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Reconfirmed 2017

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Australian/New Zealand Standard™

Methods of test for pulp and paper

Method 214s: Equipment for preparation of handsheets

Appita

STANDARDS Australia

STANDARDS NEW ZEALAND PAEREWA AOTEAROA

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee PK-019, Methods of Test for Pulp and Paper. It was approved on behalf of the Council of Standards Australia on 21 June 2007 and on behalf of the Council of Standards New Zealand on 22 June 2007.
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The following are represented on Committee PK-019:

Australian Plantation Products and Paper Industry Council (A3P)
Appita
CSIRO Forestry and Forest Products
Ensis Papro, SCION
National Association of Forest Industries

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We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Please address your comments to the Chief Executive of either Standards Australia or Standards New Zealand at the address shown on the back cover.

This Standard was issued in draft form for comment as DR 07169.

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

RECONFIRMATION

OF
AS/NZS 1301.214s:2007
Methods of test for pulp and paper
Method 214s: Equipment for preparation of handsheets

RECONFIRMATION NOTICE

Technical Committee PK-019 has reviewed the content of this publication and in accordance with Standards Australia procedures for reconfirmation, it has been determined that the publication is still valid and does not require change.

Certain documents referenced in the publication may have been amended since the original date of publication. Users are advised to ensure that they are using the latest versions of such documents as appropriate, unless advised otherwise in this Reconfirmation Notice.

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The following are represented on Technical Committee PK-019:

Appita
New Zealand Paper Forum
Monash University
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NOTES

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Methods of test for pulp and paper

Method 214s: Equipment for preparation of handsheets

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Foreword

This standard was prepared by Joint Technical Committee PK-019, Methods of Test for Pulp and Paper, as part of AS/NZS 1301, *Methods of test for pulp and paper*.

This edition cancels and replaces AS/NZS 1301.214s:1993.

This Standard conforms to ISO 5263:1995, Annex A in respect to the specification of the disintegrator except that the height of the container may be more than 193 mm, the tolerance on spacing between baffles is ±2 mm instead of ±1 mm and the width of the propeller blades at the hub is 17.5 ±0.5 mm instead of 18.2 ±0.5 mm.

Other sections of this Standard conform to the Apparatus section of ISO 5269-1:2005.

The term 'informative' has been used in this Standard to define the application of the annex to which it applies. An 'informative' annex is only for information and guidance.

Introduction

This Standard describes the equipment used for the preparation of laboratory sheets of pulp for the purpose of carrying out subsequent physical tests on these sheets to assess the relevant properties of the pulp itself. The descriptions contained in this Standard are based on ISO 5263-1 and ISO 5269-1.

The equipment includes the following units and accessories:

1 *Disintegrator*, including stock container, three-bladed propeller and revolution counter.

2 *Stock divider.*

3 *Sheet machine*, including a means of agitation and couching, drain and water valves, together with piping and operating mechanism.

4 *Press*, with pressure gauge, and template for centring sheets.

5 *Drying equipment*, including mirror-polished stainless steel plates and drying rings.

6 *Standard blotters*.

7 *Measuring pots*.

All components that come into contact with pulp suspensions shall be resistant to water and dilute acids and alkalis. Wherever specific materials of construction are prescribed in this Standard, any other material may be used provided it can be shown to have equivalent properties with regard to the application for which it is to be used.

Proper care and maintenance of the equipment is described in Annex A.

Equipment for preparation of handsheets

1 Scope

This Standard describes the equipment used for the preparation of laboratory sheets of pulp for the purpose of carrying out subsequent physical tests on these sheets to assess the relevant properties of the pulp itself.

2 Normative references

The following documents are referred to in this standard.

AS/NZS
1301.414s Conditioning of paper for testing
1301.415s Standard atmosphere for testing paper and board and procedure for monitoring the atmosphere

3 Disintegrator

The disintegrator consists of a container, a propeller and shaft, a counter and a 185 W minimum rate motor. For care and maintenance of the disintegrator see Annex A1.

3.1 Container (See Figure 1)

The cylindrical container is fitted with four equally spaced spiral baffles extending between 32 mm and 134 mm from the bottom, each baffle traversing half the internal circumference of the container. The baffles spiral downwards in a clockwise direction. There is a fillet of radius 13 mm around the inside of the base of the container.

The container is provided with a lid which shall be fixed firmly in position during the operation of the disintegrator, but is capable of being removed and replaced easily and quickly.

3.2 Propeller

The three-bladed propeller is mounted on a vertical shaft located centrally in the container and a fixed distance above the bottom. It is driven at a fixed speed in the stock (see Clause 3.4) and a counter records the number of revolutions. The counter should preferably be of the pre-set type which will switch off the disintegrator after the required number of revolutions. Viewed from above, the propeller rotates in a clockwise direction. The leading edges of the propeller blades are raised 2° to the horizontal to induce a downward flow of stock.

NOTE 1 — The revolution counter on most disintegrators at the time of publication of this Standard counts one revolution for each 25 revolutions of the propeller. With such instruments the number of propeller revolutions must be divided by 25 to determine the number which will be indicated by the counter.