

Transportation Engineering Laboratory

The Transportation Engineering lab was established to meet the needs of analysing traffic movements and testing pavement materials. This lab has facilities for analysing traffic flow on roads. This lab has a variety of equipment for testing bituminous binder, mastics, and mixtures in order to evaluate and understand material behaviour. This lab also has the capability of performing the mix design of the bituminous mixture using the Marshall Stability apparatus with Compaction set up. Undergraduate students use the Transportation Engineering lab effectively to learn the principles and procedures involved in traffic engineering and material testing in accordance with standards. The lab is being used by transportation engineering researchers.



S.No	Name of the Equipment	Description	Image
1	Impact Testing Machine	It is used to determine the aggregate impact value (AIV) which provides a relative measure of the resistance of an aggregate to sudden shock or impact.	
2	Los Angeles's Abrasion Testing Machine	It is used to measure the aggregate toughness and abrasion resistance such as crushing, degradation and disintegration.	

S.No	Name of the Equipment	Description	Image
3	Deval's Attrition Testing Machine	It is used to measure the attrition resistance of aggregate.	
4	Marshal Stability Apparatus	It is used to measure the resistance of cylindrical bituminous mix specimens to plastic flow under loading on the lateral surface	

S.No	Name of the Equipment	Description	Image
5	Stripping Test Apparatus	It is used to determine the presence of water molecules in adhesion between the bitumen and aggregates.	
6	Penetration Test Apparatus	It is used to determine the consistency and grading of bituminous material.	

S.No	Name of the Equipment	Description	Image
7	Tar Viscometer	It is used to determine the viscosity of bituminous material.	
8	Flash & Fire Point Test Apparatus	It gives an indication of the critical temperature at and above where precautions should be taken to eliminate fire hazards during its applications.	

S.No	Name of the Equipment	Description	Image
9	Ductility Test Apparatus	It gives a measure of adhesive property of bitumen and its ability to stretch.	 A photograph of a ductility test apparatus. It consists of a blue rectangular base with a small, light-colored, elongated sample of bitumen being stretched between two points. A control unit with a digital display and buttons is visible on the right side of the base.
10	Ring & Ball Apparatus	It is used to determine the softening point of bitumen, asphalt and coal tar.	 A photograph of a Ring & Ball apparatus. It features a blue base with a control panel and a vertical assembly holding two glass rings containing samples. A sign in the background reads 'Ring and Ball Apparatus (Softening Point of Bitumen) As per IS: 1191-1978'.