

# Why is it the best?

## TECHNOLOGICAL DIFFERENCES BETWEEN DDCE AND CONVENTIONAL LIGHTNING CONDUCTORS

DDCE LIGHTNING CONDUCTOR	CONVENTIONAL LIGHTNING CONDUCTOR
<p>✓ Not excite or capture the lightning with an efficiency of 99% guaranteed by the laboratory tests and field trials (in the latter two effectiveness is 100%)</p>	<p>Excites and captures lightning.</p>
<p>✓ During the peak of the storm, you can record media transfer values (leakage currents) from 700 mill amperes to 1.2 amperes per wire arrester installation, with peaks of 1.6 amperes leakage when lightning strikes appear about 300 meters, approximately.</p>	<p>During storm activity, you can register transfer values (leakage currents), if lightning strikes a lightning rod for cable installation arrester 120 A to 350,000 A, the mean values 30,000 a to 70,000 A.</p>
<p>✓ The electrostatic charge of the facility compensates land gradually with increasing potential difference between cloud and ground, neutralizing the tip effect in 99% of cases (plotter or Leader) and minimizing electrical indirect effects (electromagnetic pulses and derived currents ground) from 60% to 90%</p>	<p>Significantly increases the probability of lightning strike a lightning rod itself (70% -80%), being a metallic element ionizing scribe, with severe effects around, which will depend on the intensity beam transport, something, unpredictable</p>
<p>✓ Protects all types of structures, is especially effective in environments with risk of fire or explosion and predominant metal structures such as telecommunication towers.</p>	<p>If you fall in the lightning arrester (which is what they are designed for), generates electromagnetic pulses, surges, current surges and electrical hazards in the structure itself that is supposed to protect and surroundings, which can be quite substantial and serious</p>
<p>✓ No crystallization generates ground or electrolytic currents.</p>	<p>Generates severe crystallisation and electrolytic ground currents.</p>
<p>✓ Contains no electronic or radioactive elements.</p>	<p>The priming contains electronics. Neither contain, at present, radioactive elements.</p>
<p>✓ Minimizes shutdowns of facilities because of the direct effects of lightning. Reduce travel costs and materials for faults due to lightning. Optimizes the power and reliability of information and critical data.</p>	<p>Increases shutdowns of facilities because of the direct effects of lightning. Increased travel costs and materials for breakdowns because of lightning. Reduces the reliability of electricity supply and information and critical data.</p>
<p>✓ Grounding supports grounding of low voltage and therefore can be a go to ground installation, provided it is less than 10 Ohms.</p>	<p>Grounding is inconsistent with the grounding of low voltage, as it is a high voltage installation and therefore cannot be connected to the grounding of the installation must be independent of this.</p>

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<p>✓ In the case of lightning strikes in areas close to PDCE (indirect effects) or impacts PDCE own (1%), the PDCE is built with consumables (650 C -) to sacrifice as a fuse, transforming the beam energy in the moment of impact to thermal energy due to the type of material it is made by melting some of it very quickly.</p> <p>The effect of transforming electrical / thermal Energy cancels the appearance of possible hazardous leakage currents throughout the installation of LPS, negating the possibility of creating radiated electromagnetic pulses and dangerous step voltages (the minimized from 60% to 90%)</p>	<p>If lightning strikes in areas close to the conventional lightning rod or bait or impact on the arrester itself (70% - 80%), the melting current arrester absorbs the material gradually (depending on the intensity you get to SPCR) generating over current and throughout the facility where it is placed.</p> <p>We must think that a copper wire 50 mm section holds about 150 A in continuous current. When a lightning strike of 30,000 A, for example, although it passes in microseconds (the time depends on the transfer of resistance from the ground), the wire is completely rigid and burned.</p>
<p>✓ Meets international laws Occupational Risks Relating to the basic principles of preventive action and electrical hazards, such as:</p> <ul style="list-style-type: none"> <li>* Avoid risks because they do not attract lightning.</li> <li>* Assess and address the risks that cannot be avoided, acting as a thermal fuse in case there are indirect effects lightning strike in nearby areas where they are placed.</li> <li>* Take into account the evolution of the technique, as it is always better system that does not attract lightning to one that attracts lightning.</li> <li>* Replacing the dangerous by involving little or no danger, since the PDCE replaces an element that tries to attract a major risk, as is a tip FRANKLIN.</li> <li>* Adopt measures that put the collective protection to the individual, since the PDCE is a system of collective protection against lightning and avoid, in the probe is placed, have individual protections for workers, the majority of cases ineffective, to electrical hazards causing the lightning strikes.</li> </ul>	<p>Not comply with the international laws of Occupational Risks Relating to the basic principles of preventive action and electrical hazards</p> <ul style="list-style-type: none"> <li>* Prevents NO risk because it attracts the electrical risk from lightning strikes. Furthermore, we can never know that transport the beam intensity falls because it is random, and the effects of a lightning strike depend entirely on the intensity carrying it.</li> <li>* Assess and address the risks that cannot be avoided. Conventional tips attempting to transfer the energy carried by the beam through a metal element (head) and a copper wire downspout 50 mm, reaching a touchdown, but the point of impact of lightning, produces a thermal effect on the entire system of LPS (depending on the intensity you transport the beam will be lower or higher. Also depend on ground resistance, the higher ground resistance, higher thermal effect will be), explosion effect (point of impact) and an electromagnetic pulse (current conducted by air travelling in all directions, carrying a very high peak power, which depends on the beam intensity transport. Therefore manage these risks, WITHOUT EFFECTS important to protect the structure and the people that are around, it is quite impossible, as they themselves admit in their own regulations.</li> <li>* NO Do consider the evolution of the technique, as its operating principle remains attract lightning and therefore the risks that entails.</li> <li>* Replacing the dangerous by involving little or no risk as attract lightning, always carries a risk of unknown consequences, but very dangerous.</li> </ul>

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CONVENTIONAL LIGHTNING CONDUCTOR

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- \* Assess and address the risks that cannot be avoided, acting as a thermal fuse in case there are indirect effects lightning strike in nearby areas where they are placed.
- \* Take into account the evolution of the technique, as it is always better system that does not attract lightning to one that attracts lightning.
- \* Replacing the dangerous by involving little or no danger, since the PDCE replaces an element that tries to attract a major risk, as is a tip FRANKLIN.
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- \* NO Do consider the evolution of the technique, as its operating principle remains attract lightning and therefore the risks that entails.
- \* Replacing the dangerous by involving little or no risk as attract lightning, always carries a risk of unknown consequences, but very dangerous.

✓ Not comply with the laws of prevention of occupational risks, as for signalling danger, since the installation of an LPS with PDCE system, low voltage currents pass and are therefore not necessary to sign electrical hazards.

Not comply with the laws of prevention of occupational risks, as for signs of danger, and the installation of a conventional system is a high voltage installation, since under storm, are designed to attract lightning and if it falls, by the SPCR pass high voltage currents, and therefore, has to signal as such.

✓ No effects of Electromagnetic Compatibility generates.

It is the largest generator of electromagnetic pulses and also a very high energy and therefore extremely hazardous.