SLOVENSKI STANDARD
SIST EN ISO 801-1:2000

01-april-2000

Vlaknine - Določ evanje prodajne mase v poģiljkah - 1. del: Vlaknine v obliki listov, povezane v bale (ISO 801-1:1994)

Pulps - Determination of saleable mass in lots - Part 1: Pulp baled in sheet form (ISO 8001-1:1994)

Zellstoffe - Bestimmung des Handelsgewichtes von Lieferposten - Teil 1: Zellstoffbogen in Ballen (ISO 801-1:1994)

Pâtes - Détermination de la masse marchande des lots - Partie 1: Balles de pâtes en feuilles (ISO 801-1:1994)

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85.040 Vlaknine Pulps

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English version

Pulps - Determination of saleable mass in lots - Part 1: Pulp baled in sheet form (ISO 801-1:1994)

Pâtes - Détermination de la masse marchande des lots - Partie 1: Balles de pâtes en feuilles (ISO 801-1:1994)

Zellstoffe - Bestimmung des Handelsgewichtes von Lieferposten - Teil 1: Zellstoffbogen in Ballen (ISO 801-1:1994)

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart,36 B-1050 Brussels

Foreword

The text of the International Standard from Technical Committee ISO/TC 6 "Paper, board and pulps" of the International Organization for Standardization (ISO) has been taken over as an European Standard by Technical Committee CEN/TC 172 "Pulp, paper and board", the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by March 1997, and conflicting national standards shall be withdrawn at the latest by March 1997.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Endorsement notice

The text of the International Standard ISO 801-1:1994 has been approved by CEN as a European Standard without any modification.

INTERNATIONAL STANDARD

ISO 801-1

Second edition
1994-08-01

Pulps — Determination of saleable mass in lots —

Part 1:
Pulp baled in sheet form

Pâtes — Détermination de la masse marchande des lots —

Partie 1: Balles de pâte en feuilles

Reference number
ISO 801-1:1994(E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 801-1 was prepared by Technical Committee ISO/TC 6, *Paper, board and pulps*, Subcommittee SC 5, *Test methods and quality specifications for pulp*.

This second edition cancels and replaces the first edition (ISO 801-1:1979), of which it constitutes a technical revision.

ISO 801 consists of the following parts, under the general title *Pulps — Determination of saleable mass in lots*:

— *Part 1: Pulp baled in sheet form*

— *Part 2: Pulps (such as flash-dried pulps) baled in slabs*

— *Part 3: Unitized bales*

Annexes A and B of this part of ISO 801 are for information only.

International Organization for Standardization
Case Postale 56 • CH-1211 Genève 20 • Switzerland

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Pulps — Determination of saleable mass in lots —

Part 1:
Pulp baled in sheet form

1 Scope

This part of ISO 801 specifies a method for determining the dryness of a lot of pulp baled in sheet form and for calculating its saleable mass.

This method is applicable to all kinds of pulp baled in sheet form. It does not apply to pulp baled in lots in slab form or to pulp baled in unitized lots.

An example of a full certificate of analysis and related calculations is given in annex A. Annex B gives details of equipment for marking the position of specimen sheets in sample bales.

2 Definitions

For the purposes of this part of ISO 801, the following definitions apply.

2.1 lot: The total number of bales of the same sort of pulp of specific characteristics.

The number of bales comprising a lot is indicated by the invoice or by agreement between the interested parties.

A lot of bales of pulp is said to be "with specification" if it is accompanied by a certificate of origin stating for each bale either

— its gross mass (2.2) and its absolute dryness (2.4),

or

— its saleable mass (2.7).

2.2 gross mass: The total mass of a bale, a part of a lot or a lot comprising

— contents;

— wrappers (pulp — paper);

— packaging wires or strappings.

2.3 oven-dry mass: The mass obtained on drying pulp at 105 °C ± 2 °C, until constant mass is reached.

2.4 absolute dryness: The ratio of the oven-dry mass (2.3) of the pulp to its initial mass, expressed as a percentage.

