

ELECTRIFYING NEPAL
SINCE 1977
NOW, GOING GLOBAL



LITMUS
INDUSTRIES LIMITED



Overview

The foundation of Litmus Industries (formerly known as Lumbini Vidyut) dates back to 1977, laid out with **a broad vision of creating deep connections, value, and growth for our people, partners, and stakeholders.**



Litmus Industries Limited stands as Nepal's leading manufacturer of quality wires, cables, and conductors, making it the largest company in this sector within the country. Furthermore, it holds the distinction of being Nepal's first and only public company in the history of wires and cables. The company is preparing to issue its initial public offering (IPO) in the near future. Litmus has been bringing about progressive changes since 2014 under the purview of Ramesh Corp.

As the foremost and most trusted brand in Nepal's wires, cables, and conductor industry, we take immense pride in illuminating an electrified Nepal. Our commitment is unwavering as we move forward in harmony with the nation's growth agenda, contributing to the vitality and progress of the nation.



Milestones



Pioneer in ACSR / ABC / Power Cables manufacturing in Nepal



At a certain juncture, Litmus proudly stood as the singular Nepalese company exporting wires and cables



Exclusive Recognition: Sole Nepalese wire and cable company with NS Quality Award



First-of-its-kind manufacturer of 3,600km ACSR Moose Conductors. (Installed in 400 kV transmission line project)



Establishing itself as a key Nepalese manufacturer, Litmus played a vital role in Facilitating the Nepal Electricity Authority (NEA) by supplying 12,500 km of Aerial Bunched Cable (ABC).

Certifications

The Litmus manufacturing facilities are proud to have ISO 9001:2015 certification, guaranteeing a quality management system that ensures the consistent delivery of products that meet customer, statutory, and regulatory requirements.

Litmus products have obtained certifications from the Nepal Bureau of Standards and Metrology and ISI certification from the Bureau of Indian Standards, demonstrating our dedication to providing quality products in Nepal.

In recognition of our unwavering commitment to superior quality, Litmus received the "NS Quality Award" from the government of Nepal in 2010, distinguishing us as the only cable manufacturing company in Nepal to be honored for such excellence.

Some of our products have prestigious certifications like KEMA for energy utilization, as well as CPRI, TAG, and ERDA certificates, which not only increase their acceptance in Nepal but also in other South Asian countries. These awards, accolades, and certifications highlight Litmus' dedication to innovation, propelling us towards a brighter and more innovative future.



IS: 1554



IS: 694



Technology

Establishing a Benchmark with Advanced German Technology

At Litmus, we take pride in delivering unparalleled quality through state-of-the-art Advanced German Technology. Our utilization of this cutting-edge technology guarantees precision, production control, and superior results. Committed to the principles of Advanced German Technology, Litmus seamlessly integrates innovations in drawing, extrusion, coiling, and stranding processes.



DRAWING

Niehoff German Technology i.e. Dual Spooler Rod Breakdown Machine, Advanced Multi Fine Wire Drawing with Online Annealer and Double Twist Bunching Machine

EXTRUSION

Advanced Dual Spooler, Auto Pay Off/Take Up Changeover, Self-Centered Head, Online Sikora Technology For Diameter Controller, Online Sikora Spark Tester And Multi Pass Cooling Trough

COILING

Advanced Auto Coiling With Online Spark Tester And Accurate Auto Length Cutting

STRANDING

Latest Separate Drive Driven Cages With Electronic Shaft Synchronization, Intelligent Electronic Wire Break Detection System (Ewbds), Next Generation Siemens Controlled Achitecture (S7-1500)

Production Capacity

Moving forward aggressively to increase our production capacity every year with the support of high-end innovative technology.

With Advanced German Technology supported by fully automated high-end innovations, not just the production but the production quality as well have significantly raised to the highest distinction. Our state-of-the-art technologies and talented team of dedicated professionals have jointly made Litmus Cables the most loved and trusted top-tier cable of No.1 Quality that spreads light all across the country.



ACSR Conductors

68,000 KM

Aerial Bunched Cables

30,000 KM

XLPE Covered Conductors

20,000 KM

Power Cables

45,000 KM

House Wiring Cables

25,00,000 Coils

Enamel and Strips

14,000 MT

Aluminium Rod Continuous Casting and Rolling Line

The innovative project by Litmus Industries Limited to extend its Aluminium Rod Continuous Casting and Rolling Line in Hakui, Parasi, Nepal is meant to strengthen the company's position as a leader in the wires, cables, and conductors industry in that nation. The project, which covers 10 acres, uses cutting-edge technology to produce aluminium rods with an emphasis on quality, efficiency, and worldwide compliance.

