

Legal Inspection Requirements for Secondary Lithium Cell Blocks, Battery Packs (Modules), Battery Systems for battery energy storage systems (BESS) use

By the Bureau of Standards, Metrology and Inspection (BSMI), Ministry of Economic Affairs

Introduction:

To achieve net-zero carbon emissions by 2050, it is expected that renewable energy power generation equipment and energy storage systems will gradually enter households and communities. Due to the risks associated with thermal runaway in lithium-ion batteries used in energy storage systems, the BSMI adds secondary lithium cell blocks, battery packs (modules), and battery systems with a capacity between 1 kWh and 100 kWh (inclusive), used in battery energy storage systems (BESS) into the mandatory inspection scope. Two alternative conformity assessment procedures are made available for the choice of applicants, i.e. Registration of Product Certification (RPC) or Type-Approved Batch Inspection (TABI).

Date of implementation:

For battery capacity between 1 kWh and 20 kWh, inclusive: 1 July 2026.

For battery capacity over 20 kWh and not exceeding 100 kWh: 1 July 2027.

Scope of covered products:

Description of Goods	Inspection Standards (Note)	C.C.C. Code (the first 6 digits are the same as HS Code)(For reference)	Conformity Assessment Procedures
Secondary Lithium Cell Blocks, Battery Packs (Modules), Battery Systems for battery energy storage system (BESS) use (inspection scope: battery capacity between 1 kWh and 100 kWh, inclusive)	CNS 62619: 2020 or 2023 & CNS 63056: 2021	8507.60.00.90.0F 8507.80.90.19.5F	RPC Scheme (Modules II+IV or II+V or II+VII) or TABI Scheme

Note:

1. The products shall conduct the "Propagation Test" in accordance with Section 7.3.3 of CNS 62619: 2020 or 2023.
2. The functional safety of the battery system as specified in Section 8.1 of CNS 62619: 2020 or 2023 shall comply with one of the following standards or a newer version, along with the corresponding requirements, and provide test reports issued by testing laboratories accredited by signatories to the International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement (MRA), or the International Accreditation Forum (IAF) Multilateral Recognition Arrangement (MLA), or testing laboratories participating in the IEC System of Conformity Assessment Schemes for Electrotechnical Equipment and Components (IECEE).
 - (1) IEC/UL 60730-1:2013 (UL 60730-1:2016) Annex H (Safety integrity level Class B or C)
 - (2) IEC 61508:2010 (Safety integrity level (SIL) of at least 2)
 - (3) ISO 13849-1:2015 and ISO 13849-2:2012 (performance level "C")
 - (4) UL 991:2004 and UL 1998:2013
3. For cell blocks or battery packs (modules) that comply with CNS 62619 or CNS 63056 and are certified under the Voluntary Product Certification (VPC), the VPC certificates issued by the BSMI may be used as conformity documents. For cell blocks or battery packs (modules) that are used in battery systems that comply with IEC 62619: 2017 or relevant international standards of a newer version, the certification documents issued by product certification bodies accredited against ISO/IEC 17065 may be used as conformity documents. The products shall still comply with CNS 63056.

Description of the two kinds of conformity assessment procedures

1. Registration of Product Certification (RPC) Scheme:

For product subject to Modules II+IV, II+V, or II+VII procedures, not only the products shall be type-tested in advance (Module II) by the BSMI or BSMI-recognized testing laboratories, but the quality management systems of the production premises must be in conformity with Module IV (Full Quality Management System), Module V (Production Quality Management System) or Module VII (Factory Inspection).

For Module IV and Module V, a registration certificate in accordance with the CNS 12681 (ISO 9001) series of standards is required to be obtained from the BSMI, or certification bodies recognized by the BSMI. As for Module VII, a factory inspection report issued by the BSMI or BSMI-recognized factory inspection bodies is needed in the same way.

In addition, a declaration of conformity-to-type is also required to ensure that the mass-produced commodities are in conformity with that shown in the type-test report for all the above three IV, V, VII modules.

After being certified and registered by the BSMI, products will be allowed to use the Commodity Inspection Mark with the letter 'R' and the identification number given by the BSMI. Additionally, these products can clear customs directly without any further inspection if not being sampled by RPC border check procedures. The application fee and annual fee for RPC are both NT\$5,000 (about US\$170) for each certification, and the RPC certification is valid for 3 years. If there are any serial products, an extra NT\$3,000 (about US\$102) of application fee will be charged for every application in each certification. The fees for type testing vary by products and depend on the fee policies of the testing laboratories.

