



CMCE MARINE

LIGHTNING PROTECTOR

B R O C H U R E



PARAGUAY

www.sertecmarine.com

MAR 2024



SERTEC S.R.L.

Sertec S.R.L. It is an Engineering company, with an experience and a good national and international reputation of 20 years; being one of the main product lines of the company the multiple Compensators of Electric Charge "CMCE SERTEC" designed against atmospheric discharges.

Throughout the development of its technology, it has installed thousands of devices against atmospheric discharges worldwide in different types of applications on land and sea, including industries with explosive, chemical or highly dangerous atmospheres without ever having received lightning strikes and proudly fulfilling the mission of protecting the assets of its clients.

SERTEC S.R.L. has an important distribution structure in more than 50 countries around the world including: USA, Canada, United Kingdom, Germany, Norway, Italy, Holland, India, United Arab Emirates, Oman, South Africa, Zimbabwe, Singapore, Taiwan, Vietnam, Thailand, Mexico, Argentina, Ecuador, Peru, Bolivia, Honduras, Colombia, Costa Rica, Panama, Dominican Republic, Guatemala, Paraguay among others.

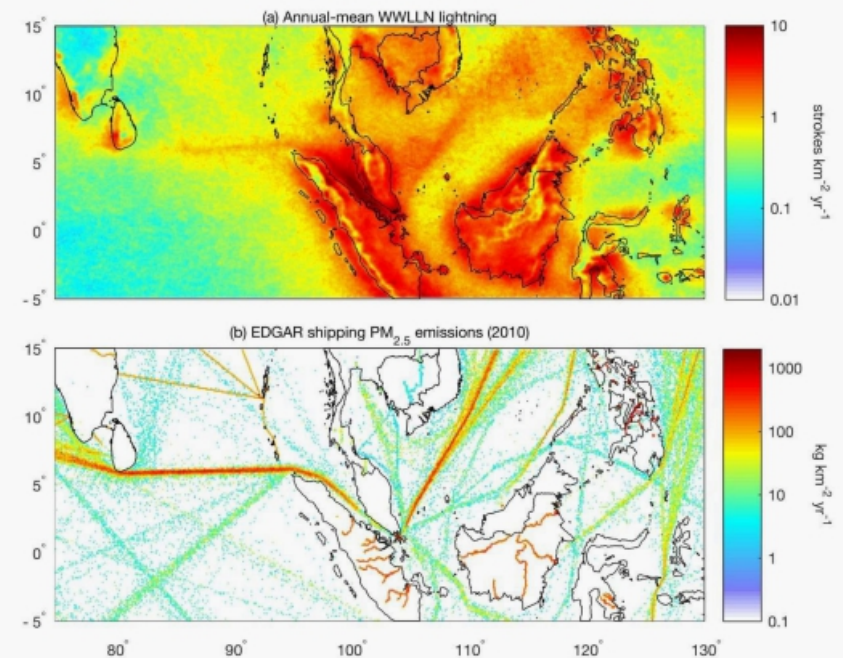
One of the important milestones is having reached at the beginning of 2020 the development of a specialized line of products for marine protection, designed to meet the demanding requirements of this industry and thus protect from small sailboats, luxury yachts, catamarans to transatlantic vessels of great bearing.

SCENARIO

Researchers from the University of Washington and NASA, concluded an increase in electrical discharges on the main oceanic sea lanes. They noticed a repeated pattern on the routes, in which there was an increase in the density of electric discharges through the analysis of data from 11 years of activity.

This phenomenon is generated because the gaseous waste particles from the ships are directed to the storm clouds, adhering to the ice particles that exist inside them, increasing the friction activity between them, generating a greater electric field for electrical storms. Large boats, due to their dimensions, are more prone to lightning strikes at sea.

Source:  BoatUS



CMCE MARINE

Sertec has developed the highest technology solution in lightning protection for boats, compatible with navigation systems, construction materials and all types of navigation masts or bridges.

The CMCE SERTEC MARINE is designed to protect against the electro-atmospheric effects produced by climate change, compensating and stabilizing the electrical charges in its environment and in movement on the high seas.