Apart from satisfying the increasing need for high-quality aluminium goods, the endeavor is consistent with Litmus's commitment to bolstering Nepal's progress by funding essential infrastructure initiatives. In addition to increasing production capacity, this expansion stimulates local economic growth by creating a variety of job possibilities and fostering community development.

Specifications for EC 1350 (H12 & H14 EC222) aluminium rods:

Sizes Available: 7.6mm, 9.5mm, and 12mm

Alloy Options

1. Alloy 6201 T4 (7.6mm, 9.5mm, and 12mm)
2. Alloy Al59, Al57 (9.5mm and 12mm)
3. Alloy 1120 (9.5mm and 12mm)
4. Alloy 8176 (9.5mm and 12mm)
5. Alloy 6101 (9.5mm and 12mm)
6. Alloy 6061 (7.6mm, 9.5mm, and 12mm)

Production Capacity

30,000/- Tons Per Annum





Overhead Conductors

Litmus Overhead Conductors are employed in overhead transmission and distribution networks, serving purposes such as un-insulated hook-ups, jumpers, grounding conductors, and various other applications. The Litmus brand represents the company's ongoing commitment to provide a wide array of overhead conductors, guaranteeing customers receive products that meet the most rigorous quality standards.

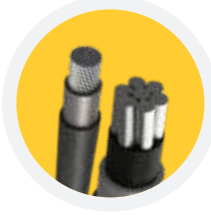
Product Ranges



**ACSR OVERHEAD
CONDUCTORS**



**AERIAL BUNCHED
CABLES (ABC)**



**XLPE COVERED
CONDUCTORS**



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ACSR Overhead Conductors

ACSR is a go-to for utility transmission and rural distribution, known for its reliability and robust mechanical strength-to-weight ratio. Serving as both ground and phase conductors on extended spans, ACSR features a galvanized steel core (solid or stranded) surrounded by 1350-H19 aluminium layers.

It provides thermal ratings comparable to or better than AAC in equivalent sizes. In larger than SWG sizes (18/1, 45/7, 72/7, or 84/19 stranding), ACSR typically has a steel content of 11% to 18% by weight, varying up to 40% based on desired tensile strength. For high tensile strength in challenging scenarios like river spans, configurations such as 8/1, 12/7, or 16/19 are preferred.

Construction

Rods

EC Grade Aluminium and high carbon steel wires with 99.95% zinc purity.

Wire

As per IS-398, BS-215 and NS 259

Conductor

Stranded Conductor as per IS-398, BS-215.

Applications

Aluminium Conductor Steel Reinforced (ACSR) is extensively employed in overhead transmission lines for both primary and secondary distribution. This conductor is crafted with one or more outer aluminium wires, stranded alongside a high-strength steel core wire coated with zinc.



Aerial Bunched Cables (ABC)

Aerial Bunched Cables (ABC) revolutionize overhead Power Distribution Systems by offering superior safety, reliability, and cost-efficiency compared to traditional bare conductor systems. Operating at 1100 volts, ABC is employed by utility service providers, such as Electricity Distributing Authorities, to distribute power to individual consumers. This innovative system reduces power losses, ensures higher safety standards, and enhances overall system economy by minimizing installation, maintenance, and operational costs. The cables are supported on poles and can be tapped at various positions, making them suitable for both urban and rural areas.

Construction

Conductor EC grade aluminium stranded conductor as per IS-8130 Class-II. Alloy conductor confirming to IS-398 (Part-IV)

Insulation Cross-Linked Polyethylene (XLPE) with the best electrical and mechanical properties.

Laying Standard Laid up of cores confirming to IS-14255.

Applications

Aerial Bunched Cables (ABC) are essential for low-power overhead distribution networks in metropolitan, urban, and rural areas. They play a crucial role in supplying power to remote facilities, villages (both temporary and permanent), and above-ground house connections. This versatile solution ensures reliable power distribution in diverse environments.



XLPE Covered Conductors

Manufacturing of 11kV XLPE-covered conductors for the first time in Nepal.

11kV XLPE-covered aluminium cable features a compact round conductor composed of aluminium strands with water-blocking, semicon, and XLPE insulation. The cable is coated with black or gray cross-linked polyethylene (XLPE) to provide specialized resistance to electric tracking and UV rays.

