

## Reading

[AEMO Annual Report 2022](#)

[AEMO Draft Marginal Loss Factors: Financial Year 2023 2024](#)

[AEMO Integrated System Plan 2022](#)

Aluminum Association USA: Aluminum Standards and data (and [code words for conductors](#))

ASTM A 90: Weight of zinc coating

ASTM B 803: Misch metal

ASTM B 941: Heat resistant Al-Zr alloy wire for electrical purposes.

Australian/ New Zealand Standard: AS/NZS 1222 (1,2): SC GZ, SC AC conductors

Australian/ New Zealand Standard: AS/NZS 1531: Conductors – bare overhead – aluminium and aluminium alloy

Australian/ New Zealand Standard: AS/NZS 1746: Conductors Bare overhead hard drawn copper

Australian/ New Zealand Standard: AS/NZS 2738: Copper and Copper Alloys

Australian/ New Zealand Standard: AS/NZS 2848: Aluminium and aluminium alloys – compositions and designations – part 1 wrought products

Australian/ New Zealand Standard: AS/NZS 2857: Timber drums for insulated electric cables and bare conductors

Australian/ New Zealand Standard: AS/NZS 3607: ACSR conductors

Australian/ New Zealand Standard: AS/NZS 3822: Test methods for bare conductors

Australian/ New Zealand Standard: AS/NZS 7000: Overhead line design detailed procedures.

Catalogues: [Olex](#), [Prysmian](#), [Midal](#), [ZTT](#), [Amokabel](#) (CCSX [25](#) [62](#) [159](#)), [Southwire](#), [3M](#), [CTC](#), [TS Conductor](#)...

[CIGRE CSE paper](#) 2018 page 45: Comparative study of the long-term reliability of HTLS conductor systems

[CIGRE Electra 120 article](#): Retrospective view at the efforts made to solve the problem of aeolian conductor vibrations on overhead transmission lines

[CIGRE Electra 144 article: Ampacity rating calculation detailed](#)

[CIGRE Electra 176 article](#): Guide to fittings for optical cables on transmission lines – part 1 Selection and use

[CIGRE Electra 307 article](#): Reference paper: Overhead transmission lines, gas insulated lines and underground cables

[CIGRE Notes: Vibration](#)

[CIGRE paper 22-08](#) 1974: Vibration in multiple conductor bundles

[CIGRE paper 22-102](#) 1990: Predicting galloping fatigue cycles in quad bundles.

[CIGRE paper 22-14](#) 1976: The possibilities and advantages offered by A-GS/L aluminium alloy in the construction of overhead lines (6201 history)

[CIGRE paper 22-202](#) 1990: Two years vibration measurements and their evaluation for an optical ground wire (OPGW) installed on a 400kV transmission line.

[CIGRE paper 22-204](#) 1990: Mechanical fatigue of components of overhead lines with special attention to composite insulators

[CIGRE paper 22-302](#) 1992: Investigation on the ageing of old ACSR cables in transmission lines: microstructural evolution and loss of strength

[CIGRE paper B2-10138](#) 2022: Wildlife detection system using AI with the collaboration of the web society

[CIGRE paper B2-103](#) 2020: Development of sensors for real time monitoring of ice loads on overhead lines

[CIGRE paper B2-10361](#) 2022: Experience use of bird protection devices on power lines and environmental impacts

[CIGRE paper B2-105](#) 2016: Operational aspects of dynamic line rating. Application to a real case grid integration of wind farms

[CIGRE paper B2-105](#) 2018: Quantifying the risk in dynamic thermal line rating.

[CIGRE paper B2-10546](#) 2022: Safe management of work in high voltage overhead lines in the Netherlands

[CIGRE paper B2-10576](#) 2022: Optimization of vegetation management with LIDAR inspection real application case

[CIGRE paper B2-10624](#) 2022: Correlation between tensile forces in conductors and stress loading of tensile towers

[CIGRE paper B2-10718](#) 2022: Innovative inspection techniques for digital tools for condition follow-up of overhead lines in Belgium

[CIGRE paper B2-10859](#) 2022: Economic analysis of stand-alone and grid connected microgrid by using HOMER

[CIGRE paper B2-10915](#) 2022: A wearable system for work at height safety management

[CIGRE paper B2-10974](#) 2022: Design of overhead lines in a changing climate

[CIGRE paper B2-10976](#) 2022: Development of aluminium tower for 420kV AC line to reduce environmental impact and safety risks under construction.

