

Supply Technical Conditions of Baoshan Iron and Steel Co., Ltd.

Cold-rolled steel strips for electromagnetic pure iron

Q/BQB 482-2014

Replacing Q/BQB 482-2009

1 Scope

This Technical Conditions specifies the terms and definitions, classification and code, dimension, shape, weight, electromagnetic characteristics, inspection and test, packaging, marking and inspection documents of cold-rolled steel strips for electromagnetic pure iron.

This Technical Conditions applies to cold-rolled steel strips for electromagnetic pure iron (hereinafter referred to as steel strips) produced by Baoshan Iron and Steel Co., Ltd. for the manufacture of electromagnetic relay armature and yoke.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB/T 222-2006 Permissible tolerances for chemical composition of steel products

GB/T 223 Methods for chemical analysis of iron, steel and alloy

GB/T 2523-2008 Measuring method of surface roughness and peak count for cold-rolled metal sheet (strip)

GB/T 2975-1998 Steel and steel products - Location and preparation of test pieces for mechanical testing

GB/T 3656-2008 Method of coercivity measurement for magnetically soft materials by pull out procedure

The coercivity aging increase of steel strips shall not be more than 10 %, and the coercivity value after aging shall not be more than 48 A/m. The recommended artificial aging process is: heat at 100 °C for 100 h, then air cooling. After consultation between the supply and demand parties, it may also be processed according to other aging processes.

7.5 Surface quality

7.5.1 The surface of steel strips shall be smooth and clean and shall not have any defects affecting use. However, minor imperfections that do not affect the normal use of the material, such as slight scratches of isolated distribution, small sand holes, hairline are allowed.

7.5.2 For steel strips, because there is no opportunity to remove the defective part, a number of abnormal parts are allowed, but the defective part shall not exceed 6 % of the total length of each coil.

7.6 Surface structure

When the surface structure is pitted surface (D), the average roughness Ra is controlled by $0.6\text{ }\mu\text{m} < \text{Ra} \leq 1.9\text{ }\mu\text{m}$. If the surface structure is bright surface (B), the average roughness Ra is controlled by $\text{Ra} \leq 0.6\text{ }\mu\text{m}$.

8 Inspection and test

8.1 The dimension and shape of steel strips shall be measured with suitable measuring tools.

8.2 The thickness of steel strips shall be measured at a distance of not less than 5 mm from the edge.

8.3 Steel strips shall be accepted in batches, and each inspection batch shall consist of electromagnetic pure iron steel strips of the same grade and of not more than 30 tons. For steel strips weighing more than 30 tons, each coil constitutes an inspection batch.

8.4 The inspection item, specimen quantity, sampling method, test method and sampling direction of each batch of steel strips shall comply with the requirements of Table 6.

8.5 The supply party may use different inspection and test methods for acceptance testing. In the event of a dispute, the test shall be carried out using the inspection and test methods specified in this Technical Conditions and the relevant technical requirements.

Table 6

Inspection item	Sample quantity (piece)	Sampling method	Test method
Chemical analysis	1/furnace	GB/T 20066	GB/T 223, GB/T 4336, GB/T 20123, GB/T 20125, GB/T 20126
Hardness	1/batch	GB/T 2975	GB/T 4340.1
Coercivity			GB/T 3656
Maximum permeability			Magnetometer method in GB/T 13012
Magnetic flux density			
Surface average roughness	—		GB/T 2523

8.6 For hardness and magnetic properties, if the test result of one item does not meet the technical requirements, then take double the quantity of specimens from the same batch for the re-inspection of the unqualified item. If the re-inspection result (including all the indicators required for the test of this item) is qualified, the whole batch is qualified. For the re-inspection result (including all the indicators required for the test of this item), even if one of the indicators is unqualified, the re-inspection is unqualified. If the re-inspection is unqualified, the single piece of product that has been tested and the test result is unqualified cannot be accepted, but the single piece of product in the batch that has not been tested can be resubmitted one by one for test and acceptance.

9 Packaging, marking and inspection documents

The packaging, marking and inspection documents for steel plates and steel strips shall comply with Q/BQB 400. If the demand party has special requirements for packaging, they shall be indicated in the contract.

10 Rules of rounding off for numerical values

The rules of rounding off for numerical values shall comply with GB/T 8170.

Additional information:

This Technical Conditions replaces Q/BQB 482-2009.

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