XLPE's thermoset nature enables continuous operation at up to 90°C, providing increased capacity compared to thermoplastic materials. This cable is designed for durability, reliability, and optimal performance in demanding electrical applications.



Construction

Conductor Aluminium Alloy Conductor complying to IS-398 (part IV).

Insulation Water blocking with a semi-conducting extruded compound as per EN 50397

Insulation Cross-Linked Polyethylene (XLPE) confirms IS-7098 (part-I).

Applications

XLPE-insulated Covered Conductors offer excellent protection against environmental factors, making them suitable for highly forested, storm-prone, congested urban, and wet areas. Their resilience extends to hot, cold, and intense sunlight conditions.

Power Cables

Low-voltage power cables are available in diverse sizes, materials, and types, each specifically tailored to its intended uses. These cables comprise three main elements: conductors, insulation, and a protective outer sheath. The composition of individual cables varies based on their specific applications.

These cables are widely employed across diverse industries such as water, renewable energy, power distribution, nuclear and thermal power stations, airports, marine, defense, telecommunications, windmills, construction, mining, offshore, ship wiring, railways, automation, audio-visual, and manufacturing. They offer versatility and applicability across a broad spectrum of uses.

Features

XLPE INSULATED CABLES

- Higher current rating and emergency overload rating
- Superior short circuit rating
- Low dielectric loss
- Much better insulation resistance
- Resistant to chemical & corrosive gases etc.
- Better resistance to surge currents
- Much longer life of the cables

PVC INSULATED CABLES

- High dielectric strength & resistance to D.C. Voltage effects
- High mechanical strength & resistance to abrasion, vibration & ageing
- Resistant to most acids, alkalis, to temporary contact with solvents, Oils and liquid fluids
- Flame retardant does not support combustion and self-extinguishing
- Outer Sheath: FR/FRLS/Zero Halogen

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Product Availability

Type	Size	Voltage Rating
Aluminium Armoured & Unarmoured	Single Core: 1.5 to 1000 sq. mm Multi Core: 1.5 to 630 sq. mm	Up to 1.1 KV
Copper Armoured & Unarmoured	Single Core: 1.5 to 1000 sq. mm Multi Core: 1.5 to 630 sq. mm	Up to 1.1 KV

Construction (As per IS 1554 & IS 7098)

Conductor

Stranded / Solid / Circular / Shaped as per IS:8130, IEC 60228, BS 6360

Material

Aluminium / Copper

Insulation

PVC / XLPE / HR PVC / Zero Halogen

Inner Sheath

PVC / HR PVC / FR / FRLS PVC / Zero Halogen as per IS 5831, IEC 60502, BS 7655

Armour

G.S Steel Round Wire / G.S. Steel formed Wire (Strip) / G.S. Steel Tape / Aluminium Round Wire/ Aluminium formed Wire (Strip) / Aluminium Tape as per is 3975, IEC 60502 P-1

Outer Sheath

PVC /HR PVC / FR / FRLS PVC / Zero Halogen as per IS 5831, IEC 60502, BS 7655.



Control Cables

Litmus control cables are versatile, catering to various applications such as industrial, signaling, transmission, measurement, and control. They facilitate the transmission of power at low voltage for process and equipment control. Primarily employed in machinery, machine tools, and appliances, as well as in measuring, heating, and air conditioning technologies, these cables serve as permanent connections in cable chains and similar contexts.



Features

- Copper conductor, optionally enveloped in galvanized steel braid.
- Customizable manufacturing according to applicable standards.
- Option for Zero Halogen properties or high thermal stability of PVC over sheathing.
- Provide different levels of protection against electrical interference.
- Resistant to caustic substances and oils.

Product Availability

Description	Type and Size	Voltage
PVC insulated cables conforming to IS:1554-I and Customer specific requirements	Single core to 37 cores 1.5 Sqmm to 4 sqmm	Up to 1.1 KV

Construction

Conductor

Stranded / Solid / Circular / Shaped as per IS:8130, IEC 60228, BS 6360

Material

Copper

Insulation

PVC / HR PVC / Zero Halogen

Inner Sheath

PVC / HR PVC / FR / FRLS PVC / Zero Halogen as per IS 5831, IEC 60502, BS 7655

Armour

G.S Steel Round Wire / G.S. Steel formed Wire (Strip) / G.S. Steel Tape / Aluminium Round Wire / Aluminium formed Wire (Strip)/ Aluminium Tape as per is 3975, IEC 60502 P-1

Outer Sheath

PVC /HR PVC / FR / FRLS PVC / Zero Halogen as per IS 5831, IEC 60502, BS 7655.