[CIGRE paper B2-11004](#) 2022: Availability of data for asset management and automated condition monitoring

[CIGRE paper B2-11145](#) 2022: Correlation of the surface wettability and the audible noise emission of overhead conductors

[CIGRE paper B2-118](#) 2020: Limits of vibration amplitude measurement-based conductor fatigue design

[CIGRE paper B2-206](#) 2016: X-Ray Technique

[CIGRE paper B2-212](#) 2008: Extending the service life of aged overhead line towers.

[CIGRE paper B2-212](#) 2018: Estimation of tensile force in conductor by vibration and strain measurement in pillar's legs of transmission line

[CIGRE paper B2-213](#) 2012: Corrosion characteristics based on an investigation of sampled OHTL conductors and a probabilistic lifetime estimation method.

[CIGRE paper B2-214](#) 2008: Aeolian vibrations on high voltage lines comparative self-damping as evaluated on the field.

[CIGRE paper B2-214](#) 2008: Aeolian vibrations on high voltage lines comparative self damping as evaluated on the field

[CIGRE paper B2-224](#) 2020: Case of dynamic line rating (DLR) for overhead transmission in context of tropical countries like India

[CIGRE paper B2-303](#) 2010: Impact of turbulence on vortex induced vibrations and fatigue of conductors: modelling and real span experimentation.

[CIGRE paper B2-306](#) 2010: the life extension policy of overhead lines

[CIGRE paper B2-309](#) 2010: Assessment of OHL availability and residual lifetime by using on destructive instrumental control for conductors, steel wires and guys.

[CIGRE paper C2-103](#) 2014: Operational experience with dynamic line rating forecast-based solutions to increase usable network transfer capacity.

[CIGRE paper C2-112](#) 2014: Thermo-mechanical dynamic rating of OHTL: applications to Italian lines

[CIGRE paper C2-143](#) 2020: Use of dynamic line rating system in system operation and planning

[CIGRE TB 141](#): Refurbishment and upgrading of foundations

[CIGRE TB 265](#): Life cycle assessment of overhead lines

[CIGRE TB 273](#): Overhead conductor safe design tension with respect to aeolian vibrations

[CIGRE TB 299](#): Guide for selection of weather parameters for bare overhead conductor ratings

[CIGRE TB 402](#): High impedance faults

[CIGRE TB 498](#): Guide for application of direct real time monitoring systems

[CIGRE TB 545](#): Assessment of in-service composite insulators by using diagnostic tools

[CIGRE TB 561](#): Live work a management perspective

[CIGRE TB 631](#): Coatings for protecting overhead power network equipment in winter conditions.

[CIGRE TB 635](#): Microgrids 1 engineering, economics and experience

[CIGRE TB 638](#): Guide to overall line design

[CIGRE TB 643](#): Guide to operation of conventional conductor systems above 100C

[CIGRE TB 645](#): Meteorological data for assessing climatic loads on overhead lines.

[CIGRE TB 695](#): Experience with the mechanical performance of non-conventional conductors

[CIGRE TB 708](#): Guide on repair of conductors and conductor fitting systems

[CIGRE TB 731](#): The use of robotics in assessment and maintenance of overhead lines

[CIGRE TB 748](#): Environmental issues of high voltage transmission lines in urban and rural areas

[CIGRE TB 763](#): Conductors for the uprating of existing overhead lines, physical modification, reconductoring with conventional and high temperature conductors

[CIGRE TB 767](#): Vegetation fire characteristics and the potential impacts on overhead line performance

[CIGRE TB 788](#): Dynamic loading effects on overhead lines – impact of foundations

[CIGRE TB 809](#): Dynamic loading effects on overhead lines – impact of structures

[CIGRE TB 81](#): Foundation testing

[CIGRE TB 818](#): Transmission line structures with fibre reinforced (FRP) composite.

[CIGRE TB 828](#): Vibration modelling of high temperature low sag conductors and self-damping characterization

[CIGRE TB 837](#): Coating for improvement of electrical performance of outdoor insulators under pollution conditions

[CIGRE TB 838](#): Coatings for protecting overhead power networks against icing, corona noise, corrosion and reducing their visual impact.

