

CURRICULAM-VITAE OF GAGANDEEP SINGH



1. **Name:** Er. Gagandeep Singh
2. **Gender:** Male
3. **Date of Birth:** 29th Sep, 1988
4. **Designation & Affiliation:** Principal Scientist, Central Road Research Institute, New Delhi
5. **Postal Address :** Flexible Pavement Division
Central Road Research Institute
Delhi Mathura Road, P.O. CRR
New Delhi – 110025, INDIA
6. **Phone Numbers:** 09654384348 (M)
7. **E-mail ID:** gagan.crri@gmail.com singh1830@gmail.com
8. **Qualifications** (*starting from University Level*)

Sr No.	Degree	University/ Institute	Year	Remarks
1.0	B.Tech (Civil)	NIT, Kurukshetra	2010	Distinction
2.0	M.Tech (EIDM-Roads)	AcSIR	2012	Distinction
3.0	PG Diploma Course in Alternative Dispute Resolution	Indian Law Institute New Delhi	2020-21	Passed

9. Employment Experience

Sr.No.	Grade / Post	From	To	Lab./Instt.
1.0	Scientist C	17/12/2012	16/12/2016	CSIR- CENTRAL ROAD RESEARCH INSTITUTE
2.0	Senior Scientist	17/12/2016	16/12/2022	
3.0	Principal Scientist	17/12/2022	Till Date	

10. **Areas of Interest:** Pavement Material and Design, Application of Waste Material in Road Construction

11. Some of the important Project

- Development of prefabricated plastic panels for road construction
- Development of Design Guidelines and Specification for Utilization of Steel Slag in Road Construction
- Estimation of Modulus of Resilience by Volumetric/Performance properties of Asphalt mixes
- Development of High Strength and fast curing cementitious stabilized base layer
- Delhi Cluster- "Delhi Research Implementation and Innovation" (DRIIV), Theme Solid Waste Management, WP-6 Use of construction & demolition wastes, incinerated residues in road construction.
- Laboratory study on use of Banner Flex Waste in Road Construction
- Evaluation of NuMIXER as rejuvenator for High Rap Mixes
- Laboratory Studies of Highly Modified Asphalt (HIMA-using Kraton SBS Polymer) and Bituminous Mixes containing HiMA vis a vis VG-30 Bitumen
- Evaluation of CF-36P Cellulose Fiber Pellets for application in Stone Matrix Asphalt (SMA)
- Development of Micro-Surfacing Technology for Preservation and restoration of Riding Quality of Cement Concrete Road
- Development of customized bitumen emulsion for mix seal surfacing for Aggregates of UP State
- Development of Rejuvenator for Recycling of Asphalt Pavement Material for Hot-In-Plant and Hot-In-situ Recycling of Bituminous Pavement
- Development of Design Guidelines and Specification for Utilization of Steel Slag in Road Construction – ESSAR Steel
- Development of Design Guidelines and Specification for Utilization of Steel Slag in Road Construction – JSW Steel
- Development of Design Guidelines and Specification for Utilization of Steel Slag in Road Construction – JSW Steel
- Development of Design Guidelines and Specification for Utilization of Steel Slag in Road Construction – RINL
- Field Trials of BOF Steel Slag aggregate on National/State highway and Subsequent performance evaluation for two years
- Assessment of Neoloy based Geocell System for application in Flexible Pavement and Development of Design Templates
- Utilization of Waste Plastic for construction of bituminous roads in Arunachal Pradesh
- Development of Cementitious Material for Stabilization of Base course
- Evaluation of Effect of Modified Wheel Configuration of Electric Bus of Alstom on Flexible Pavement.
- Investigations for Verification of Pavement Design Involving Sub-base and Base Modification for Section 0.000-47.213 (NH-52B) of Package 'Arunachal Pradesh SARDP-NE' of NHIDCL.
- Development of Ambient Temperature Bituminous Mix Technology for construction of flexible pavement
- Development of Micro-Surfacing Technology with industrial waste materials i.e. Steel Slag, Fly Ash and marble

- Development of Bitumen Emulsion based stabilization technology for stabilization of reclaimed asphalt pavement and granular material in flexible pavement
- Development and Assessment of Anti-stripping agent for Improved Adhesion of Bitumen with Aggregate
- Evaluation of Lakhnadone-Ghansore (Seoni-MP) Road for remedial measures for rehabilitation
- Technical Advice and Vetting of Mix Design of CTB, CTSB, RAP, and DBM for Aligarh-Kanpur Section
- Investigation and Evaluation of Identified Roads under SRD Project Division-II Delhi PWD for Recommendations of Strengthening/Rehabilitation
- Testing and Recommendation for improvement of riding surface of Roads under PWD Shahdara Road Maint. Div (M-211)
- Evaluation of Munirka & Ber Sarai Flyover towards Suggesting Repair Treatment
- Evaluation of Various Road under WR-24 and 25 Delhi PWD Division Sainik Vihar.
- Evaluation of NH-10 (Delhi Rothak Road) under Delhi PWD Division Sainik Vihar
- Investigation on Rehabilitation/Strengthening of PWD Roads under Delhi PWD South East Road Division (Old M-412)
- Evaluation of Distressed Surface of Wazirabad Flyover along with adjoining Slip roads towards Suggesting Repair Treatment.

