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Implementation Rules for CCAP Mark Certification

Battery and charger for electric bicycle

CCAP 标志认证实施规则

电动自行车用蓄电池及充电器

Issued on: February 01, 2021 Implemented on: February 01, 2021

China Certification Centre for Automotive Products

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1 Application scope

This Rules is applicable to lithium-ion batteries, sealed lead-acid batteries, metal hydride nickel batteries and their chargers for electric bicycles.

2 Certification basis and standards

2.1 For battery

GB/T 36972-2018, Lithium-ion battery for electric bicycle

GB/T 22199.1-2017, Valve-regulated lead-acid batteries for moped - Part 1: Technical conditions

QB/T 2947.2-2008, Electric bicycles-cell or battery and chargers - Part 2: metal-hydride Ni-ion batteries and chargers (Except charge retention capacity and cycle life)

2.2 For charger

GB/T 36944-2018, Technical requirements of charger for electric bicycles

QB/T 5511-2020, Lithium-ion battery charger for electric bicycle

In principle, the above standards shall implement the latest version issued by the national standardization administrative department. When other versions of the standard need to be used, the announcement of applicable relevant standard requirements issued by CCAP shall be followed.

3 Certification mode selection and relevant requirements

3.1 Basic certification modes

The basic certification mode for implementing CCAP mark certification for battery and charger for electric bicycle is:

Type test + initial factory inspection + post-certification supervision

The basic certification mode is based on the premise of manufacturing enterprises' integrity and self-discipline, effective management, and stable production. It is determined based on the inherent safety risk characteristics of the product and the production process commonly used by manufacturing companies. CCAP has formulated the "Principles for Classification of Manufacturing enterprises" (see Attachment 4) to implement classified management of manufacturing enterprises. Combining the classification management results, production methods and product characteristics, certification elements are added to the basic certification mode, so as to determine the certification mode applicable to manufacturing enterprises with different capabilities and levels.

The post-certification supervision is a combination of post-certification follow-up inspection, production on-site sampling test or inspection, and market sampling test or inspection.

4 Classification of certification unit

The battery and its charger are divided into different units. In principle, battery and charger for electric bicycle produced by the same producer (manufacturer) and the same manufacturing enterprise (site) with no significant differences in the following aspects are one certification unit:

4.1 Battery:

(1) Battery type (lithium-ion battery, lead-acid battery, metal hydride nickel battery);

(2) Materials (such as positive and negative electrode materials, etc.).

4.2 Charger:

(1) Charger category (Type I charger, Type II charger);

(2) Applicable battery types (lithium-ion batteries, lead-acid batteries, metal hydride nickel batteries).

Same-unit may include multiple “models (or specifications)” products. Same-model refers to those products of which the design has no impact to standard compliance.

For the same product that is of same manufacturer but of different manufacturing enterprises, or for the same-model product that is of different manufacturers and of same manufacturing enterprise, it may consider to only conduct the type test on the samples of one unit. The products of other manufacturing enterprises / manufacturers shall provide documents for conformity inspection.

5 Certification entrusting

5.1 Proposal and acceptance of certification entrusting

The certification client shall submit a certification entrustment to CCAP in an appropriate manner in accordance with CCAP's certification process and requirements, and shall be responsible for the authenticity and legality of the submitted certification application materials. The certification client shall be able to assume relevant quality and legal responsibilities. The battery producers (manufacturers) and manufacturing enterprises entrusted with certification shall be able to produce normally and comply with national laws, regulations and relevant industrial policy requirements.

CCAP will conduct a completeness and normative review of the certification entrustment materials submitted by the certification client. If problems are found during the review process, CCAP acceptance personnel will communicate with the

c. If the certification client is the seller or the importer, copies of relevant contract signed between the seller and the manufacturer OR the importer and the manufacturer shall be provided (when it is the first-time application and when there is change);

d. Power of attorney of the client (when applicable);

e. For foreign certification client, it must provide the relevant certificate documents to prove the authenticity of above materials and undertake relevant legal responsibilities (including "three guarantees", "call-back" and relevant quality responsibilities).

(2) Information of certified product

1) Quality system documents, including:

a. Quality manual, including organization chart and/or responsibility provisions;

b. Quality assurance capability control files directory. It shall conform with the relevant requirements specified in Appendix 1 of Attachment 2;

c. Copy of the quality management system certificate (if any).

