

Study Committee B1 — Insulated Cables Poster Locations • Paris Session 2026

Your hosts



Carl Erik Hillesund

Carl Erik has a Master of Science degree in electrical engineering at the university in Trondheim from 1987. He has worked with different types of high voltage projects and been involved in many underground and submarine cable projects. For more than 30 years he has been working with project engineering, specifications, tendering, follow up manufacturing/testing as well as installation and repair of submarine power cables for Statnett, Norwegian DSO's as well as projects related to electrification of offshore oil and gas installations.

He has been Norwegian Cigre B1 representative in two periods until 2024 and member of several working groups.

Carl Erik is currently working in Statnett with strategic technology development in business unit Offshore Grid.



Fabien Charles

Fabien is a graduate engineer from Institut National Polytechnique de Grenoble. He joined cable industry 36 years ago in Silec. During his career he has been involved in power distribution and transmission projects as design engineer, R&D unit manager, product manager, sales engineer and system design manager. In Prysmian, he is currently managing HVAC Cable System Engineering team in Europe organization. He is currently the French member of SC B1.

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PS 1

Future cable systems and innovative cable applications

ID	Title	Station
10117	Universal Transition Joint 150kV for XLPE cable on the Belgian Grid	1 (8h30)
10281	Requirements for Feasibility of Superconducting Cables as studied in the CableGnosis Project	2 (8h30)
10282	Time-domain reflectometry-based temperature monitoring on MVAC cables: experience from field and laboratory experiments	3 (8h30)
10320	Introduction of 4000 mm ² AlMil conductor in HV cable systems	4 (8h30)
10325	An Analytical Current Rating Calculation Method for Submarine Cables Completely Immersed in Water or Partially Buried in the Seabed	5 (8h30)
10426	Insulated Cables Statistics 2023	6 (8h30)
10678	Electrical and Civil Engineering Challenges for Underground Cable Installations in Urban Settings	7 (8h30)
10679	XLPE Cable Retrofit for Pipe-Type Presents Engineering Challenges	8 (8h30)
10699	High-power medium-voltage superconducting cables for Europe's energy transition	9 (8h30)
10701	Dynamic cable monitoring using Distributed Fiber Optic Sensing	10 (8h30)
10720	EMT Modeling and Analysis of HTS Power Cables in Data Center Interconnection	11 (8h30)
10728	Towards a Coordinated HV Cable Approach: A TSO-Led Response to the Grid Action Plan - Six European TSOs Launch Collaborative Effort to Support HV Cable Supply Chain	12 (8h30)
10822	Development of 275kV Aluminum Conductor XLPE Cable and Connectors	13 (8h30)
10823	Development of DC deep water submarine cables that enable installation along optimal routes	14 (8h30)

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ID	Title	Station
10824	Early Detection of External Damage Incidents in Long-Distance Direct Current Submarine Cables	15 (8h30)
10991	Industry-First Dynamic Cable System Solution at 245 kV	16 (8h30)
11146	Development and Qualification of a 420 kV Dry-Type Outdoor Termination	17 (8h30)
11167	220 kV Transition Joint for Connecting High-Pressure Fluid-Filled (HPFF) Cable and Cross-Linked Polyethylene (XLPE) Insulated Cable	18 (8h30)
11268	Investigation on Zero-miss Phenomenon in Shunt Reactor Compensated Long HVAC Cable for Offshore Wind Farm	19 (8h30)
11341	AC Electrical Characteristics of Polypropylene for Eco-friendly Thermoplastic Power cable	20 (8h30)
11366	Subsea reactive power compensation for offshore wind	21 (8h30)
11368	Stresses on crossing third-party assets due to lightning strikes along underground HVDC cable route	22 (8h30)
11380	Nobel passive signal acquisition system for PD monitoring of very long cables based on optical fibre	23 (8h30)
11407	Evaluation of modified XLPE for 320 kV HVDC Cable use at elevated Conductor Temperatures	24 (8h30)
11412	First results from curvature sensor installed in dynamic cable on floating platform	25 (8h30)
11513	Research on 110kV Torsion-Resistant Cable for Offshore Wind Power	26 (8h30)
11705	Design of Flexible Cable Installations within Congested Tunnel Systems	27 (8h30)
11731	Study on Mechanical Fatigue Loads on Insulation in a Dynamic HVDC Cable	28 (8h30)