[CIGRE TB 865](#): Inspection and testing of tools, equipment and training for live line work on overhead lines

[CIGRE TB 865](#): Inspection and testing tools, equipment and training for live line work on overhead lines

[CIGRE Technical article: CSE 22: Critical review on biological growth on composite insulators](#)

[CIGRE Technical article: CSE 22: Estimation of cumulative loss of strength of fittings for high temperature low sag](#)

[CIGRE Technical article: CSE 22: Estimation of wet conductor audible corona noise from I type suspension insulator](#)

[CIGRE Technical article: CSE 22: Semi-autonomous cost-effective erection method](#)

[CIGRE Technical article: CSE 24: comparison of electrical clearances Japan and other countries](#)

[CIGRE Technical article: CSE 25: Pattern recognition-based protection schemes](#)

[CIGRE Technical article: CSE 27: Application of SF<sub>6</sub> alternatives](#)

[CIGRE Technical article: CSE 27: Latest design standard on structures for OHL Japan](#)

Code words for overhead aluminium electrical conductors: Aluminum Association (not AAAC 1120)

[CopperString 2.0](#)

[Energy Networks Australia: Guide to Australia's Energy Networks 2021](#)

Fittings catalogues: [PLP](#), [Sicame](#), [Dulmison](#)/ Maclean...

Government site: Department of Agriculture, Fisheries and Forestry

Government site: Department of Climate Change, Energy, the Environment and Water

Government site: Queensland Government State Development, Infrastructure, Local Government and Planning (CopperString)

[IEC 50326: Conductors for overhead lines – characteristics of greases](#)

[IEC 61597 1995 Calculation methods for overhead conductors](#)

[IEC TC7: Strategic plan](#) (Technical committee: Overhead Lines)

[IEEE Paper circa 1980](#): Practical approaches to overhead line installation

[IEEE Standard 524 \(1980\)](#): Guide to the installation of overhead transmission line conductors

[IEEE Standard 524 \(2016\)](#): IEEE Guide for the installation of overhead transmission line conductors

Library: newspapers, images some technical papers: [www.Trove.nla.gov.au](http://www.Trove.nla.gov.au)

Library: State Library South Australia: [www.slsa.gov.au](http://www.slsa.gov.au)

Library: State Library Victoria: [www.slv.gov.au](http://www.slv.gov.au)

Local Conferences: Northern Territory Major Projects Conference; Wind farms, Solar farms...

[News item: Bulldozed Aboriginal site – lack of apology](#)

[ONCOR: Dynamic Line Rating 2014 Magazine Article](#)

[Paper 1929: Rural supplies](#)

[Paper 1932: Cable spans](#)

[Paper 1933 Notes on wood poles](#)

[Paper 1935: Electrical development in New Zealand](#)

[Paper 1935: Rural electrification of the Upper Hunter Valley Live line work](#)

[Paper 1936: Proposals for electrical development in NSW](#)

[Paper 1936: The Sugralaof Rubicon Hydro Electric Scheme SECV](#)

[Paper 1937: Long line/ span design](#)

[Paper 1948: Electrical connectors and conductors](#)

[Paper 1950: Survey of rural transmission lines using semi-skilled labour](#)

[Paper 1956: Overhead Line Construction Code of Practice CB1-1954](#)

[Paper 1959: Deterioration of hard drawn stranded copper conductors](#)

Paper 1971: Creep equations of conductors for sag-tension calculations: [Harvey and Larson](#)

Paper 1985: Improved overhead line conductors using aluminium alloy 1120: [Barber and Callaghan](#)

[Paper 1986: Overhead conductors in Australia: 1986](#)

[Paper 1988: Research on vibration of overhead ground wires: Rawlins](#)

[Paper 1996: A dictionary on electricity \(Australia\)](#)

[Paper 2000: Fire ignition by contact between green vegetation and high voltage conductors \(Stokes\)](#)

[Paper 2009: Line ratings in Australia](#)

[Paper 2009: Victorian Bushfires Royal Commission final report](#)

[Paper 2011: Corrosion on copper conductors 70 to 90 years old \(Nexans/ TasNetworks\)](#)

[Paper 2013: Corrosion on OHL conductors from New Zealand \(Nexans/ TransPower NZ\)](#)