2) Product description of the battery and charger for electric bicycle shall comply with the requirements of Attachment 1 (when it is the first-time application and when parameters change);

3) Product photos sufficient to identify the main features of the product;

4) Product drawings: assembly diagram, structural diagram and electrical schematic diagram;

5) Production conformity control plan (when it is the first-time application and when the production conformity control plan changes). Compilation requirements are shown in Attachment 3;

6) Implementation report of the production conformity control plan. See Appendix 2 of Attachment 3 for the preparation requirements (every year after certification);

7) CCAP mark addition plan (for the first application and change);

8) If entrusting other enterprises to produce the battery and charger for electric bicycle, the certification client shall also provide CCAP with a copy of the relevant contract signed between the entrusting enterprise and the entrusted enterprise, such as the ODM/OEM agreement signed between the certification client, the producer (manufacturer) and the manufacturing enterprise, the authorization letter and a copy of the original ODM certification certificate

the audit result and the "Principles for Classification of Manufacturing enterprises" (Attachment 4), which includes:

(1) The certification mode adopted and unit division;

(2) Type test plan (including the selection and confirmation of the designated laboratory);

(3) Factory inspection plan and time (man-day);

(4) Estimated certification fees;

(5) Other matters and requirements that need to be explained.

CCAP shall give the above certification plan to the client. After reaching a consensus, it shall sign a formal certification contract with the client as the basis for certification implementation.

6 Certification implementations

6.1 Type test

6.1.1 Type 1 test plan

CCAP shall formulate a type test plan after reviewing the data and inform the certification client. Certification client can choose designated laboratories by himself. Once the laboratory is selected, no adjustments will be made in principle. The certification client can provide opinions on the type test plan. If the designated laboratory has any objection to the type test plan, it shall explain the situation to CCAP.

The type test plan includes all sample requirements and quantities for the type test, testing standard items, designated laboratory information, etc. (including differential test requirements).

6.1.2 Sample requirements of type test

Normally, the certification client selects representative samples for testing according to the requirements of CCAP for type test samples. When necessary, CCAP can also obtain samples through on-site sampling/sealing. If there is only one model in the certification unit, a sample of this model will be sent. When there is more than one model in the unit, CCAP will select a representative model among them, and conduct difference tests on other models when necessary.

Type test samples shall be products produced by the manufacturing enterprise entrusted with certification according to normal processing methods. The certification client shall ensure that the samples provided are consistent with the actual products produced. Samples may not be obtained for testing by borrowing, renting, or purchasing samples. CCAP and/or the laboratory shall review the authenticity of the samples provided by

the certification client. When the laboratory has doubts about the authenticity of the sample, it shall explain the situation to CCAP and handle it accordingly.

6.1.2.1 Specification and quantity of type test samples

Quantity of type test samples: Refer to Attachment 2 "Type test and production conformity items". The final number of test samples is subject to the test plan confirmed by CCAP and the certification client or its agent.

After the type test, the samples and/or related data that have been confirmed to be qualified shall be disposed of in an appropriate manner. The number of test samples for supervision and random inspection and/or the need for supplementary differences shall be subject to the test plan finally confirmed by CCAP. The certification client shall ensure that the submitted samples are completely consistent with the actual products produced, including materials, structures, parameters, etc.

6.1.2.2 Critical components/raw materials list and relevant requirements

When sending samples, the certification client shall also submit a product description sheet and a list of critical components/raw materials. It shall be consistent with the critical components/raw materials identified in the "Production Conformity Control Plan" submitted by the enterprise. The list must at least include the name, model, specification and supplier of critical components (materials).

For critical components/raw materials purchased domestically, manufacturing companies can provide corresponding certification certificates.

6.1.3 Type test items and test base

See Attachment 2 of this Rules for type test items and test base.

6.1.4 Selection and confirmation of the designated lab

The certification client can select a lab among the designated inspection labs provided by CCAP for the certification products. According to the client’s confirmation, CCAP shall give inspection commission to the selected lab to conduct type test.

6.1.5 Implementation of type test

Type test shall be completed by the designated lab entrusted by CCAP. The designated lab shall complete the sample testing within the stipulated time according to relevant stipulations of CCAP. The lab shall make a complete record of the whole test process and put it on file in order to ensure traceability of the inspection process and result.

If there is unqualified item, the lab shall inform the situation to CCAP. If the client wants to continue applying for certification, it shall complete rectification within 3 months and submit the rectification material to CCAP. CCAP shall reconfirm the test

CCAP shall check production conformity control system of the enterprise. In principle, the initial factory inspection shall be completed within 1 year after passing the type test. Otherwise, product type test shall be made again, in principle, the initial inspection shall cover the products applied for certification/certification-products and the processing sites. “Processing sites” refer to all departments, sites, personnel and activities.