Remote monitoring

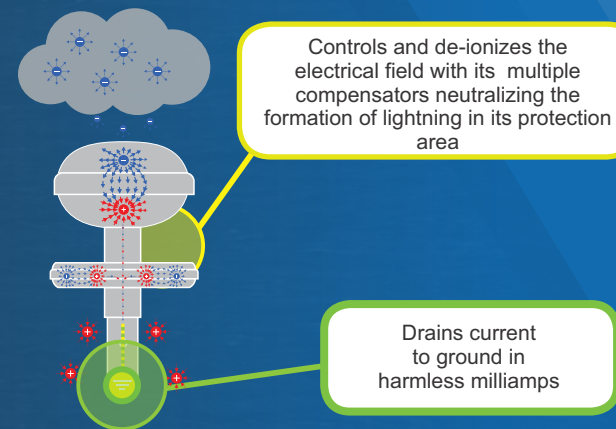
Real-time monitoring of the CMCE-SERTEC. The information (miliamps readings) can be viewed from a web page. Data can be obtained from all installed CMCE-SERTEC equipment, no matter the quantity.

- Historical data, that can be saved for reporting.
- Live status of the CMCE, on display.
- Alarms providing notification if there is an error.



The technology is based on a principle of Nikola Tesla

In 1916 Nikola Tesla in his patent No. 1,266,175 mentioned the principles of operation of a primitive device based on the principles that underpin our developments, explaining the inconveniences produced by the top-of-the-line lightning rods, which, instead of protecting property and people, attracted lightning, increased the feasibility of lightning strikes and consequently the risks for them. New materials and designs, added to years of experience, have allowed us to improve the experiences of the undisputed scientist Nikola Tesla evolving in the protection of atmospheric phenomena.



SITUATION

In a typical situation, any boat on the high seas or in port constitutes a perfect target when navigating near or within a thunderstorm, this becomes the point of greatest attraction on the horizon of the storm and the probabilities increase on ocean routes.

The masts are not designed to contain and handle discharges without collateral damage (the voltage that represents the discharge of more than one billion watts or 30,000A traveling such a structure).

The masts of steel or metallic material, become current conducting elements, if the lightning is formed and attracted, it impacts everything that is linked to them, passing the current to the keel, hull and main structures. Affecting the electrical system, navigation systems, VHF radio, MF DSC, GMDSS, Navtex among others. The structure is compromised and may alter its technical properties, as well as putting the cargo and crew at risk.

With a CMCE device installed at the highest point of a boat, the attraction effect caused by the masts and antennas is eliminated by creating a protection shield for the structures.

The CMCE Technology is a preventive element rather than protective equipment, guaranteeing more sailing time instead of lost profit time and repair costs.

Thanks to this technology, the crew, cargo and communication systems will not be affected, reducing to the maximum the risk of being hit by lightning strikes.



MODELS



CMCE SERTEC MARINE

GOLD

Description: Thanks to its small size and weight, it is also special for use in Small Boats, Sailboats, Marine Buoys, etc.

Weight: 1,062 kgrs. (Gross)

Measurements: Ø 12.5 cm x 21.6 cm.

Packaging:

Galvanized Metallic Material.



CMCE SERTEC MARINE

PLATINUM

Description: Of greater deionizing power, For use in medium-sized fishing or expedition boats, Catamarans, Small yachts, etc.

Weight: 2,750 kgrs. (Gross)

Measurements: Ø 16.25cm x 25.67cm

Packaging:

Galvanized Metallic Material.



CMCE SERTEC MARINE

DIAMOND

Description: With great deionizing power, it is developed for maximum protection in Yachts, Cruises, Cargo ships, Military ships, etc.

Weight: 6.170 kgrs. (Gross)

Measurements: Ø 25cm x 37.8cm

Packaging:

Galvanized Metallic Material.

CERTIFICACIONES



Certification ISO 9001, ISO 14001 2015 by STARREGISTER



ILAC-MRA, ENAC



Approved by the NATO Cataloging System (NOC) with the NCAGE code SFKU3



Approved by the TESLA institute based on the IEC 60060-1, IEC 60060-2 Standard



Type Approval certificate ELE281223XG



We have UL Certification in a specific model.



CE marking on all CMCE models.



UKCA marking on all CMCE models

PARTNERS



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CATAMARANS

TMS
TECHNICAL
MARINE
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YACHTS

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EMP SOLUTIONS

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& SERVICES PTE. LTD



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Soluciones inteligentes pensando en usted