2.5 air-dry mass: The mass of the pulp when its moisture content is in equilibrium with the ambient atmosphere.

2.6 theoretical commercial dryness: A conventional equilibrium value of 88 % or 90 % according to the country and/or commercial agreements.[1)]

2.7 saleable mass: The gross mass (2.2) multiplied by the absolute dryness (2.4) divided by the theoretical commercial dryness (2.6). Usually, it approximates to the air-dry mass (2.5).

2.8 invoiced mass: The saleable mass (2.7) indicated by the vendor on the invoice.

1) If the air dryness is 90 %, the pulp contains 90 parts by mass of absolutely dry fibres and 10 parts by mass of water. For an air dryness of 88 %, the corresponding figures are 88 and 12.

3 Principle

From the lot, sample bales are taken in number which is a function of the total number of bales in the complete lot and in accordance with a sliding scale. These sample bales are weighed[2] and collected in groups of six bales.

Five specimen sheets are selected from each sample bale under defined conditions.

From each specimen sheet, a test piece is cut in the form of a triangle, as indicated in clause 6.

The test pieces are weighed and dried to constant mass to determine their oven-dry mass (2.3).

The saleable mass (2.7) of the lot is then calculated.

4 Apparatus

4.1 Scale, suitable for weighing the bales to an accuracy of at least 1/1 000.

4.2 Balance, suitable for weighing the test pieces to an accuracy of at least 1/5 000. The balance shall have a capacity of at least 5 kg and a sensitivity of 0,1 g. Its weighing pan (or weighing table) shall be wide enough to accommodate the test pieces so that they do not protrude outside the rim of the pan.

NOTE 1 As the test pieces are weighed when still hot, they cause an upstream flow of air around the weighing pan and, in consequence, a negative error in the balance reading. This error is minimized if the pan is wide enough so that no part of the test pieces protrudes outside the rim of the pan.

4.3 Equipment, for marking the position of the specimen sheets to be selected (see annex B) and the test pieces in these sheets, as well as for cutting them.

4.4 Equipment, for storing at least 30 test pieces to prevent them from gaining or losing mass before weighing.

4.5 Drying oven, with good ventilation, and capable of being controlled at 105 °C ± 2 °C.

5 Sample bales

All the sample bales shall be representative of the lot and for this purpose, so far as possible, these bales should be selected at random from all parts of the lot. In the absence of any other agreement between the interested parties, the available part of the lot to be examined shall be not less than half the complete lot at the time of examination.

If the bales have identification numbers relating to several series, the sample bales shall be selected as far as possible in proportion to the size of each of these series.

The sample bales shall be intact and damaged as little as possible, and shall not include

— bales showing signs of definite drying or wetting, as may happen with bales situated on the external faces of a stack;

— bales or wrappings of bales having deteriorated, or showing clear signs of accidental localized wetting or loss;

— bales carrying traces of previous sampling;

— bales whose number is illegible or is not contained in the specification, if this is a lot specified bale by bale.

The number of sample bales to be taken is given in table 1.

Above 5 000, the minimum number to be taken is 100 plus 1 % of the bales in excess of 5 000, the maximum number being 200 plus 1 % of the bales in excess of 5 000. In all cases, the total number of sample bales shall be a multiple of 6.

When the lot is relatively uniform, and the number of bales rejected (exclusive of bales from the outer faces of the stack) does not exceed 10 % of the minimum number of bales to be selected (see table 1), then the minimum number shall be taken. Otherwise, the analyst shall decide, within the limits set in table 1, the number of bales to be selected.

For frozen pulp, the sampling shall be postponed until the bales have thawed, so that satisfactory test pieces can be cut from the sheets.

2) The mean of the gross mass of the sample bales is considered as being the mean of the gross mass of all the bales in the lot.

