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Pulse-jet Bag Filter

脉冲喷吹类袋式除尘器

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Pulse-jet Bag Filter

1 Scope

This Standard specifies technical requirements, test methods, inspection rules, marking, packaging, transportation and storage of pulse-jet bag filters.

This Standard is applicable to pulse-jet bag filters (hereinafter referred to as bag filter).

2 Normative References

The following standards contain provisions which, through reference in this text, constitute provisions of this standard. For dated reference, subsequent amendments to, or revisions (excluding amended content) of, any of these publications do not apply. However, the parties whose enter into agreement according to these specifications are encouraged to research whether the latest editions of these documents are applied or not. For undated references, the latest edition of the normative document referred to applies.

GB/T 699	Quality Carbon Structural Steels
GB/T 700	Carbon Structural Steel (GB/T 700-2006, ISO 630:1995, NEQ)
GB/T702	Hot-rolled Round and Square Steel Bars - Dimension, Shape, Weight and Tolerance (GB/T 702-2004, ISO 1035.1~1035-2:1980, MOD)
GB/T 704	Hot-rolled Flats - Dimensions, Shape, Weight and Tolerances (GB/T 704-1988, neq ISO 1035-4:1982)
GB/T 706	Hot-rolled beam steel - Dimensions, Shape, Weight and Tolerances (GB/T 706-1988, neq FOTC 8239:1972)
GB/T 707	Hot-rolled Channel Steel - Dimensions, Shape, Weight and Tolerances (GB/T 707-1988, neq FOTC 8240:1972)
GB/T 912	Hot-rolled Plates and Strips of Carbon Structural Steels and High Strength Low Alloy Structural Steels
GB/T 985-1988	Basic Forms and Sizes of Weld Grooves for Gas Welding Manual Arc Welding and Gas-shielded Arc Welding
GB/T 986-1988	Basic Forms and Sizes of Weld Grooves for Submerged Arc Weld
GB/T 1804-2000	General Tolerances - Tolerances for Linear and Angular Dimensions without Individual Tolerance Indications (eqv ISO 2768-1:1989)

JB/T 5916-2004	Electro-magnetic Pulse Jet Valve for Bag-house Filters
JB/T 5917-2006	Bag Cage for Baghouse Filters
JB/T 8471-1996	Technical Requirement and Acceptance Regulation for Bag Filter Erection
JB/T 10191-2000	Bag Filter - Safety Rules - Manifold for Pulse-jet Bag Filter

3 Terms and Definitions

For the purposes of this Standard, the following terms and definitions apply.

3.1

Pulse-jet bag filter

Bag filter that removes dust by shock vibration and counterblast -- using the compressed gas ejected instantly by the pulse jetting mechanism with compressed gas as dust removal power so as to induce multiples of secondary gas to inject into the filtering bag and make the filtering bag expended sharply.

3.2

Contrary flow pulse-jet bag filters

Pulse-jet bag filter in which jetting air flow is reverse to the clean air flow in the filtering bag (house) and clean air is discharged from the upper clean air box.

3.3

Consistent flow pulse-jet bag filters

Pulse-jet bag filter in which jetting air flow is consistent to the clean air flow in the filtering bag after filtering and clean air is discharged from the lower clean air box.

3.4

Two directions pulse-jet bag filters

Pulse-jet bag filter in which jetting air flows are injected from upper and lower positions of the filtering bag and the clean air is discharged from the clean air manifold.

3.5

Round gap ejector pulse-jet bag filters

Pulse-jet bag filter in which round gap jet exhauster is used for contrary jetting.

4.7 Painting

4.7.1 Surface rust, residue, oil stain, dust and other dirt shall be cleaned up before bag filter painting. Derusting method and grade shall meet the requirements of GB/T 8923; where ejecting or blast cleaning is used, the derusting grade shall not be lower than Sa2; where hand scrubber or power tool is used for derusting, the derusting grade shall not be lower than St2.

