Paramount group of companies, is one of India's leading wire & cable manufacturing companies.

Over six decades of operations, the group has widened its portfolio, building on a prestigious clientele that includes government, institutional and major private sector organizations, both national and international.

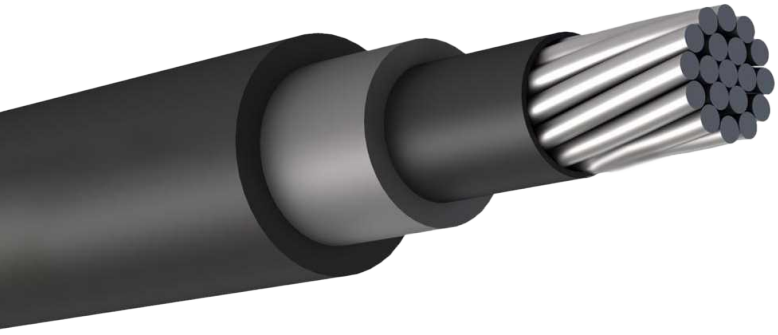
Focused on manufacturing excellence, technological advancement and customer satisfaction Paramount envisions pioneering the wire and cable industry in India. The company believes in empowering success stories across industries by meeting global benchmarks and providing quality focused solutions.

With a mission of continued success, Paramount Cables aims at emerging as a progressive company, catalyzing growth and reshaping horizons.

INDUSTRIES WE SERVE

- TELECOM
- RAILWAYS & METRO
- POWER
- STEEL & CEMENT
- OIL & GAS
- DEFENCE
- RETAIL
- INFRASTRUCTURE

COVERED CONDUCTOR



Medium Voltage Covered Conductors consist of a conductor covered with insulating material(s) as protection against accidental contacts with other covered conductors and with grounded parts such as tree branches etc. In comparison with insulated conductors, this covering has reduced thickness, but is sufficient to withstand the phase-to-earth voltage temporarily.

CONDUCTOR TYPE

- Conductor Type- Aluminum, Alloy of different type AL-59, AAAC, AL7 & ACSR as per SS 4240813, EN 50182, IS 398P-4 & IS 398P-2 etc.
- Voltage Grades- 6.6 to 33KV etc.
- Applicable Standards– EN 50397-1, EN 50182, SS 4240814, IS 398 P-4 , IS 398 P-2 & customer specifications etc.

CONSTRUCTION OF COVERED CONDUCTOR

- Conductor: - Stranded Circular Aluminum / Alloy / ACSR of different types as per requirements without or with longitudinal watertight applications.
- Conductor Screen: - Extruded Semi conducting Compound.
- Inner Layer of Insulation: - It shall be extruded XLPE/HDPE.
- Outer Covering: - UV resistant, Anti tracking Erosion resistance XLPE/HDPE.

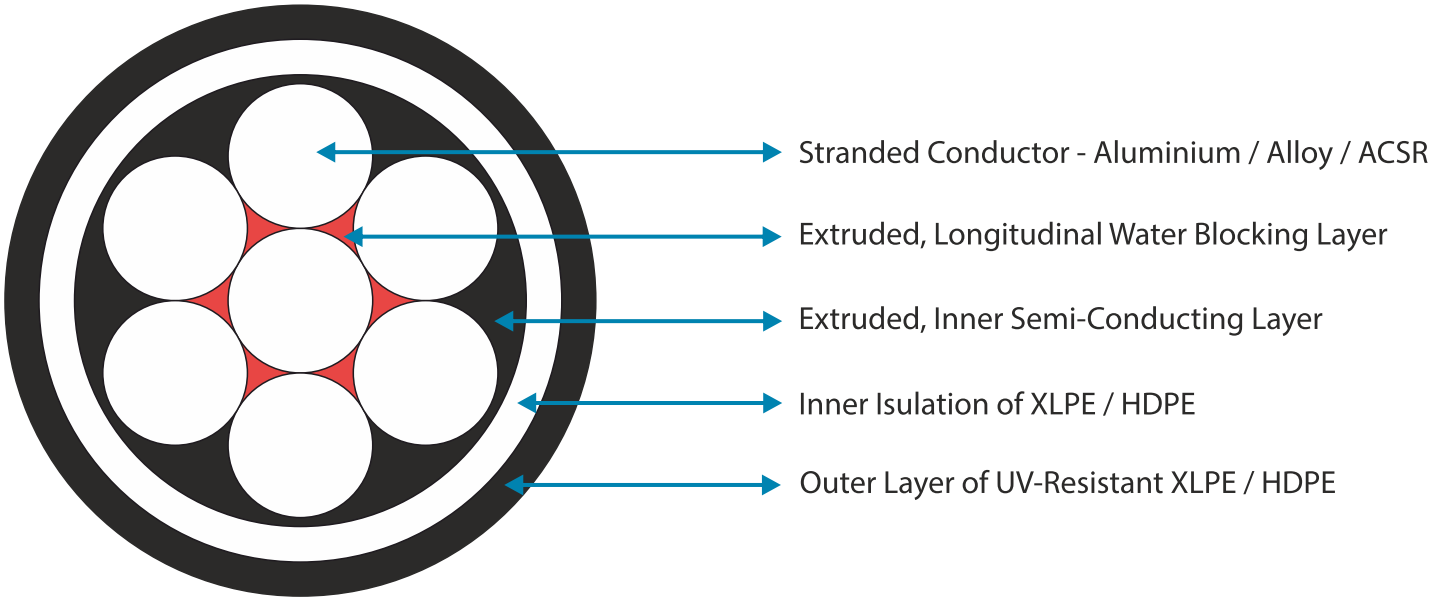
The Semi Conducting Screen, Inner Insulation and Outer Insulation should be extruded in one step i.e., triple extrusion to ensure a good bonding between the three layers and also with the conductor.