6.2.2 Production conformity control plan auditing

The factory shall develop a production conformity control plan in accordance with the requirements of Attachment 3 and submit it to CCAP for review. CCAP will notify the certification client of the review results after the review is completed. If the production conformity control plan can meet the requirements, the audit is PASS. If CCAP considers that the production conformity control plan is not up to standard, the client shall make rectification and submit it again. CCAP shall inform the client of the audit result after completing the new review.

After passing the production conformity control plan review, CCAP shall formulate the on-site inspection plan as scheduled. The plan includes the products to be inspected, inspection site, and scope of inspection.

The review time of the production conformity plan is determined according to the unit-quantity of the products that apply for certification, and appropriately consider the scale of the manufacturing enterprise. Normally it needs 0.5~2 man-days for each manufacturing enterprise.

6.2.3 Production conformity factory on-site inspection

Under normal circumstances, CCAP will go to the production site to conduct production conformity inspection after passing the type test and passing the review of the production conformity control plan. Type test and conformity factory inspection can be carried out simultaneously if required.

6.2.3.1 Principles for production conformity factory on-site inspection

CCAP shall dispatch inspectors with national registration qualification to form an inspection team to conduct on-site inspection in the manufacturing enterprise. During the inspection, the manufacturing enterprise shall be producing the products entrusted for certification. When necessary, CCAP can conduct extended inspection in sites outside the manufacturing enterprise.

6.2.3.2 Production conformity inspection and specified on-site test

During factory on-site inspection, the inspection team shall randomly draw samples of the products at the end of the production line or among qualified products in the warehouse. The inspection items include but are not limited to the follows:

a. The identification of the certified product (such as name, specification, model,

trademark and so on) shall be consistent with the type test report and the materials submitted for entrusted certification;

b. The structure and parameters of the certified product shall be consistent with the type test samples and the materials submitted for entrusted certification;

c. On-site designated test for certified products (the inspection items are drawn from the production conformity control plan).

Product conformity inspection shall cover product categories. The factory inspection team is responsible for the inspection samples taken. If the factory inspection team discovers deficiencies in the enterprise's production conformity control plan during on-site inspection, it shall provide opinions and suggestions to CCAP.

The production conformity factory on-site inspection time is determined based on the number of units of the certified products entrusted. Give due consideration to the production scale of the factory. Generally, each factory has 2~4 man-days. To ensure certification quality, a combination of on-site man-days and production conformity control plan review time is allowed, but the total initial factory on-site inspection man-days shall not exceed 6 man-days.

6.2.3.3 ODM mode manufacturing enterprise inspection

On-site inspections of ODM factories shall be carried out in accordance with the "Supplementary Provisions Involving the ODM Model in the Implementation Rules for Compulsory Product Certification" and relevant CCAP document requirements. Implement in accordance with CCAP relevant document requirements. The number of verification days can be appropriately increased according to the number of ODM producers (manufacturers). Each producer (manufacturer) shall not exceed 0.25 man-days. The total increase shall not exceed 1 man-day. If necessary, on-site inspection can be conducted on the ODM producer (manufacturer). The number of inspection man-days shall not exceed 0.5 man-days.

6.2.4 Adoption of relevant certification results

See Attachment 5 for the requirements for the adoption of relevant certification results.

For factories that have obtained a quality management system certification certificate issued by a relevant organization recognized by the Certification and Accreditation Administration, the results of the quality management enterprise certification that are the same as the factory's quality assurance capability requirements can be recognized. Appropriately reduce the number of review days.

6.2.5 Production conformity factory on-site inspection results

Factory inspection results are usually divided into four categories: "factory inspection passed", "written verification passed", "on-site verification passed", and "factory

the production conformity control plan and the declared and reviewed and approved production conformity control plan; Or when there are significant differences between the structure and technical parameters of the actual production product and the consistency of the type test samples; Or when there are many general non-conformities or individual serious non-conformities that constitute system non-compliance and directly endanger product consistency or product compliance with standards, the inspection result is unqualified. Terminate this inspection. Specific examples:

(1) The specified on-site test results are unqualified;

(2) Key resources do not meet the requirements and it is difficult to ensure product consistency or product compliance with standards;

(3) There are serious problems with product conformity, which will cause the product to fail to meet standard requirements, such as changes in product structure or key parts that do not meet specified requirements;

(4) Inspections reveal defects or safety hazards in certified products, which may lead to quality and safety accidents;

(5) Changes and consistency control of certified products are not effectively implemented, resulting in product unconformity and systematic failure of quality assurance capabilities;

(6) Illegal use of CCAP marks or certificates, and the factory has serious dishonesty;

(7) During the period of suspension of the certification certificate, the factory fails to take corrective measures or is still unqualified after corrective measures;

(8) The factory obtains the certification certificate by cheating, bribery or other improper means;

(9) Other serious non-conformities that directly endanger product consistency or product compliance with standards.