Domestic House Wires

Fire Retardant Low Smoke (FRLS)



- Range: 0.5 to 16 sq. mm.
- Available in FR and FRLS insulation conforms to NS 344 and IS 694.
- Multi-strand 100% pure annealed electrolytic grade copper conductor.
- Bunching of copper in uniform lay and diameter
- Steam and boiling high flame-retardant properties.
- Water resistant & anti-rodent.
- Higher flexibility ensures easy handling and a longer life.
- Double-insulated with an ultra-thin layer.

Halogen Free, Flame Retardant (HFFR)

- Range: 0.5 to 16 sq. mm.
- Available in ZHFR insulation, it conforms to IS 17048.
- Excellent electrical and mechanical properties.
- High flame-retardant and fire-resistant. properties Lead (Pb) free non-toxic alternatives.
- Made of non-toxic polymer. Halogen free. Eco Friendly.
- Higher flexibility ensures easy.
- Excellent resistance to tarnishing of the copper.
- Handling and longer life. Steam and boiling water resistant & anti-rodent.



Enamel Winding Wires

Enamelled Round Copper Wires are essential in various electrical applications, featuring a copper conductor coated in insulating varnish to prevent shorts and enhance efficiency. Widely utilized in motors, generators, transformers, household appliances, auto-electrical systems, refrigeration motors, fans, coils, and relays, these wires excel in low-voltage scenarios due to their effective insulation and high conductivity. In essence, they play a critical role in ensuring the reliable performance of diverse electrical components and systems.

- ✓ Tough Coating Resistant to external forces such as bending and stretching.
- ✓ Excellent solderability and heat resistance.
- ✓ Excellent corona effect resistance.
- ✓ High thermal properties.
- ✓ Resistant to water and moisture.
- ✓ Good electrical characteristics such as dielectric strength and insulation resistance.

Type	Type and Size	Voltage
Enamelled Round Copper Wires in accordance with IS-13730 (part 34) with varnish of temperature class 130°C	9 SWG to 40 SWG	Up to 1.1 KV

Construction

- Rods** EC-Grade Copper with 99.98% purity.
- Wire** As per IS-13730 (Part 34).
- Conductor** Insulation thickness covering of Grade-2 with varnish having chemical base of Polyurethane, Polyester, Polyesterimide.



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Paper Insulated Copper Strips

Paper-insulated Copper Strips are widely employed for winding coils in transformers and electrical equipment. We produce single, double, or triple paper-covered annealed strip copper conductors.

These strips find extensive use in high-voltage applications like oil-filled power and Distribution Transformers, Dry-Type Transformers, High-Tension Motors and Generators, and Traction Equipment.

- ☑ Ductility and Malleability.
- ☑ High Electrical & Thermal Conductivity, High Melting Point.
- ☑ Corrosion Resistance.
- ☑ Compatibility and Durability.



Type	Type and Size	Voltage
Paper Insulated Rectangular Flat Copper Conductor in accordance to IS-13730 (part-27).	Thickness : 2 mm to 4 mm Width : 6 mm to 12 mm	Up to 1.1 KV

Construction

Rods	EC-Grade Copper with 99.98% purity.
Wire	As per IS-13730 (Part 27).
Conductor	Kraft Paper

Type Test Certificate

DNV-GL

KEMA TEST REPORT

1370-18

Object	Self-supporting 60° Semi-Buried Conductors (SBC)
Type	0.6/1 kV to 400 kV ¹⁾ - A / 0.6/1
Client	Combinat Energie SA, CH Luzern, Switzerland; 494900 Netherlands, Royal
Manufacturer	Combinat Energie SA, CH Rue de l'Industrie 10, Luzern, Suisse
Tested by	DNV GL Netherlands B.V. A-1144, 1048 Amsterdam
Date of test	28 May to 14 June 2018
Test specification	The tests have been carried out in accordance with client's technical conditions and standards, self-standing 60° Semi-Buried Conductors (SBC) Report Number: 1370-18, Version No.: 17000200-001727-01
Summary and conclusion	The object complies with the research requirements of the standard

This report requires prior to the report tested, the report will be for convenience of any client, further the possible reference to that report will refer to the manufacturer.

It is declared by the manufacturer:

The report consists of 20 pages in total.

