



Swami Keshvanand Institute of Technology, Management & Gramothan

(Accredited by NAAC with 'A⁺⁺' Grade)

Approved by AICTE, Ministry of Education, Government of India

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Affiliated to Rajasthan Technical University, Kota

Department of Civil Engineering (2022-23)

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**Swami Keshvanand Institute of Technology,
Management & Gramothan, Jaipur
Department of Civil Engineering**




The following are the facilities available in the Department of Civil Engineering at SKIT Jaipur



1. Aggregate Polishing Apparatus
2. Air pollution samplers (PM-10)
3. Air pollution samplers (PM-2.5)
4. Centrifuge Extractor
5. Compressive strength Machine of Mortar
6. Digital Marshal stability with ITS
7. Direct Shear Apparatus
8. ISAT Apparatus
9. PAN Mixture
10. Permeability Test Apparatus
11. RCPT Test
12. Rolling Thin Film Oven
13. Rotational Viscometer
14. Skid Resistance Tester
15. Tile Abrasion Testing Apparatus
16. Total Station
17. Triaxial Apparatus
18. UPV Tester



Name of Equipment	Specification	Make	Research Application	Total Cost (Per unit in Rs.)	Bill No. & Date of Purchase	View
Aggregate Polishing Apparatus	Automatic Grade- Fully-automatic Power (HP)- 5hz,Machine Capacity - 10 to 50ltrs Voltage -230 v Product type -Polishing Machine Weight Approx 30kg	EIE	To provide facility for determining advance properties of rigid pavements.	127794	EP/18-19/4523 & 13-01-2019	
Air pollution samplers (PM-10)	APM 460	Envirotech	It is used for measuring the mass of particulate matter in ambient air.	100848 with IGST	2021-22/EI/728 & 16-10-2021	



Air pollution samplers (PM-2.5)	APM 550 mini	Envirotech	It is used for measuring the mass of particulate matter in ambient air.	112784 with IGST	2021-22/EI/728 & 16-10-2022	
Centrifuge Extractor	centrifuge extractor is compact with in-built dimmerstat for speed variation from 0 rpm to 3600 rpm. Each unit is supplied complete with a set of 25 Filter Paper Discs.	AIMIL	To provide facility for quality assurance of bituminous mixes.	48303.4	47 & 01-04-2017	
Compressive strength Machine of Mortar	Capacity (In kN) 250kN, Ressure Gauge (In kN) 250kN Least Count (In kN) 1kN, Pressure Gauge Diameter (mm) 200 AC motor, 220 V, 50-60 Hz, 1 phase, 1 hp and 1.1 kW	AIMIL	To provide facility for testing of mortar mixes	366974.1	G191 & 2-12-2022	


Digital Marshal stability	Marshall Apparatus, 50kN, Ref. Standard ASTM 05581 :2007 (AIM 550-1) Digital Indicator 25mm S Type Load Cell Precise Speed	AIMIL	To provide facility for advance research on bituminous mixes.	192921.05	2016/17/99 & 28-11-2016	
Direct Shear Apparatus	Motorised 12 speed (IS 2720 Part 13) Proving ring and 2 nos. of dial guage of 0.01 x 25 mm	HEICO	Used to evaluate the shear strength properties of soil.	104063	101 & 03/07/14	

ISAT Apparatus	Product Type INITIAL SURFACE ABSORPTION TEST APPARATUS (ISAT) Dimension(L*W*H) 690 X 430 X 640(L X W X D) mm Millimeter (mm) ; Weight 30KG	EIE	To assess the water absorption per unit area of the surface zone in concrete	26125	EP/2122/6870 & 23-03-2022	
PAN Mixture	Pan Type, Capacity 40 L (AIM 9891) vessel is rotated at 20-24 RPM 3Phase Motor	AIMIL	To improve the quality and strength of concrete mix	201780	G153 &27-10-2022	
Concrete Permeability Test Apparatus	Concrete Permeability Apparatus 3 cell model for 150 mm cube as per DIN Std. (AIM 384),air compressor cap. 15kg	AIMIL	Used to determine the depth of penetration of water under pressure in the concrete specimens	175814.75	2016-17/8 7 08-04-2016	