The main situations of illegal use of CCAP marks or certificates include: counterfeiting, altering, renting, lending, impersonating, buying and selling, transferring CCAP marks or certificates, and misappropriating CCAP marks; continue to use the CCAP marks or certificate after learning that the certificate has been revoked or suspended; intentionally apply the CCAP marks on products that have not obtained a CCAP certificate; other intentional and illegal use of the CCAP marks or certificate.

6.2.5.4 Notification of results of factory on-site inspection of production conformity

After the inspection team completes the factory inspection, it shall inform the enterprise of the inspection results. If non-conformities are found during factory inspections, the

company shall provide clear requirements for the verification method of corrective measures (such as written verification or on-site verification) and the time limit for rectification. Notify the production company of the verification results in a timely manner.

When the conclusion of the inspection team's on-site review changes after CCAP's assessment, CCAP shall promptly notify the manufacturer of the conclusion.

The factory inspection team shall not only give the conclusion of the factory inspection, but also make recommendations on the enterprise classification results to CCAP in accordance with Attachment 4 of this Rules.

6.3 Certification evaluation and decision

CCAP conducts comprehensive assessment of the type test result, the initial factory inspection result and relevant materials/information. If the evaluation is PASS, the certificate shall be granted according to certification unit. If not, the certification is terminated.

6.4 Time-limit of certification

Time-limit of certification refers to the period FROM the date when CCAP accepts the entrusting TO the date when the certificate is issued.

Usually, FROM the date when CCAP accepts the entrusting TO the date when the certificate is issued (or certification decision is made), the time is not more than 90 days. In which, it includes type test time, initial factory inspection time, test report submission time, evaluation and approval time of the certification result, and the certificate-making time. It excludes the time required for the certification client to prepare materials, the time required to rectify non-conformities in test samples, the time to re-submit samples for testing, and the time to rectify non-conforming items in factory inspections..

Other certification procedure time-limit shall follow relevant provisions of CCAP. Each department of CCAP shall control the certification time-limit according to the requirements of relevant documents. The certification client and the manufacturing enterprise shall actively cooperate in order to complete all the activities within the time-limit required by CCAP.

If the certification activities are not completed within the specified time-limit due to reasons of the client and the manufacturing enterprise, it shall not be counted in the certification time-limit.

7 Post-certification supervision

Post-certification supervision refers to that the certification body conducts supervision to the certification-products and the manufacturing enterprise. The supervision method is one of or combination of the following three modes: post-certification follow-up

(1) Production conformity control plan implementation report that is completed by the manufacturer or the manufacturing enterprise;

(2) Implementation situation of the production conformity control plan of the manufacturing enterprise;

(3) Production conformity inspection and on-site designated test;

(4) Use situation of the certification mark and the certificate;

(5) Corrective measures for non-conformities in the previous factory on-site inspection and verification of their effectiveness;

(6) Other CCAP's requirements on factory on-site inspection.

7.2 Production on-site sampling test or inspection

7.2.1 Principles of production on-site sampling test or inspection

In principle, sampling test or inspection at the production site shall at least cover the certified product categories (i.e., lithium ion, lead-acid, metal hydride nickel, charger, etc.).

If production on-site sampling inspection or test method is adopted for post-certification supervision, then the certification client, manufacturer and manufacturing enterprise shall cooperate.

7.2.2 Content of production on-site sampling test or inspection

In principle, different unit/models of products shall be drawn as samples for each time of supervision. CCAP formulate the sampling inspection plan according to the enterprise classification principles and features of the products. For the inspection items, all or several of the type test inspection items shall be inspected.

The personnel appointed by CCAP shall draw samples from qualified products produced by the enterprise (including the production lines, warehouses or seaports/airport) according to the sampling inspection plan. After sampling, CCAP shall seal up the samples. The enterprise shall send the samples to the designated test lab within 10 working days. The enterprise shall also fill out the sample description form when sending the samples and truthfully describe critical components and materials (including the suppliers) used in the samples. CCAP and/or the lab shall inspect the conformity of the samples. If they find that the samples are inconsistent with the certification-products, in principle, test shall not be continued. The inspection conclusion shall be that: the samples are not consistent with the certification-products; the test is not continued.

If the manufacturing enterprise meets the requirements of Attachment 5, it can use the

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