1301 208s-89 Physical testing of handsheets
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Sets out the method for the testing of pulp handsheets for physical and mechanical properties. Tests for optical properties are not included.
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AUSTRALIAN STANDARD
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PHYSICAL TESTING OF HANDSHEETS

This method relates to the testing of pulp handsheets for strength and other physical properties. Tests for optical properties are not included. The tests are made by the Appita standard testing methods for paper, which in some cases are modified to meet the special requirements of testing handsheets.

The tests described are those usually required by pulp users, and a plan for cutting up eight handsheets to do these tests is given. The plan is only for the purpose of illustration, and may be modified according to the tests to be made and the number of specimens to be tested.

For accurate and reproducible results the procedure for forming, conditioning and testing the handsheets must be followed closely, and the testing instruments must be kept in first-class condition as required by the pertinent paper testing methods.

The method is based on the British procedure of 1936 (Reference 16.1).

1. NUMBER AND GRAMMAGE OF HANDSHEETS

Prepare a set of handsheets by the procedure in Appita Standard P203. A set consists of at least 8 acceptable handsheets of 60 ± 2 g/m² oven-dry grammage.

2. DRYING AND CONDITIONING

2.1 Place the stack of drying rings containing the wet handsheets in the standard atmosphere prescribed in Appita Standard P415 to dry. Continue the drying until the handsheets can be detached from the plates with ease. The dried sheets should be perfectly flat and have a glazed finish.

Examine the handsheets and discard any which are damaged or have a perceptible fault, e.g. uneven thickness or froth marks. If less than eight handsheets remain for testing, prepare more handsheets to make up the number in the set.

2.2 Condition the handsheets in the standard atmosphere by hanging them in such a way that the air has free access to all surfaces. Unless the conditioning time is known from previous experience, continue the conditioning until the mass of the handsheets is constant when weighed at hourly intervals.

Record the mass of each handsheet to the nearest mg. Select for testing the eight sheets with the least variation in mass and formation: the remainder may be kept for future reference.

Test the conditioned handsheets in the standard atmosphere, taking care to handle the test pieces as little as possible.

3. GRAMMAGE

Determine the oven-dry grammage of the selected handsheets in grams per square metre by either of the following methods. Method A is the more precise and is taken as the standard, but method B is sufficiently accurate for most purposes.

3.1 Method A. After completing the tear test, divide the torn test pieces into duplicate samples, taking care to ensure that the two pieces from any torn 62 mm × 50 mm test piece are allocated to the same sample and that there are an equal number of