

超電導関連の標準化の進捗状況

IEC/TC90 超電導委員会は、IEC 規格及び JIS の原案作成・提案などを通じて、超電導関連の標準化の推進に貢献しています。

IEC 国際規格 (International Standard, IS)

【青字は改訂作業中】

【赤字は改訂及び新規発行】

- **IEC 60050-815 Ed.3.0: 2024: International Electrotechnical Vocabulary - Part 815: Superconductivity**
- IEC 61788-1 Ed.2.0: 2006 : Superconductivity - Part 1: Critical current measurement - DC critical current of Nb-Ti composite superconductors
- IEC 61788-2 Ed.2.0: 2006 : Superconductivity - Part 2: Critical current measurement - DC critical current of Nb₃Sn composite superconductors
- IEC 61788-3 Ed.2.0: 2006 : Superconductivity - Part 3: Critical current measurement - DC critical current of Ag- and/or Ag alloy-sheathed Bi-2212 and Bi-2223 oxide superconductors
- IEC 61788-4 Ed.5.0: 2020 : Superconductivity - Part 4: Residual resistance ratio measurement - Residual resistance ratio of Nb-Ti and Nb₃Sn composite superconductors
- IEC 61788-5 Ed.2.0: 2013 : Superconductivity - Part 5: Matrix to superconductor volume ratio measurement - Copper to superconductor volume ratio of Cu/Nb-Ti composite superconducting wires
- IEC 61788-6 Ed.3.0: 2011 : Superconductivity - Part 6: Mechanical properties measurement - Room temperature tensile test of Cu/Nb-Ti composite superconductors
- IEC 61788-7 Ed.3.0: 2020 : Superconductivity - Part 7: Electronic characteristic measurements - Surface resistance of superconductors at microwave frequencies
- IEC 61788-8 Ed.2.0: 2010 : Superconductivity - Part 8: AC loss measurements - Total AC loss measurement of round superconducting wires exposed to a transverse alternating magnetic field at liquid helium temperature by a pickup coil method
- IEC 61788-9 Ed.1.0: 2005 : Superconductivity - Part 9: Measurements for bulk high temperature superconductors - Trapped flux density of large grain oxide superconductors
- IEC 61788-10 Ed.2.0: 2006: Superconductivity - Part 10: Critical temperature measurement - Critical temperature of composite superconductors by a resistance method
- IEC 61788-12 Ed.2.0: 2013: Superconductivity - Part 12: Matrix to superconductor volume ratio measurement - Copper to non-copper volume ratio of Nb₃Sn composite superconducting wires
- IEC 61788-13 Ed.2.0: 2012: Superconductivity - Part 13: AC loss measurements - Magnetometer methods for hysteresis loss in superconducting multifilamentary composites
- IEC 61788-14 Ed.1.0: 2010: Superconductivity-Part 14: Superconductivity - Part 14: Superconducting power devices - General requirements for characteristic tests of current leads designed for powering superconducting devices
- **IEC 61788-15 Ed.1.0: 2011: Superconductivity - Part 15: Electronic characteristic measurements - Intrinsic surface impedance of superconductor films at microwave frequencies**
- IEC 61788-16 Ed.1.0: 2013: Superconductivity - Part 16: Electronic characteristic measurements - Power-dependent surface resistance of superconductors at microwave frequencies
- IEC 61788-17 Ed.2.0: 2021: Superconductivity - Part 17: Electronic characteristic measurements - Local critical current density and its distribution in large-area superconducting films
- IEC 61788-18 Ed.1.0: 2013: Superconductivity-Part 18: Mechanical properties measurement- Room temperature tensile test of Ag- and/or Ag alloy- sheathed Bi-2223 and Bi-2212 composite superconductors
- IEC 61788-19 Ed.1.0: 2013: Superconductivity - Part 19: Mechanical properties measurement - Room temperature tensile test of reacted Nb₃Sn composite superconductors
- IEC 61788-21 Ed.1.0: 2015: Superconductivity - Part 21: Superconducting wires - Test methods for practical superconducting wires - General characteristics and guidance
- IEC 61788-22-1 Ed.1.0: 2017: Superconductivity - Part 22-1: Superconducting electronic devices - Generic specification for sensors and detectors
- IEC 61788-22-2 Ed.1.0: 2021: Superconductivity - Part 22-2: Normal state resistance and critical current measurement – High-Tc Josephson junction
- IEC 61788-22-3 Ed.1.0: 2022: Superconductivity - Part 22-3: Superconductivity - Part 22-3: Superconducting strip photon detector - Dark count rate
- **IEC 61788-23 Ed.3:2024: Superconductivity - Part 23: Residual resistance ratio measurement - Residual resistance ratio of Nb superconductors**
- IEC 61788-24 Ed.1: 2018: Superconductivity - Part 24: Critical current measurement - Retained critical current after double bending at room
- IEC 61788-25 Ed.1: 2018 , Superconductivity - Part 25: Mechanical properties measurement - Room temperature tensile test on REBCO wires
- IEC61788-26 Ed.1:2020, Superconductivity - Part 26: Critical current measurement - DC critical current of RE-Ba-Cu-O composite superconductors
- **IEC 61788-27:2025 Ed.1 2025, Superconductivity - Part 27: Twist pitch measurement of practical superconducting wires - Twist pitch measurement of Nb-Ti/Cu and Nb-Sn/Cu composite superconductors**