4.7.2 For whole-set bag filter to be delivered, their external surfaces shall be painted with two passes of primer and two passes of finish coats; for large scale bag filter transported to site in a split way, last pass of finish coat is painted on site.

4.7.3 Paint film of bag filter shall be uniform and solid-colored, and free of defects like crisping, flaking, cracking, curling and brush mark; the paint film thickness shall not be less than 50μm.

5 Test Method

5.1 Tests for outlet dust concentration and equipment resistance of bag filter shall meet the requirements of GB/T 12138-1989; bag filters may be tested in the operating conditions half a year after completing the field installation.

5.2 Air leakage rate of bag filter is the ratio of the difference between outlet air volume and inlet air volume to the inlet air volume of bag filter. Air leakage rate is tested in the condition where the bag filter runs normal filtering; stable negative pressure shall be kept in the system during the test. The test condition is that negative pressure in bag filter clean air box is 2000Pa. When there is deviation of negative pressure, it is calculated according to the following formula:

$$\varepsilon = 44.72 \times \varepsilon_1 / \sqrt{p}$$

Where,

ε -- The air leakage rate, %;

ε_1 -- The measured air leakage rate, %;

p -- The averaged negative pressure in the clean air box, Pa.

5.3 Bag filter film thickness shall be tested with paint film thickness gauge, and the number of test points shall not be less than two per square meter.

5.4 Inspection of paint film adhesive force shall comply with the requirements of JB/T 5000.12.

6 Inspection Rules

6.1 Inspection Classification

Inspections of bag filter include type inspection and end-of-manufacturing inspection.

6.2 End-of-manufacturing inspection

6.2.1 Each product may be delivered upon it passes the inspection performed by the manufactory quality inspection department and is accompanied by the quality certificate.

6.2.2 End-of-manufacturing inspection shall comply with the requirements of Chapter 4, and it shall cover the items blow:

a) No load test of driving mechanism;

b) Test for pulse jet device;

c) Accuracy test for machining and assembling;

d) Welding quality inspection;

e) Appearance quality inspection;

f) Inspections on other technical requirements specified in order arrangement.

6.3 Type Inspection

6.3.1 Under any of the following conditions, type inspection shall be carried out:

a) Where it is produced in the first batch;

b) Where great change of structure, material or process may affect performance of the bag filters after normal production;

c) Periodic random inspection shall be performed for bag filter by type in batch production.

6.3.2 Type inspection shall comply with the requirements of Chapter 5 and the test results shall meet the requirements of Table 1.

7 Marking, Packaging, Transportation and Storage

7.1 Marking

Product label plate shall be fixed on designated position for each product, and its dimension

and type shall meet the requirements of GB/T 13306. The label plate shall include the following information:

a) The name of the manufacture;

b) The model and name of the product;

c) Key performance parameters (filter area, rate of air volume treated);

d) The net weight;

e) The ex-factory date (year, month);

f) The factory number.

7.2 Packaging and Transportation

7.2.1 Bag filter may be packaged upon it passes the inspection items specified in 6.2.2.

7.2.2 Whole products or split components shall meet relevant land-road and waterway loading and transportation requirements.

7.2.3 Packages for product or spare parts and components may be nude packaging, open packaging, bundling or case packaging. The packaging shall prevent the products from damage in normal condition of transport.

7.2.4 Inlet, outlet, jet air inlet and dust exhaust port of nude-packaging bag filters must be sealed.

7.2.5 Packaged with wooden case, bag filter or its spare parts and components shall be fixed, and kept a distance of 30mm~50mm from the case internal wall generally. The middle shall be filled and blocked with wood or other strut members, and rainproof packages shall be used for key components like filtering bag and electric apparatus.

7.2.6 Text and marks on package external wall shall be clear and tidy, and include the following information:

a) The name and address of the manufacture;

b) The model and name of the product;

c) The name and address of the consignee;

d) The packaging case number "Base ×, of × cases totally";

e) The package dimensions length "(mm) × wide (mm) × height (mm)";

f) The weight;

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