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ID	Title	Station
11761	Ampacity Calculations of Complex Underground Cables Arrangements	29 (8h30)
11789	A piecewise approximation methodology to analyse cable arcing fault behaviour and characteristic	30 (8h30)
11812	Improved cable RTTR and early failure detection by combining DTS monitoring with distributed point sensing	31 (8h30)
11824	525 kV HVDC Mass Impregnated Cables for 3000 m water depth	32 (8h30)
11827	Development and Reliability Validation of J-Tubeless Installation Method for Submarine Cables in Offshore Wind Farms	33 (8h30)
11834	Qualification of 132 kV wet design XLPE cables	34 (8h30)
11836	Predictive Modelling of XLPE Cable Systems Using Real-Time Monitoring via Distributed Sensing and Edge Integration in the EASY-DC framework	35 (8h30)
11837	Field Experiences with Surface Inspection and Control Algorithms Employed on Extruded HVDC Cable Accessory Installations	36 (8h30)
11838	Mechanical design of dynamic cables for floating wind – Technology Qualification combining testing and cross section modelling	37 (8h30)
11844	Hydrogen-cooled superconducting power link	38 (8h30)
11845	XLPE cable cores with a new aluminium alloy conductor subjected to ageing in water at high constant temperatures and temperature cycling	39 (8h30)
11846	A Practical Approach to Dynamic Operation of the HVAC Submarine Cable System 'Fensfjorden' in Norway	40 (8h30)
11848	Single End Bonding of submarine 3-core cables – Qualification Testing	41 (8h30)
11849	Dielectric Strength of XLPE Subjected to Temporary Overvoltages of Different Durations	42 (8h30)

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ID	Title	Station
11902	Application Case of Field Experience through Mechanical Constant Test of 154kV Eco-friendly Polypropylene Insulated Power Cables	43 (8h30)
12007	Influence of Polarity Reversal on the dielectric strength of extruded HVDC Cables	44 (8h30)
12231	Protective Measures for Medium-Voltage Cable Systems against Nearby Lightning Strikes to Ground	45 (8h30)
12398	Transient Performance and Operational Insights of Hybrid 380 kV AC Transmission Systems	46 (8h30)
12401	Defining Operational Voltage Bands for HVDC Cable Systems in Multiterminal DC Grids: Rationale for Increasing Type Test Base Voltage from 525 kV to 550 kV	47 (8h30)
12501	Development and Standardization of 750 kV Extra-High-Voltage AC Cable System for Large Capacity Renewable Energy Transmission	48 (8h30)
12570	Current rating in dynamic cables with corrugated sheath and double wire armour	49 (8h30)
12571	Thermoelectric performance of a 66 kV Submarine Umbilical Cable Integrating Hydrogen Transmission for Offshore Renewable Systems	50 (8h30)
12618	Assessment of Water Tree Formation in XLPE Insulation Variants to Validate Design of 132 kV Wet-Type Dynamic Cables	51 (8h30)