1370-18, Appendix B.2

Responsible
Executive Vice President
Global Laboratory

KEMA Laboratorium

Amstelveen, 5 November 2018

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Kema Test Report

[illegible]

Central Power Research Institute Certificate (CPRI)

[illegible]

TAG Corporation Report

[illegible]

Nepal Standard (NS) Certificate

Prestigious Projects



Transmission Line Project

- Hetauda-Dhalkebar-Inaruwa 400 kV Transmission Line Project
- Bhutan Power Corporation Limited, Thimphu
- Dumre Damauli 132 kV Transmission Line Project
- Butwal Koholpur 132 kV Transmission Line Project
- Khimti Dhalkebar 220 kV Transmission Line Project

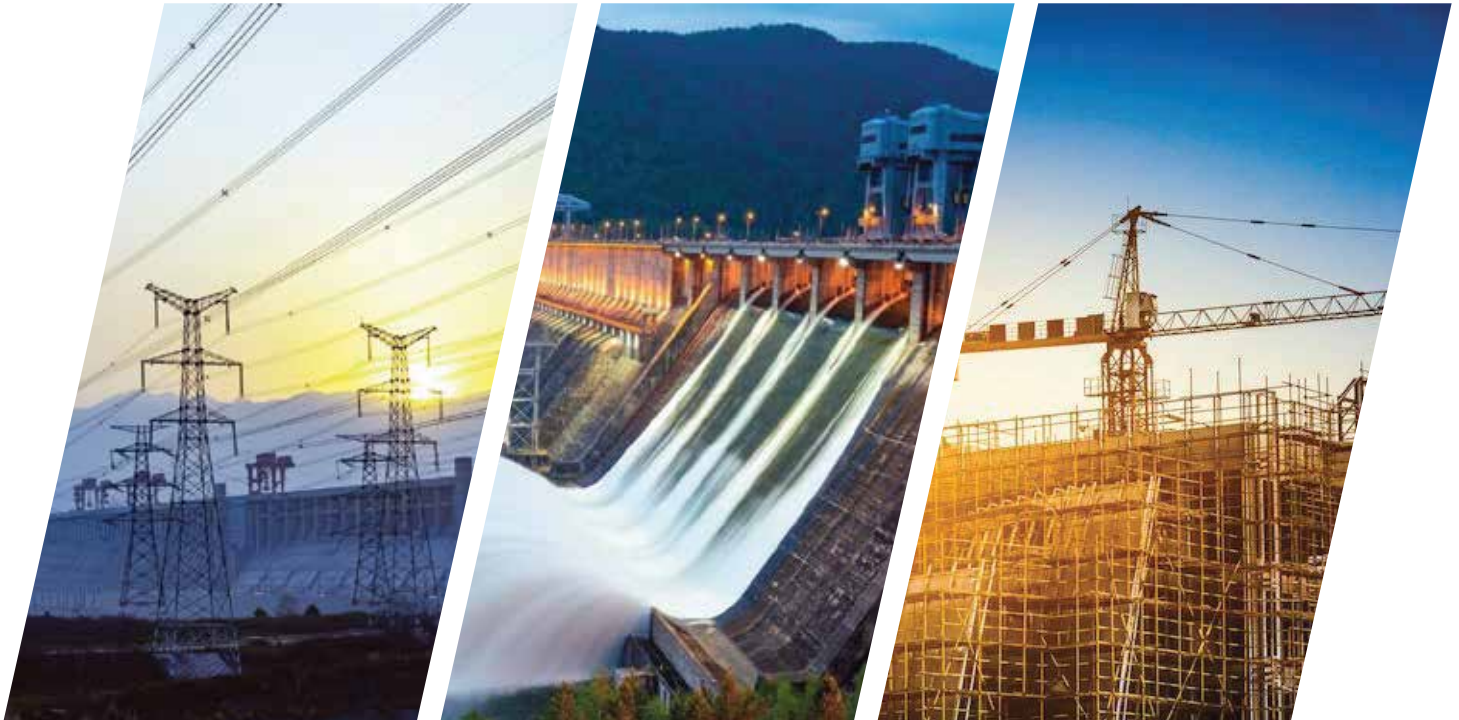


Hydroelectric Project

- Chameliya Hydroelectric Project
- Modikhola Hydroelectric Project
- Upper Tamakoshi Hydroelectric Project



Kadoorie Agriculture Aid Association (KAAA-British Gurkhas)



Our Suppliers



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