12. Publications

Sr No.	Authors	Title of the Article	Year of Pubn.	Name of Journal/Conference	Venue/Country	Vol No. Issue, Pages	DOI/Publisher
1.	Anand, Sanchit, Gaur Arun, Singh Gagandeep	Evaluation of fatigue endurance limit of dense bituminous mix using different failure theories for the design of perpetual pavement	Sep, 2020	International Journal of Pavement Research and Technology, Springer SCI Journal	Springer	318-326, VL - 14, IS - 3	https://doi.org/10.1007/s42947-020-0024-1
2.	Uma Devi Rongali Gagandeep Singh, Anita, P. K. Jain	Laboratory Performance of Stone Matrix Asphalt Containing Composite of Fly Ash and	March, 2013	Journal of Scientific and Industrial Research, (SCI)	India	Vol 72, pp 186-192	

		Plastic Waste					
3.	Gagandeep Singh, Satish Pandey, M. N. Nagabhushana, P. K. Jain	Effect of SBS Modified Binder on Performance of Bituminous Concrete	January, 2013	Civil Engineering & Construction Review	India	Jan Vol,106-112 2013	
4.	Shubham Surywanshi Gagandeep Singh and Dr. Vandana Tare	Laboratory Study of Stone Matrix Asphalt produced using Steel Slag Aggregates	2019	Conference of Transportation Research Group of India	18-21 DEC, 2019	PAPER NO 507	Springer
5.	Dr. Siksha Swaroopa Kar, M N Nagabhushana, Gagandeep Singh	Studies on Use of Ferro Chrome Slag for Replacement of Aggregate in Road Construction	1-3 rd July, 2019	International Conference on resource Sustainability Cities	Australia	-	Accepted for Oral Presentation
6.	Satish Pandey, Gagandeep Singh, J B Sengupta	Assessment of Bituminous Pavement Surface Condition for Recycling	11-12 March 2016 at New Delhi.	CONSAP	CRR I New Delhi		CRR I
7.	P.K. Jain , Gagandeep Singh and R.K. Swami	Studies on Use of Air-cooled Blast Furnace Slag as Aggregate in Road Construction	11 -12 February 2015	14th Annual International conference on Asphalt, Pavement Engineering and Infrastructure . Britannia Adelphi Hotel, Liverpool, UK	Liverpool UK		ARRB

8.	Gagandeep Singh, P.K. Jain,	'Innovative Method for Strengthening of Soil Using Biomass Based Additive for Pavement Construction	11-12 Sep 2015	IIBE Seminar	Manekshaw Centre, New Delhi		BRO
9.	Gagandeep Singh, Devesh Tiwari, P.K. Jain, Arvind Swamy	Critical Review of Endurance Limits of Bituminous Mixes for Developing Countries	10th to 12th Dec 2014	Transportation Planning and Implementation Methodologies for Developing Countries	IIT, Bombay	Transportation Research Proceedings (2015)	Elsevier
10.	Gagandeep Singh, M.N.Nagabhushana & P.K.Jain	"Investigations for Feasibility of Recycling of Pavement at Rajpath: A Case Study"	15-16 Jan, 2014	NASERBIP	CRRI, New Delhi	1, 65-69	CRRI
11.	Praveen Kumar & Gagandeep Singh	RAP With Modified Binders - A Review	15-16 Jan, 2014	NASERBIP	CRRI, New Delhi	1, 70-75	CRRI

13. Technology / Process / Know-how transferred

Sl. No	Title	Date of transfer	Organization /Industry	Your Role*
1.	Rejuvenator for recycling of Asphalt pavement material for Hot in plant and Hot in situ recycling of bituminous/ Asphalt pavement	04-Nov-2019	Verma Industries, Delhi	Team Member of the project through which technology developed

2.	Modified Mix Seal Surfacing (MSS+)	24-August-2020	JMVD Pvt Ltd, Lucknow	Co-PL of the project through which technology developed
3.	Macrosurfacing Technology: Thin Surfacing for Cement Concrete Pavement	22-Feb-2021	JMVD Pvt Ltd, Lucknow	Co-PL of the project through which technology developed

14. Patent Holder

Title	Country	Filed on (Date)	Granted on (Date)
Process for Preparation of High Performance Highly Modified Hybrid Bitumen for Lower Thickness of Bituminous Pavements and Use in Perpetual	INDIA	11/10/2017	21/12/ 2021