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PS 2

Recent experience with AC and DC cables, both land and submarine

ID	Title	Station
10157	Advanced 3D FEM Modeling for Thermal Management of Underground Cable Systems and Crossings	1 (10h30)
10257	Unlocking Accuracy: Improving Analytical Model for Submarine Cable Impedance from 50 Hz to 10 kHz	2 (10h30)
10283	Empirical criteria for avoiding thermal runaway and predicting steady state conductor temperature in EHVDC cables	3 (10h30)
10315	Integrated End-of-Warranty Assessment of the Borssele 220 kV Offshore Export Cables	4 (10h30)
10319	Technology & analysis of transient overvoltage measurements for a 420 kV sectionalized cross-bonded underground cable system in a Siphon circuit of the Dutch EHV transmission grid	5 (10h30)
10322	Unlocking thermal and ampacity headroom of medium-voltage cables: towards a component-aware distribution planning framework	6 (10h30)
10323	Recent experience with the consequences of cable tunnel flooding on 132kV XLPE cables and joints	7 (10h30)
10355	Operational insights from the ± 320 kV VSC HVDC Cable System: Metallic Pipeline crossing challenges and Thermal Performance Assessment	9 (10h30)
10357	Design Challenges and Mitigation for HVDC Cable Installation in Metropolitan Cities of India	10 (10h30)
10992	Retention System for Submarine Cable without Armour Wires	11 (10h30)
11021	Non-Invasive Method for Evaluating and Detecting Failures in Bentonite Filling in High-Voltage Cable Ducts during Project Execution	12 (10h30)
11022	Installation of the 1st 525 kV Insulated Cable in Brazil	13 (10h30)
11025	Overhead & Insulated Cables Transmission Lines - Brazilian Scenario	14 (10h30)
11060	Analysis of hourly interruption distribution: the case of the Milan's medium and low voltage grid	15 (10h30)

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ID	Title	Station
11061	Electrical-Thermal Rating of High-Voltage Cables via EMTP Coupled Modelling	16 (10h30)
11062	HV Cables Thermal Rating under Steady-State Conditions in Unfilled Ducts	17 (10h30)
11064	Capacitive PD Sensing and Transmission Line Modeling for Long-Range Cable Defect Detection	18 (10h30)
11065	Qualification and reliability assessment of slow polarity reversal endurance in HVDC MIND cables for enhanced grid flexibility	19 (10h30)
11066	Towards predictive monitoring of HVDC Cables: An integrated system for stress, partial discharges and ageing assessment	20 (10h30)
11265	Calculation and experimental validation of impedance of buried single-core bonding leads	21 (10h30)
11278	Improving the efficiency of renewable energy cable networks	22 (10h30)
11308	Development of an Asset Health Index for Underground Power Cable Terminations	23 (10h30)
11381	Safety in Underground High-Voltage Cable: Effective Solutions for People and Infrastructure Protection	24 (10h30)
11382	Fault events analysis in underground high-voltage cables	25 (10h30)
11384	Sensitivity analysis for the different types of Partial Discharge sensors related to the measured installation	26 (10h30)
11389	How does a HVDC cable system react on TOVs?	27 (10h30)
11408	Water Treeing Behaviour in XLPE Insulation under the Influence of SAP and Development of Evaluation Method	28 (10h30)
11429	Frequency-dependent impedance modelling of HVDC cable	29 (10h30)

