Australian/New Zealand Standard™

Methods of test for pulp and paper

Method 014rp: Size classification of wood chips

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The following are represented on Committee PK-019:

Appita Inc.
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Forest Research (New Zealand)
National Association of Forest Industries
New Zealand Pulp and Paper Industry Association
Printing Industries Association of Australia
Pulp and Paper Manufacturers Federation of Australia

Additional interests participating in the preparation of this Standard:

Paper manufacturers
Pulp manufacturers
Research interests
Manufacturers of paper testing instruments
Suppliers of paper testing instruments

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Foreword

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

This is a new standard, and its introduction is intended to provide the pulp and paper industry with a standardised method for classifying wood chips.

Introduction

The purpose of chip classification is to determine the quality of market wood chips with regard to chip sizes and fines content. A sample of wood chips is taken from a lot, and the sample is put through a classifier which separates the chips according to size. The proportion of chips in each size class is reported.

Similar standards are SCAN-CM40:94, TAPPI UM21, TAPPI UM22, CPPA Useful Method D.25U, CPPA Useful Method D.26U.

Size classification of wood chips

1 Scope

This standard describes the apparatus and procedure for size classification of wood chips intended for the production of wood pulps.

2 Normative references

The following standards contain provisions which, through reference in this test, constitute provisions of AS/NZS 1301.014rp. At the time of publication, the editions indicated were valid. All standards are subject to revisions, and parties to agreements based on AS/NZS 1301.014rp are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below.

AS/NZS 1301.010s:2002, *Determination of moisture in wood chips*

AS/NZS 1301.013rp:1999, *Sampling of wood chips for testing*

3 Principle

A sample of chips is taken from a lot and is classified into different fractions using a chip classifier. The weight of each fraction is reported.

4 Apparatus

4.1 Chip classifier, comprising several screens and a fines pan mounted above each other in a shaking frame in such a way that there is no loss of chips or fines during screening.

Screens with holes separate the chips according to length. Screens with slots separate the chips according to thickness. The number of screens in the stack and the dimensions of the screen apertures determines the distribution of the chips between the fractions. Some preferred screen combinations are given below. These are guidelines only, and other configurations and screen apertures are acceptable. Where the apertures are circular, all holes must be complete circles. Part holes, i.e. at the edges of the screen, are not allowed. If the diameter of the hole is 6.5 mm or less, permissible variation in diameter is 5%. If the diameter of the hole is greater than 6.5 mm, permissible variation in diameter is 3%. The holes should be placed in a pattern of equilateral triangles, and the distance between the centres of adjacent holes should be the diameter of the hole plus at least 20%.

Screens with slots are generally made up of two rows of parallel rods of diameter 5 or 6 mm as illustrated in Figure 1. The slot dimension is the distance between two adjacent rods in different rows. Permissible variation in the slot dimension is 5%.

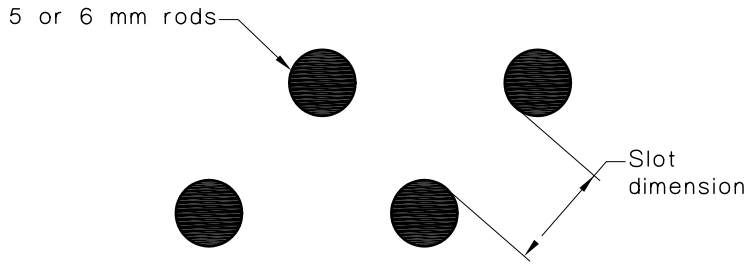

Figure 1 — Screens with slots are made up of two parallel rows of rods. The slot dimension corresponds to the maximum chip thickness which can pass through the screen.