

GTR-230

EXTENDING POWER GRID LIFETIME IN EXTREME ENVIRONMENTS

! PROBLEM SOLVED

Power transmission infrastructure operating in coastal industrial and high-UV environments suffers accelerated corrosion, electrical degradation and increasing maintenance costs, reducing asset reliability and operational lifetime.

Developed by NanoTC, GTR-230 is a nanotechnology coating that protects high-voltage conductors from severe coastal corrosion and UV damage.

The technology has shown potential to improve electrical performance, extend maintenance intervals and support industrial integration into conductor manufacturing processes.

KEY BENEFITS



SUPERIOR CORROSION PROTECTION

Barrier effect minimizing corrosion under severe coastal and industrial environments (C4).



UV & WEATHERING STABILITY

Advanced formulation designed for long-term outdoor exposure and environmental durability.



ELECTRICAL PERFORMANCE IMPROVEMENT

Reduces corona activity, partial discharges and leakage current.



EXTENDED MAINTENANCE INTERVALS

Has shown potential to improve electrical performance and reduce maintenance frequency under validated test conditions.



+12 years

EXPECTED MAINTENANCE INTERVAL REFERENCE RANGE

PROVEN PERFORMANCE

ELECTRICAL PERFORMANCE

~20% Reduction in corona pulses (UV chamber).

~30% Reduction in partial discharges (PRY-Cam).

~21% Reduction in average leakage current amplitude.

CORROSION RESISTANCE

ASTM B117 - 500 h (C4 equivalent)

- Best overall performance of the multilayer system.
- Lower corrosion propagation under the film compared to uncoated aluminum.
- +12 YEARS Reference maintenance interval extension.

TRACTION

NanoTC, as part of Broom Innovation, gains access to an international commercial and operational network with presence in 11 countries, enabling international deployment of advanced nanotechnology solutions across strategic industrial sectors.

GLOBAL COMMERCIAL REACH

106 YEARS
FACING THE FUTURE



Seeking co-development, industrial validation and potential integration into conductor manufacturing lines with global OEM conductor manufacturers.

BUSINESS MODEL

NANOTC INDUSTRIAL INTEGRATION MODEL



NanoScan

Industrial diagnosis and opportunity identification.



NanoPilot

Laboratory and pilot-scale validation under real industrial conditions.



NanoTransfer

Technology transfer and industrial implementation.



NanoSupply

Scalable supply of nanomaterial-based additives.

From industrial challenge identification to scalable nanotechnology implementation.

TEAM



EDUARDO SALAS
COMMERCIAL DIRECTOR
BROOM GROUP

International business development and strategic partnerships.



GUSTAVO SESSAREGO Ph. D
NANOMATERIALS &
ELECTROCHEMISTRY SPECIALIST

Ph. D in Chemistry with expertise in advance materials performance.

PARTNERS

SUPPORT / ECOSYSTEM

CORFO

ProChile
MINISTERIO DE RELACIONES EXTERIORES

PARTNERS

transelec
ventures:

BROOM GROUP

TECHNICAL VALIDATION



PONTIFICIA
UNIVERSIDAD
CATÓLICA DE
VALPARAÍSO



UNIVERSIDAD TECNICA
FEDERICO SANTA MARIA

**Universidad
de Valparaíso**
CHILE