IEC 技術報告書 (Technical Report, TR)

- IEC TR 61788-20 Ed.1.0: 2014 Superconductivity - Part 20: Superconducting wires - Categories of practical superconducting wires - General characteristics and guidance

IEC 発行物の入手は、IEC の Web store (<http://www.iec.ch/>)へ、直接ご用命ください。

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JIS 超電導関連発行規格

- JIS H 7005: 2005 超電導関連用語 (整合 IEC 60050-815: 2000)
- JIS H 7300 : 2020 超電導—実用超電導線の試験方法の総則 (整合 IEC 61788-21:2015)
- JIS H 7301: 2009 超電導—第1部:臨界電流の試験方法—ニオブ・チタン合金複合超電導線 (整合 IEC 61788-1: 2006)
- JIS H 7302: 2009 超電導—第2部:臨界電流の試験方法—ニオブ3すず複合超電導線 (整合 IEC 61788-2:2006)
- JIS H 7303: 2019 超電導—機械的性質の試験方法—銅安定化ニオブ・チタン複合超電導体の室温引張試験 (整合 IEC 61788-6: 2011)
- JIS H 7304: 2017 超電導—超電導体のマトリックス比試験方法—銅安定化ニオブ・チタン複合超電導線の銅比 (整合 IEC 61788-5: 2013)
- JIS H 7305: 2010 超電導—臨界電流の試験方法—銀シーสบスマス2212及びビスマス2223酸化物超電導線の直流臨界電流 (整合 IEC 61788-3:2006)
- JIS H 7306: 2012 超電導—残留抵抗比試験方法—ニオブ・チタン複合超電導体の残留抵抗比 (整合 IEC 61788-4: 2007)
- JIS H 7307: 2010 超電導—エレクトロニクス特性測定法—超電導体のマイクロ波表面抵抗 (整合 IEC 61788-7:2006)
- JIS H 7308: 2017 超電導—超電導体に対するマトリックス体積比試験方法—ニオブ3すず複合超電導線の非銅部に対する銅部体積比 (整合 IEC 61788-12: 2013)
- JIS H 7309: 2012 超電導—臨界温度試験方法—複合超電導体の抵抗法による臨界温度 (整合 IEC 61788-10:2006)
- JIS H 7310: 2013 超電導—交流損失試験方法—ピックアップコイル法による液体ヘリウム温度・交流横磁界中の円断面超電導線の全交流損失測定 (整合 IEC 61788-8: 2010)
- JIS H 7311: 2006 超電導—交流損失試験方法—磁力計法によるニオブ・チタン複合超電導線のヒステリシス損失測定 (整合 IEC 61788-13: 2003)
- JIS H 7313: 2007 超電導—バルク高温超電導体の試験方法—捕そく(捉)磁束密度 (整合 IEC 61788-9: 2005)
- JIS H 7314: 2013 超電導—給電装置—超電導機器へ給電する電流リードの特性試験に関する一般要求事項 (整合 IEC 61788-14: 2010)

JIS の入手は、(一財)日本規格協会の Web store (<https://webdesk.jsa.or.jp/>)へ、直接ご用命ください。

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