PROBLEM AREAS IN CONVENTIONAL SYSTEM

- In storm-prone locations throughout India, trees often fall on bare conductor distribution lines causing the pole to fall onto the ground.
- Due to the contact between bare conductor & the ground, an earth fault would be caused but the earth's fault will not get cleared due to the high resistance path.
- The current flow through the high resistance path will cause heating thus resulting in a fire.
- Also, electrocution of large birds and animals is also seen in jungle areas and wildlife sanctuaries.
- Bare conductors are prone to power thefts.
- Laying underground cables is comparatively better option but comes at very high cost & have wide right of way costs & delays attached to them.

MEDIUM VOLTAGE COVERED CONDUCTORS DRAWING

Covered conductors are with or without optional longitudinally water blocking layer are covered with special grade material that provides insulation and ultraviolet protection. They provide safety against accidental contacts and reduce outages significantly. Longitudinal Water blocking layer if applicable is Triple extruded & UV resistant.



APPLICATIONS

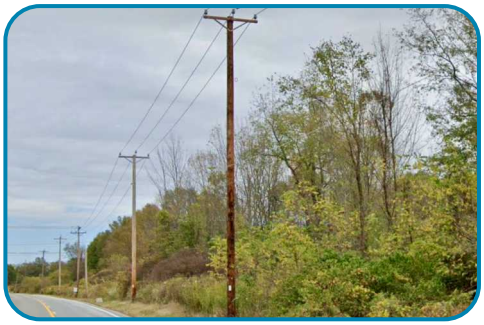
Covered Conductors are quickly replacing Over Head Bare Conductor (Aluminium, Alloy, ACSR) and underground laying of cable in power transmission and distribution system in many parts of the world. These Covered Conductors similar to (SAC (Space Arial Bunch Cables) are commonly being used in South Korea, Japan, Iran, Myanmar and some parts of Australia. With a successful track record.

- Covered Conductors are extensively used in voltage upgradation projects ranging between 6.6KV to 33 KV.
- Covered Conductors can function smoothly with conductor temperature up to 80^{0}C and in corrosive environment.
- From a Safety perspective, ideally covered conductors should be used in densely populated areas and forested hilly terrains.
- Lower installation and maintenance cost makes it ideal for usage in areas which are densely populated thereby bringing down installation cost per user drastically down with significantly low level of outages.
- Covered conductors can be used in high UV radiation areas due to outer jacket being UV resistant.
- Covered Conductors fulfil the demands in extreme cold environment with heavy snow and ice load.

ADVANTAGES OF COVERED CONDUCTOR

- No interruptions by contact of tree branches.
- No faults with short duration touching of phase conductors during wind conditions.
- Ideal and safer solution for installations for river, lake, railway, road crossings and in populated areas.
- Phase to phase conductor distance can be reduced there by reducing the tower cost.
- Less power shut down for clearing of the lanes from growing tress.
- Covered conductors are a cheaper alternative to underground cable, Aerial Bunched cables and other traditional methods especially in difficult terrain and in densely populated areas.
- Can protect big birds like peacocks and flamingos etc. Ideal for installations in forest areas and in bird sanctuaries.
- Lines in densely public areas has higher safety potential incase of accidental touching.
- Overcomes costly right of way issues and lines can be commissioned faster.
- Covered conductors are self- supporting and can have pole spans of 60 to 70 meters.
- Negligible Leakage Current on surface of the Covered Conductors.
- Lower total cost of ownership over the life cycle compared to underground cables.
- Increasing the power distribution network reliability.
- Same corridor of an old bare overhead line can be used for covered conductors.
- Ideal for installation in forest areas and bird sanctuaries.



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ISO 9001 & 14001 Certified

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