

AIR ENTRAINMENT METER

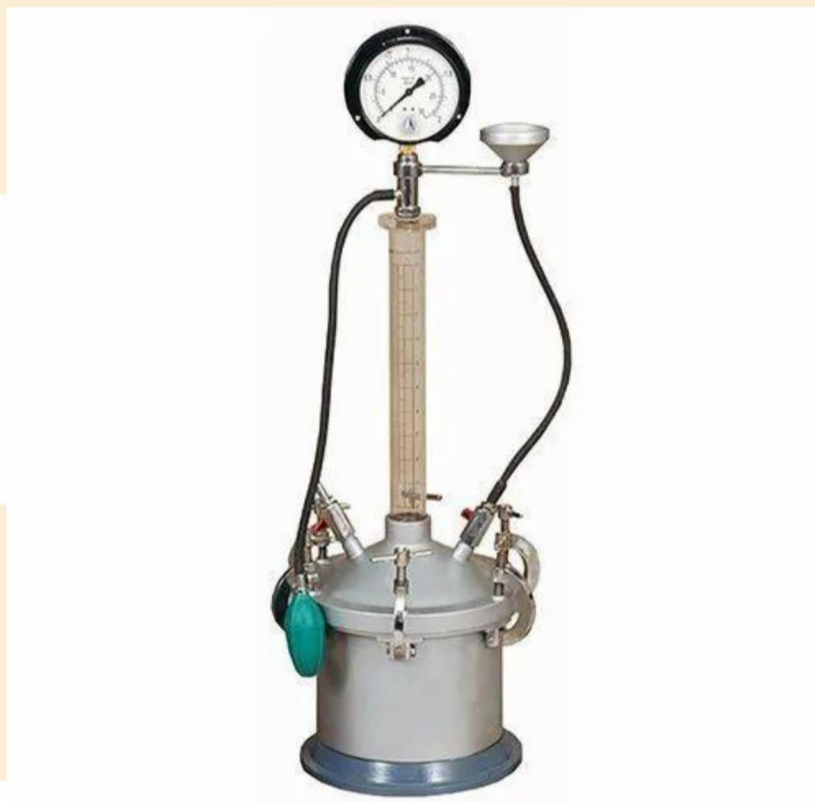
BE 56

You're absolutely correct that air entrainment in concrete is a critical factor affecting its durability and workability. Entrained air, when controlled within an optimal range (typically 4-7% for most concrete mixes exposed to freeze-thaw cycles), enhances durability by providing space for water to expand during freezing, reducing cracking and spalling. However, too little air entrainment (below 3%) can compromise this durability, while excessive air can reduce concrete strength.

Air-entraining admixtures are often used to improve workability and achieve the desired air content, but precise measurement is essential to ensure the mix meets specifications. Air entrainment meters, using the pressure method, are standard tools for this purpose. These devices work by applying pressure to a sample of freshly mixed concrete in a sealed chamber and measuring the volume change, which correlates to the air content. The method is based on Boyle's Law, where the reduction in volume under pressure indicates the air content.

FOLLOWING STANDARD

IS 1199, IS:10079, BS:1881 , EN 12350-7



BALAJI ENTERPRISES