

[1] **EC-TYPE EXAMINATION CERTIFICATE**

according to Directive 94/9/EC, Annex III
(Translation)



[2] Equipment and protective systems intended for use
in potentially explosive atmospheres, **Directive 94/9/EC**

[3] EC-Type Examination Certificate Number: **IBExU12ATEX1088 X**

[4] Equipment: **Magnetic Separator**
Types SBPA..., SRKP... and SEKP

[5] Manufacturer: GOUDSMIT magnetic systems b.v.

[6] Address: Petunialaan 19
5582 HA Waalre
Netherlands

[7] The design of the equipment mentioned in [4] and any acceptable variation thereto is specified in the schedule to this EC-Type Examination Certificate.

[8] IBExU Institut für Sicherheitstechnik GmbH, NOTIFIED BODY number 0637 in accordance with article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that the equipment mentioned in [4] has been found to comply with the essential health and safety requirements for the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.
The test results are recorded in the test report IB-12-2-050 of 4 July 2012.

[9] Compliance with the essential health and safety requirements has been assured by compliance with EN 13463-1:2009, EN 13463-5:2011 and CLC/TR 50404:2003.

[10] If the sign „X“ is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in [17] in the schedule to this EC-Type Examination Certificate.

[11] This EC-Type Examination Certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

[12] The marking of the equipment mentioned in [4] shall include the following:

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Fuchsmühlenweg 7 - 09599 Freiberg, Germany
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Authorized for certifications
-Explosion protection-

Freiberg, 4 July 2012

By order

(Dipl.-Ing. Willamowski)



Certificates without signature and seal are not valid. Certificates may only be duplicated completely and unchanged. In case of dispute, the German text shall prevail.

Schedule

[13]

Schedule

[14]

to the EC-TYPE EXAMINATION CERTIFICATE IBExU12ATEX1088 X

[15]

Description of the equipment

The magnetic separators mentioned in [4] serve to separate ferromagnetic particles out of passing product flows. Subject of this EC-Type Examination is only the non-electrical part of the magnetic separators. Purchased parts (e.g. pneumatic drives) are not subject of this EC-Type Examination. They must be selected and installed in accordance with the requirements on the equipment category and the respective zone.

The magnetic separators of the types SEKP and SRKP can be constructed as product chute separator, cascade separator and in a design without a product chute.

The cascade separator consists of a zig-zag shaped chute with a side outlet which is orientated to below. This outlet is closed with a movable flap. Permanent magnets are arranged on the outside of the zig-zag shaped chute. The ferromagnetic particles in the product flow are attracted by the permanent magnets and stick on them. In fixed intervals this flap is activated so that the outlet for the separated ferromagnetic particles is opened and the product outlet is closed. Then the magnets are moved away by the pneumatic drive and the ferromagnetic particles can fall through the outlet.

The magnetic separator as product chute separator consists of a rectangular product chute with a movable flap and a movable permanent magnet mounted at the side. In fixed intervals the flap is pneumatically opened. The permanent magnet is moved away so that the ferromagnetic particles can fall out at the side.

The magnetic separator without a product chute consists of a rectangular frame on which a movable flap and a movable permanent magnet are mounted. The frame can at the side be connected to a pipe. In fixed intervals the flap is pneumatically opened and the permanent magnet behind the flap is moved away so that the ferromagnetic particles can fall out at the side.

The magnetic separator of the type SBPA consists of a rectangular product chute. In the middle of the product chute a flap is installed in an upright position. Two additional side-mounted flaps close the product chute. Movable permanent magnets are placed behind these flaps. In fixed intervals the middle flap is turned aside so that the product flow can be directed aside. The side flap, which has no contact to the product flow in this moment, is opened and the permanent magnet behind the flap is turned aside so that the adherent ferromagnetic particles can fall down. Then the side flap is closed and the procedure is repeated for the other side flap.

The flaps and magnets are moved by pneumatic cylinders.

All parts in contact with the product are produced from stainless steel. The materials are specified in the documents.

Magnetic separators can be constructed in different sizes and designs. An overview about possible sizes is part of the test documents.

Technical details to the constructive design of the magnetic separators are specified in the Test Report IB-12-2-050 or in the test documents which are part of the test report.

[16]

Test report

The test results are recorded in the Test Report IB-12-2-050 of 4 July 2012. All documents underlying this examination and the operating range of the magnetic separators are mentioned in the test report. Designs are only permitted when they conform to the documents listed in the test report.

Summary of the test results:

The test results show that the magnetic separators mentioned in [4] fulfil the requirements on equipment of Category 1D inside and Category 2D outside in type of protection "c" (protection by constructional safety).

The test documents are listed in chapter 2 of the test report.

[17] Special conditions for safe use

The "X" after the number of the EC-Type Examination Certificate means that special conditions must be maintained for the safe use of the magnetic separators.

- The smoulder temperature of dusts must not be less than the maximum surface temperature (temperature of the media) plus a safety margin of 75 K.
- The ignition temperature of dusts must not be less than 1.5 times the maximum surface temperature in °C (temperature of the media).
- Before a longer standstill the magnetic separators must be emptied.
- All screw connections inside the magnetic separators have to be secured against loosening.
- Purchased parts must be selected and installed in accordance with the requirements for the respective zone.

[18] Essential Health and Safety Requirements

Confirmed by compliance with standards (see [9]).

By order

Freiberg, 4 July 2012


(Dipl.-Ing. Willamowski)