1 Purpose

1.1 To establish a standard procedure for performing a Pitot tube traverse to measure air flow in a duct.

2 Scope

2.1 This procedure applies to the Pilot tube traverse in either rectangular duct or round duct.

3 Reference

3.1 NEBB Testing Adjusting Balancing Manual for Technicians, First Edition, 1986.

4 Definition

4.1	CFM	Cubic Feet per Minute
4.2	FPM	Feet Per Minute
4.3	TAB	Test, Adjust, and Balance

5 Responsibility

5.1 TAB technicians shall record all test readings on Form FN 8.007.1 (Duct Traverse Test Report).

5.2 TAB technicians shall save all test reports in files, located in the TAB department of Therma.

5.3 All test equipment utilized shall be in calibration in accordance with NEBB Standards and traceable to the National Institute of Standards and Technology (NIST).

6 Materials Requirement

6.1 Plastic Plugs or equivalent

7 Test Equipment

7.1 Differential Pressure Meter

7.2 Pitot Tube

8 Procedures

8.1 Measure the size of the duct and calculate the cross-sectional area.

8.2 Determine the traverse hole dimensions on the duct and mark off each hole's location. Drill test holes and cap off them with plastic plugs or equivalent.

Note: 1. Test points must be taken at the center of equal area over the cross section of the duct.

2. Traverse location must be 2 equivalent diameters upstream or 5 downstream of an elbow, off-set transition or damper.

8.3 Connect a good grade of tubing from the differential pressure meter to the pitot tube.

8.4 Uncap one hole at a time and measure the velocity using the pitot tube. Record the duct velocity in FPM and cap off the hole.

8.5 Repeat step 8.4 until the velocity has been measured at all holes. Seal the duct as necessary when the measurement is complete.

8.6 Calculate the average velocity by averaging the velocity of the readings.

8.7 Calculate the actual air volume in CFM using the following equation:

Actual CFM = Average Velocity x Area

8.8 Record all data on the Form FN 8.007.1 (Duct Traverse Test Report).

9 Review and Approval

9.1 Return the Form FN 8.007.1 (Duct Traverse Test Report) to the TAB Department for review.

Document Approval

General Foreman — Date: 4-15-97

Service Manager — Date: 4-15-97

Quality Assurance Manager — Date: 4-16-97