***भारतीय मानक***

***Indian Standard***

 **IS…………:2024**

 **IEC 62561-7: 2024**

**विद्युत संरक्षण प्रणाली कम्पोनेंट्स (एलपीएससी)**

**भाग 7 अर्थिंग सुधारने वाले यौगिकों के लिए आवश्यकताएँ**

**Lightning protection system components (LPSC)**

Part 7 Requirements for Earthing Enhancing Compounds

ICS 29.020; 91.120.40

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BUREAU OF INDIAN STANDARDS

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**September 2024 Price Group**

Electrical Installation Sectional Committee, ETD 20

NATIONAL FOREWORD

This Standard (Part 7) which is identical with IEC 62561-7: 2024 ‘Lightning Protection System Components (LPSC) – Part 7 Requirements for earthing enhancing compounds’ issued by the International Electrotechnical Commission (IEC) was adopted by the Bureau of Indian Standards on the recommendation of the Electrical Installation Sectional Committee and approval of the Electrotechnical Division Council.

This Indian Standard is published in several parts. The other parts in this series are:

|  |  |
| --- | --- |
| Part 1 | Lightning protection system components LPSC - Part 1: Requirements for connection components |
| Part 2 | Lightning protection system components LPSC Part 2: Requirements for conductors and earth electrodes |
| Part 3 | Lightning protection system components LPSC Part 3: Requirements for isolating spark gaps ISGs |
| Part 4 | Lightning protection system components LPSC Part 4: Requirements for conductor fasteners |
| Part 5 | Lightning protection system components LPSC Part 5: Requirements for earth electrode inspection housings and earth electrode seals |
| Part 6 | Lightning protection system components LPSC Part 6: Requirements for lightning strike counters LSCs |
| Part 8 | Lightning protection system components LPSC Part 8: Requirements for components for isolated LPS |

The standard does not provide performance of the earth enhancing compound in reducing the resistance of electrode to soil. The compound shall be used as recommended in IS/IEC 62305-3 and not recommended for other purposes. The following points are also to be noted.

1. Earthing enhancing compounds are effective in soil with resistivity higher than 3000 Ωm.
2. Earthing enhancing compounds are not effective in soil with resistivity less than 200 Ωm.
3. In soil with low resistivity, corrosion of the earth electrode shall be considered.
4. For Low Voltage electrical installation, an earth electrode may be required. How ever no minimum value is necessary.
5. For high voltage installation, earth electrodes shall reduce touch and step potentials.

The text of the IEC Standard has been approved as suitable for publication as an Indian Standard without deviations. Certain conventions are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

1. Wherever the words ‘International Standard’ appears referring to this standard, they should be read as ‘Indian Standard’.
2. Comma (,) has been used as a decimal marker, while in Indian Standards the current practice is to use a point (.) as the decimal marker.

The technical committee has reviewed the provisions of the following international standards referred in this adopted standard and decided that they are acceptable for use in conjunction with this standard.

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| *International Standard* | *Title* |
| ISO 4689-3, | Iron ores – Determination of sulfur content – Part 3: Combustion/infrared method |
| EN 12457-2, | Characterization of waste – Leaching – Compliance test for leaching of granular waste materials and sludges – Part 2: One stage batch test at a liquid to solid ratio of 10 l/kg for materials with particle size below 4 mm (without or with size reduction) |
| CEN/TR 16192, | Waste – Guidance on analysis of eluates |
| ASTM G57-20, | Standard Test Method for Field Measurement of Soil Resistivity, Using the Wenner, Four-Electrode Method |
| ASTM G59-97, | Standard Test Method for Conducting Potentiodynamic Polarization Resistance Measurements |
| ASTM G102-89, | Standard Practice for Calculation of Corrosion Rates and Related Information from Electrochemical Measurements |

Only the English language text has been retained while adopting it in this Indian Standard, and as such, the page number given here are not the same as in the IEC Publication.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated expressing the result of a test, shall be rounded off in accordance with IS 2: 2022 ‘Rules for rounding off numerical values (*second revision*)’. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.