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ID	Title	Station
11514	Extra-low frequency dielectric relaxation: Characterization of crosslinking byproducts in XLPE HVDC cable insulation	30 (10h30)
11516	Research on UV fluorescence-based localization for insulating fluid leakage and underwater sealing repair method for SCFF submarine cable	32 (10h30)
11517	Asia's First 2 GW 500 kV EHVDC XLPE Submarine Cable Project: Engineering and Execution	33 (10h30)
11613	Enhanced Single-Ended Fault Location in Hybrid Transmission Corridors with Underground Cable Sections Using a Dynamic Sequence Impedance Factor	34 (10h30)
11671	End To End Implementation of a 400kV 1x2500 mm ² XLPE Cable System With DTS Monitoring	35 (10h30)
11698	Simplified Versus Realistic Geometries in Thermal Modelling of Cables Installed in HDD	36 (10h30)
11709	State-of-the-art review of post-installation effects on subsea cable thermal properties for rating calculations	37 (10h30)
11712	Sequence impedance of submarine cables: Part II	38 (10h30)
11728	Comparative analysis on mechanical behavior according to Armor-types of dynamic cable: A FEM-based design perspective	39 (10h30)
11729	Study on the Behavior of Power Cables under External Forces in Duct : A Case Study from a EHV Cable System in South Korea	40 (10h30)
11737	Cables in unfilled ducts – comparison between IEC 60287 and FEM	41 (10h30)
11787	Strain–life characterization of lead sheath for submarine cables using small-scale and full-scale bending fatigue tests	42 (10h30)
11866	Cables in ventilated conduits: experimental and numerical study of heat transfer and cable ratings	43 (10h30)
11868	Development and Validation of an Improved Cable Thermal Rating Model for Unfilled Trough Installations	44 (10h30)
11869	Inter Array Cable Rating – Considerations Beyond IEC standards	45 (10h30)
12003	Field Trials of DAS-Based TPID Systems for the Monitoring of Urban Extra High Voltage Cable Systems	47 (10h30)

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ID	Title	Station
12005	Arc Pre-Location in Medium Voltage VLF Cable Testing: Performance Assessment on various Cable Insulation Faults, and Workflow Variation depending on used Equipment	48 (10h30)
12058	Inductive Interference Assessment from 230 kV Submarine and Underground Cable Systems: A Case Study in Southern Thailand	49 (10h30)
12092	Topside circulating current and lead sheath grounding of export cables for offshore wind	50 (10h30)
12266	Depth of cover Algorithm Validation in the Baltic Sea using time-lapse geophysical Surveys	52 (10h30)
12268	Field Evidence and Lesson Learned from offshore Power Cable Fault finding using distributed acoustic Sensing	53 (10h30)
12352	Criteria and Methodologies for Selecting Sheath Voltage Limiters (SVLs)	54 (10h30)
12377	New methods for the selection of the bonding cable and SVL	55 (10h30)
12404	Field-Proven V-Moveout Detector for Real-Time Power Cable Fault Detection using Distributed Acoustic Sensing	56 (10h30)
12436	Comparison of an autoencoder and an insulation forest model for the condition assessment of low voltage cables based on powerline communication data	57 (10h30)
12445	Fiber Optics for AI-based Cable Threat Detection in Urban and Submarine Environments	58 (10h30)
12569	Sequence Impedance Calculation in Three-Core, Double-Layer Armored Power Cables: Accurate and Efficient Modeling Approaches	59 (10h30)
12572	Current Rating Improvement via CFD Modeling of Underground HVAC Cables in Natural Ventilated Troughs	60 (10h30)
12573	Water diffusion modeling in power cables: Addressing 1D to 3D geometries using FEM	61 (10h30)
12574	Accurate modelling of induced voltages on cables with single-point bonded sheaths installed in HV substations	62 (10h30)
12613	Thermal Modeling and Ampacity of Submarine Three Phase AC Cables with Lead Sheath: IEC 60287 versus Hybrid Analytical-FEA Approach	63 (10h30)
12634	Indirect Fault Location in Cable Lines Using Distributed Temperature Sensing	64 (10h30)

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PS 3

Environmental impact and cable lifecycle

ID	Title	Station
10356	Routing and Installing EHV AC XLPE Land Cables in Geotechnically Challenging Terrain: Experience from the Himalayas	53 (8h30)
10827	Application of 77 kV Overhead Insulated Cables	54 (8h30)
11793	Research on the Development Mechanism of Submarine Cable Suspension and Fatigue Life Assessment under the Action of Ocean Currents	55 (8h30)
11870	Life cycle assessment of submarine power cables for distribution of offshore wind power to land	56 (8h30)
12273	Scalable and efficient production Strategies for HVDC Cables and Accessories: Enabling the Next Generation of Energy Infrastructure	52 (8h30)

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General and promotional posters

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