1.0 INTRODUCTION

1.1 SCOPE

1.1.1 This document establishes the method for determining moisture content.

1.1.2 Moisture content of data processing card stock may be defined as the proportion of weight of the paper represented by the moisture in the paper.

1.1.3 Moisture content is determined by weighing a sample of card stock prior to, and after, drying. The weight loss divided by the original weight equals the moisture content.

1.2 REFERENCES

1.2.1 Standards

TAPPI T412-os63 Moisture in Paper and Paperboard

1.3 AUTHORIZATION

1.3.1 This document is authorized by the Manager of Quality Assurance Consumables.

1.4 TEST EQUIPMENT/MATERIAL

1.4.1 Emerson Speed Dryer. Emerson Apparatus Co., Melrose, Massachusetts. (See Figure 1)

Emerson speed dryer shall be used in the test. The size of the hot plate is rectangular 14 x 24 inches. Refer to drawing.

1.4.2 An accurate and rapid weighing instrument to weigh each sample to the nearest one-hundredths of a gram.

1.4.3 A moisture proof sample holder to protect the sample when it is exposed to the atmosphere.

2.0 PROCEDURE

2.1 SAMPLE PREPARATION

2.1.1 Cut with sharp knife about 1/2 inch or at least ten convolutions deep into a mill roll or across a slit reel of data processing card stock paper.

2.1.2 Remove three strips about 20 inches long from the inner convolutions of a slit reel of paper or one rectangular area of paper measuring about 10 x 20 inches from the inner convolution of a mill roll of paper.

2.1.3 All specimens so extracted from the sample must be folded and placed quickly into the sample holder. The sample holder will prevent the specimen from becoming conditioned to the surrounding atmosphere. As the percent of moisture content is computed from the original weight of the data processing card stock or paper specimen, it is important that the test be conducted as quickly as possible after the test specimen has been acquired from the sample.

3.0 TEST INSTRUCTIONS

NOTE: Refer to applicable specification for limits and range requirements.

3.1 Weigh sample holder with specimen to nearest one-hundredth of a gram on rapid weighing scale.

3.2 Subtract weight of sample holder used from total weight and note exact weight of test specimen.

3.3 Remove specimen from sample holder.

3.4 Place specimen in the Emerson Speed Dryer. Maintain dryer at 240 to 260°F temperature.

3.5 After three minutes, remove the specimen from the dryer and quickly place it back into the sample holder.

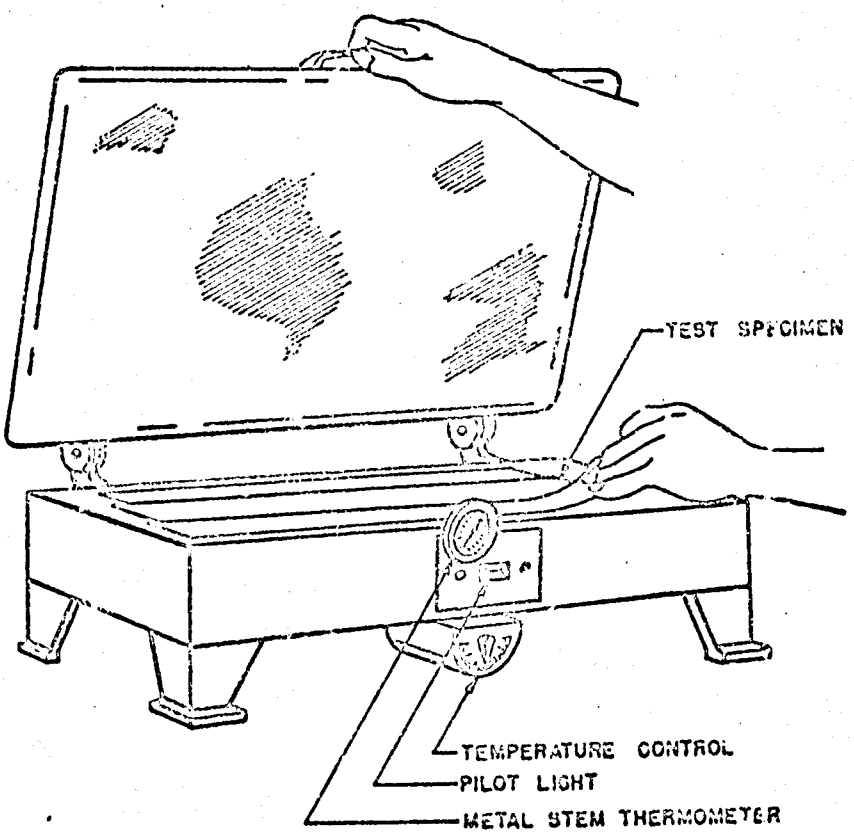
3.6 Reweigh the specimen, immediately.

3.7 Subtract weight of sample holder and note weight of dehydrated specimen.

3.8 With use of nomograph or mathematical calculation, determine the percentage of moisture content of the original weight of sample.

4.0 REPORTING

4.1 Record the moisture content in percentage loss in the original weight of the sample to the nearest 0.1.



EMERSON SPEED DRYER

Figure 1