[Paper 2013: Corrosion on Olive conductors from Australia \(Nexans/ TransGrid\)](#)

Paper 2013: Creep equations and elevated temperature data for 1120 AAAC conductors: [Lee and Rouillard](#)

[Paper 2015: Vegetation conduction ignition test report \(Marxsen\)](#)

[Paper 2017: Market ready covered conductor research and development project \(Groundline/ Amokabel\)](#)

[Paper 2019: Collision with terrain involving Airbus Helicopters AS350B3e VH-SZS \(Carrapateena stringing\)](#)

[Paper 2020: A practical health index for overhead conductors: experience from Australian distribution networks \(Ma, Saha, Lee and Goshal\)](#)

[Paper 2022: Energy Connect towers](#)

[Paper 2022: Overhead Line Galvanized steel wire conductor serviceability and predicted life to replacement: Brennan](#)

[Paper 2022: Rooftop solar management in SA during interconnector outage](#)

[Paper 2022: stormy Saturday for SA](#)

[Paper: Fawcett:](#) Dust storms 1983 and Black Saturday 2009 Bushfire: Weather

[Paper: Jacobs:](#) Bushfire risk reduction recommendations

Paper: Testing of spiral vibration dampers: [Roughan](#)



[Safety statistics: Key work-related health and safety statistics Australia 2021](#)

Suppliers: [Nexans](#)/ [Olex](#), [Midal](#) ([metric](#)), [Southwire](#) ([Misch Metal](#)), [Lamifil](#), [ZTT](#), [Prysmian](#) ([Invar](#))...[3M](#), CTC, TS Conductor...[Sumitomo](#)

Suppliers: Siemens ([Fusesaver](#)), [PLP](#), Sicame, [Amokabel](#) (CCSX25 [Winter](#), CCSX25 [Summer](#)), [Dulmison](#)...[Ampacimon](#) ([sag definition](#))

Textbook: CIGRE Green book: Overhead Lines

Textbook: Eskom: Planning, design and construction of overhead power lines

Textbook: Eskom: The fundamentals and practice of overhead line maintenance

Textbook: Overhead power lines: Kiessling et al

Textbook: Southwire: Overhead conductor manual

Textbook: US Aluminum Association: Aluminum electrical conductor handbook

Textbook: Wareing: Wood pole overhead lines

[Thesis: Brennan](#): Methodology for assessment of serviceability of aged transmission line conductors

[Thesis: Drury](#): The effect of prestressing on the inelastic creep behaviour of Australian made bare overhead conductors

[Thesis: Effenev](#): Options and evaluation for the refurbishment of vibration damaged SWER lines in Capricornia Electricity

Trade Magazine: T&D world

Trade Magazine: Transmission & Distribution

Utility: AusNet, Vic [Annual Report 2021](#)

Utility: ElectraNet, SA [Annual planning report 2021](#)

Utility: ESKOM South Africa [2022 Public forum](#), [2022 development plan](#), [2023 to 2032](#)

Utility: Power and Water NT (Regulatory Proposal) ([Capital expenditure 2023](#))

Utility: Powerlink, Qld

Utility: SAPN, SA [Asset management plan 2014 to 2025](#)

Utility: TasNetworks, Tas [Annual Report 2019 2020 Bushfire Risk Mitigation Plan 2018](#)

Utility: TransGrid, NSW

Utility: TransPower, NZ

Utility: Western Power, WA [Annual Planning 2020 2021](#)

Website: Bureau of Meteorology (Australia) [www.bom.gov.au](http://www.bom.gov.au) : [Lightning](#), [Thunder days](#), [Cyclone Tracy report](#), Solar files Mildura and Melbourne airports

Website: International Electrotechnical Commission [iec.ch](http://iec.ch)

Website: [opennem.org.au](http://opennem.org.au) (Open data Australia NEM and SWIS)

Website: [www.AEMO.com.au](http://www.AEMO.com.au) (Australian Energy Market Operator)

Website: [www.AER.gov.au](http://www.AER.gov.au) (Australian Energy Regulator)

Website: [www.ASTM.org](http://www.ASTM.org)

Website: [www.e-cigre.org](http://www.e-cigre.org)

Website: [www.IEEE.org](http://www.IEEE.org)

World GHG emission flow chart