

## **PART 1 GENERAL**

### 1.01 Purpose:

- A. This standard is intended to provide useful information to the Professional Service Provider (PSP) to establish a basis of design. The responsibility of the engineer is to apply the principles of this section such that the University may achieve a level of quality and consistency in the design and construction of their facilities. Deviations from these guidelines must be justified through LCC analysis and submitted to the University for approval.

### 1.02 Requirements:

- A. Medium and high-pressure ductwork is hereby defined as ductwork subject to operating pressures in excess of 2" w.g., positive or negative.
- B. Low pressure ductwork is hereby defined as ductwork subjected to velocities of 2500 fpm or less, and operating pressure of 2" w.g. or less, positive or negative.
- C. Provide balancing dampers with inspection ports at supply, return, and general exhaust branches when connected to larger ducts, as required, for air balancing.
- D. Ductwork taps shall be conical or clinch collar with 45 degree or boot connections.
- E. Connect air devices to low pressure ductwork with five-foot maximum length of flexible duct. Connections to Air devices and changes in direction shall be made with hard sheet metal duct elbows.
- F. **No** internally insulated ducts shall be used on SHSU campuses.

## **PART 2 PRODUCTS**

### 2.01 Materials:

- A. Ductwork Materials: Provide materials which are free from visual imperfections including pitting, seam marks, roller marks, stains and discoloration, and other imperfections, including those which would impair painting.
- B. Corrosive Fume Exhaust: Typically 304L stainless steel with welded seams unless nature of corrosive fumes require otherwise.

## **PART 3 EXECUTION**

### 3.01 Testing:

- A. Medium Pressure Leakage: After medium pressure duct system is constructed, test for duct leakage in accordance with the latest versions of ASHRAE 90.1 and SMACNA HVAC Air Duct Leakage Test Manual. Repair leaks and repeat tests until total leakage is less than 1% of system design airflow when the system is pressurized to the design duct pressure class rating.

**END OF STANDARD**