

5. EXHAUST DUCTS

5.1 Purpose. The purpose of the exhaust duct work is to control the flow of air, in the desired quantities and at the desired velocities, from each exhaust hood to the point of discharge.

5.2 Duct Systems.

5.2.1 For general consideration refer to ANSI Z9.2-1961, para.

5.2, page 17.

5.3 Conveying and Design Velocities.

5.3.1 A distinction is made between "transport velocity" ("conveying velocity") and "design velocity" for dusts. Transport velocity is the minimum velocity required to keep the dust moving through the duct. Design velocity is generally higher than transport velocity for the following reasons:

(1) To provide a factor of safety to insure the maintenance of transport velocity in the main in the event of closure of one or more branches, leakage of duct work, corrosion or erosion of the fan wheel, increase in system resistance due to denting of duct work, and other causes

(2) To balance systems having a number of branches

(3) To allow the use of smaller size ducts.

5.3.2 Recommended minimum air velocities.

...Duct risers - 4100 fpm

Horizontal ducts - 3900 fpm