Table 1 — Number of sample bales to be taken

Total number of bales in lot	Number of sample bales	
	min.	max.
Up to 100	12	24
101 to 200	18	36
201 to 300	24	48
301 to 400	24	48
401 to 500	24	48
501 to 600	30	60
601 to 700	30	60
701 to 800	36	72
801 to 900	36	72
901 to 1 000	42	84
1 001 to 2 000	48	96
2 001 to 3 000	60	120
3 001 to 4 000	72	144
4 001 to 5 000	96	192

6 Procedure

6.1 Weighing of sample bales

Determine the gross mass of each sample bale separately and report the results to an accuracy between 1/500 and 1/1 000; report, if possible, their marks and references in the order of their weighing. Check the scale (4.1) before the weighings and during the course of the operation.

If the moisture content of the sheets of pulp serving as wrappers obviously differs from that of the rest of the bale, or if the wrappers are invoiced separately, test them separately in accordance with 7.2.

6.2 Selection of specimen sheets

Select five specimen sheets from each sample bale, as specified below, as soon as possible after weighing.

Draw five sheets from each sample bale, the distance between the sheets being constant and equal to one-fifth of the total thickness of the bale (see the note). Do not take the sheets from the same positions in each bale, but select them according to the procedure specified below and illustrated in figure 1. In sample bale No. I, the first sheet is taken 1 cm from the extreme top, and the last sheet (the fifth) will be one-fifth of the thickness of the bale from the bottom. In sample bales Nos. II, III, IV, V and VI, each sheet is taken from a slightly lower position (actually 1/50 of the thickness of the bale) than the corresponding sheet of the preceding bale; thus, in sample bale No. VI, the first sheet will be taken 1/10 of the height of the bale from the top, and the last sheet will be 1/10 of the height of the bale from the bottom. The sample bale No. VII, being a part of the next group of six sample bales, will recommence the cycle and be treated in the same way as the sample bale No. I, etc.

NOTE 2 Pulp bales composed of sheets folded or in juxtaposition. Pulp sheets are sometimes delivered folded two or more times into laps to conform to the size of the bale. In such cases, the word "sheet" should be interpreted as applying to only one thickness of the lap. If several sheets are folded into one lap, the test piece should be drawn from the sample sheet defined above. It is advisable to cut the pulp sheet(s) along the fold of the lap to determine the exact position from which the specimen sheet should be drawn.

Where the bales are composed of two adjacent sheet piles, the two sheets in juxtaposition on the same level should be considered as constituting one specimen sheet.

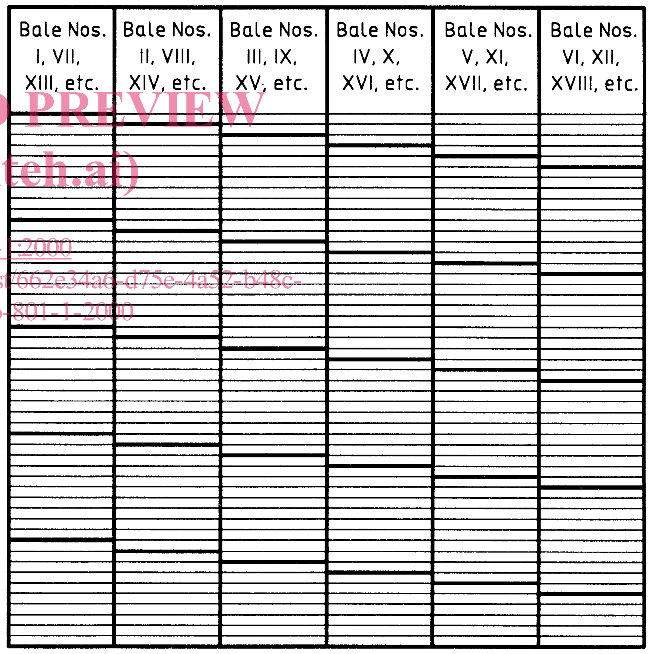

Figure 1 — Diagram indicating the position from which specimen sheets shall be taken

Select all specimen sheets very carefully, especially those within about 5 cm from the top and the bottom of the bale.

The specimen sheets can be selected easily with the aid of an appropriately graduated measuring rod (see annex B). Place the rod in an inclined position against the side of the bale, so that its lower end is at the level of the bottom face on the bale, and the upper line at the level of its top. The faces on the rod cor-