RCPT Test	<p>Vacuum Pump 1 Pc Vacuum Desiccator 250 mm Voltage 220-240 V Frequency 50-60 Hz</p>	EIE	To provide facility for determining the durability parameters of concrete.	323980	EP/2122/6870 & 23-03-2022	 <p>The image shows a red and grey RCPT Apparatus. It has a central digital display screen. To the right of the screen are three vertical control panels, each labeled 'CELL 1', 'CELL 2', and 'CELL 3'. Each panel contains a red emergency stop button, a 'FUSE-1A' indicator, and a 'RTD-1' sensor port. The top of the unit is labeled 'RCPT APPARATUS' and the bottom right corner has the text 'EIE INSTRUMENTS PVT. LTD. www.eieinstruments.com'.</p>
Rolling Thin Film Oven	<p>Description Rolling Thin-Film Oven 220-240V 50/60 Hz Max Temp (°C) 163°C ± 1°C (preset) Dimensions: Internal (HxWxD) 380 x 480 x 440 mm Dimensions: External (HxWxD) 800 x 710 x 660 mm Insulation Double wall Internal material 304 stainless steel Max power (W) 1500</p>	EIE	To provide facility for advance research on rheological properties of bitumen.	289218	EP/18-19/4523 & 13-01-2019	 <p>The image shows a stainless steel Rolling Thin Film Oven. It has a large rectangular viewing window on the front door. To the left of the door is a control panel with several buttons and a digital display. The unit is mounted on four small casters.</p>

Rotational Viscometer	<p>No of Standard Spindle : 2</p> <p>Display : LCD</p> <p>Temperature Monitoring : Yes</p> <p>Measurement Accuracy : $\pm 1\%$ (FS)</p> <p>Repeatability : $\pm 0.5\%$ (FS)</p> <p>Output : RS232C Interface</p> <p>Power Supply : AC 220V / 50Hz</p> <p>Dimension LxWxH (mm) : 400 x 350 x 360</p>	AIMIL	To provide facility for advance research on rheological properties of bitumen.	403560	G191 & 2-12-2022	
Skid Resistance Tester	<p>Pendulum bob weight $1500 \text{ g} \pm 30 \text{ g}$</p> <p>Moment of pendulum's BabyCenter $410 \pm 5 \text{ mm}$</p> <p>Face-on static pressure on pavement $22.2 \pm 0.5 \text{ KN}$</p> <p>Measuring range $410 \pm 5 \text{ m}$</p> <p>Distance b/w edge and center of pendulum 508 mm</p> <p>Weight 25 kg</p>	EIE	To provide facility for determining advance properties of rigid pavement.	92040	EP/18-19/4523 & 13-01-2019	

Tile Abrasion Testing Apparatus	<p>Standard- IS:1237, 1706 Revolving at the rate of 30 ± 1 rpm. At the end of 100 revolutions of the disc, The wear of the tile is measured using AIM48101 thickness measuring device . A funnel is provided to facilitate charging the grinding path with abrasive powder. Supplied complete with automatic pre-set revolution counter and one 7.5 kg weight, but without abrasive powder and thickness measuring device.</p>	AIMIL	To provide facility for advance research on abrasion value of tiles.	161601	47 & 04-10-2017	
Total Station	<p>Model-CX65, magnification/resolving power-30x/ 2.5", Data storage- internal memory & plug in memory device, laser pointer-coaxial red laser beam, Li-ion chargeable battery (capacity-15hrs), distance measurement capacity - 350m (Reflectorless) and 2500m(Apprx.)</p>	SOKKIA	Use in Surveying for measuring - distance, area, angle & relative coordinates points.	273000	590 & 29/08/2016	

Triaxial Apparatus	One motorized load frame, one proving ring and one cell assembly with loading plunger	HEICO	Used to evaluate the shear strength properties of soil.	197719	101 & 03/07/14	
UPV Tester	Test Mode Range Measurement units Resolution Calibrated accuracy Transducer Operating Temperature Power Testing range Through transmission mode 0.1μ sec to 9999.9μ sec Time ± 0.1μ sec ± 0.1μ sec Contact Type 0° to 50° c 7.2V DC Instantaneous upto 5 meters & 5 meters and above with amplifier and suitable probes	ROOP ULTRASONIC LTD	It is a nondestructive popular test used to examine the homogeneity, quality, cracks, cavities, and defects in concrete.	207090	142/B/23-24 & 24-11-2023	