2. Type-Approved Batch Inspection (TABI) Scheme

Under this procedure, manufacturers or importers shall have their products type-tested by the BSMI or BSMI-designated testing laboratories, and file an application for Type Approval to the BSMI or its branches.

After manufacturers or importers obtain a Type Approval certificate, they are required to file an application for batch inspection to the BSMI each time before their products are released from the production premises or arrive at the port of entry. The BSMI will then review the application and the related documents while additional samples may be required for further testing if it is deemed necessary.

After the products have passed the inspection, they will be allowed to use the Commodity Inspection Mark with the letter 'T' and the identification number given by the BSMI. The application fee for the Type Approval is NT\$3,500, and a Type Approval certificate is valid for three years. The fees for type testing vary by products and depend on the fee policies of the testing laboratories.

*Further information on the two schemes can also be found on the BSMI website:
<https://www.bsmi.gov.tw/wSite/lp?ctNode=9768&CtUnit=4132&BaseDSD=7&mp=2>

Locations to apply for Type Testing:

The BSMI designated testing laboratories.

Locations to apply for Registration of Product Certification:

The BSMI or its branches.

Locations to apply for Batch Inspection:

1. Domestic manufacturers or consigned manufacturers: submit inspection applications to the BSMI or the branches of the BSMI according to the place of production. If necessary, the manufacturers can apply for cross-jurisdictional inspections.
2. Importers or entrusted importers: report to the BSMI or the branches of the BSMI for inspection according to the jurisdiction of the port where the imported goods arrive. If necessary, the manufacturers can apply for cross-jurisdictional inspections.

Time required for Registration of Product Certification:

14 working days. (This period does not include the time for corrective actions by the applicant due to deficiencies in the documents or samples. Extra 7 working days may be required if additional tests are required.)

Related requirements:

1. For the above listed commodity with battery capacity between 1 kWh and 20 kWh, inclusive:
 - (1) No matter imported and domestically produced, the inspection will begin from 1 July 2026. The import regulation code is C02. From the announcement date, the BSMI can accept applications for Type Approval Batch Inspection and Registration of Product Certification for the above listed

commodity with battery capacity not exceeding 20 kWh.

- (2) Those who apply for a certificate to the BSMI from the date of announcement shall provide the type test report that meets the inspection standards. The certificate shall be issued after the examination by the BSMI. The validity period of the certificate shall be three years from the date of issuance. (If the issuance date is before 30 June 2026, the effective date will begin from 1 July 2026 and the expiry date will be 30 June 2029)
- 2. For the above listed commodity with battery capacity over 20 kWh and not exceeding 100 kWh:
 - (1) No matter imported and domestically produced, the inspection will begin from 1 July 2027. The import regulation code is C02. From the announcement date, the BSMI can accept applications for Type Approval Batch Inspection and Registration of Product Certification for the above listed commodity with battery capacity over 20 kWh and not exceeding 100 kWh.
 - (2) Those who apply for a certificate to the BSMI from the date of announcement shall provide the type test report that meets the inspection standards. The certificate shall be issued after the examination by the BSMI. The validity period of the certificate shall be three years from the date of issuance. (If the issuance date is before 30 June 2027, the effective date will begin from 1 July 2027 and the expiry date will be 30 June 2030)
- 3. For the above listed commodity that complies with CNS 62619 or CNS 63056 and is certified under the Voluntary Product Certification (VPC), the type-test report may be issued by the original BSMI-designated testing laboratories after the supplementary testing is conducted to address differences in the product or standard.
- 4. Cell model, model or identifiable code of the battery management system (BMS), and software version shall be suffixed to the battery system model when applying for the Type Approval certificate or Registration certificate.
- 5. The technical documents required for type testing shall comply with the requirements specified in the "Directions Governing Type Approval of Electrical and Electronic Commodities."
- 6. Fees for product type-testing: Charged in accordance with the fee regulations of the BSMI's designated testing laboratory.
- 7. Fees for product registration of product certification and type approval batch-by-batch inspection: Charged in accordance with the relevant provisions of the "Regulations Governing Fees for Commodity Inspection."
- 8. The inspection standards of the products listed in the table shall be the version published in this announcement. If any updated version is available, the BSMI shall publish the implementation date of the updated version in a further announcement.
- 9. The C.C.C. Codes listed in the table are used for reference only. The commodity shall still comply with the requirements before entering into the market, even though its C.C.C. Code is identified differently by the Customs Administration, Ministry of Finance or International Trade Administration, Ministry of Economic Affairs.
- 10. Commodities with combined features or multifunctional products shall comply with the respective inspection standards and conformity assessment procedures of RPC scheme.