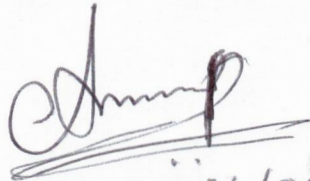


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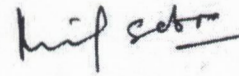
Dr. Agnivesh P

Assistant Professor

Department of Civil Engineering

Indian Institute of Technology (BHU)

Varanasi, Uttar Pradesh



Co-Supervisor

Dr. Nikhil Saboo

Associate Professor

Department of Civil Engineering


Indian Institute of Technology

Roorkee, Uttarakhand

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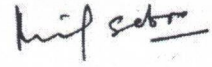
Dr. Agnivesh P

Assistant Professor

Department of Civil Engineering

Indian Institute of Technology (BHU)

Varanasi, Uttar Pradesh



Co-Supervisor

Dr. Nikhil Saboo

Associate Professor

Department of Civil Engineering

Indian Institute of Technology

Roorkee, Uttarakhand


Signature of Head of the Department

विभागाध्यक्ष/HEAD

जानपद अभियांत्रिकी विभाग

Department of Civil Engineering

भारतीय प्रौद्योगिकी संस्थान (बी.एच.यू.)

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LIST OF TABLES

Table 1-1 Savings from the use of reclaimed asphalt pavement in 2019	5
Table 2-1 Composition of asphalt binder.....	15
Table 2-2 Classification of rejuvenators based on the source.....	21
Table 2-3 Classification as per ASTM D4452.....	22
Table 2-4 Classification as per IS 17052	23
Table 2-5 Factors affecting the fatigue performance of rejuvenated recycled mixes.....	28
Table 2-6 Better performing rejuvenators (type) in rutting	34
Table 3-1 Asphalt binder properties	40
Table 3-2 Physical properties of aggregate.....	41
Table 3-3 Rejuvenator properties.....	42
Table 3-4 Rejuvenator blending conditions adopted in literature.....	50
Table 4-1 Performance of mixes at different aging periods	71
Table 4-2 Aging periods implemented in the present study	73
Table 4-3 Percentage variation in strain values with corresponding increase in aging periods	75
Table 4-4 Percentage variation in cracking tolerance index values with corresponding increase in aging periods.....	78
Table 4-5 One-way ANOVA results.....	81
Table 4-6 Aging index at different aging times	82
Table 5-1 Performance of recycled mixes with Waste Engine Oil as rejuvenator	86
Table 5-2 Functional groups details.....	92
Table 5-3 Properties of recycled binder blends	94
Table 5-4 Results of Two-Way ANOVA analysis	99
Table 6-1 Viscosity and rolling thin film oven test results	118

Table 6-2 Functional groups identified for each rejuvenator.....	119
Table 6-3 Rejuvenator dosages corresponding to different parameters.....	136
Table 6-4 Clusters and corresponding dosages for all binder blends	137
Table 6-5 Selection of optimum dosage cluster.....	141
Table 6-6 Ranking approaches for 40% RAP.....	146
Table 6-7 Ranking approaches for 80% RAP.....	146
Table 6-8 Final ranking of Rejuvenators	147
Table 7-1 Aging performance of rejuvenators.....	151
Table 7-2 Rate of decrement of Cracking Tolerance Index.....	155
Table 7-3 Rate of increment of Rutting Tolerance index	158
Table 7-4 Rate of increment of Resilient Modulus.....	161
Table 7-5 Ranking of rejuvenators corresponding to each performance parameter	163

LIST OF FIGURES

Figure 1-1 Milling Machine.....	3
Figure 1-2 Teeth on rotating drum of milling machine	4
Figure 1-3 Usage of reclaimed asphalt pavement in asphalt mixtures over the years in the united states.....	5
Figure 1-4 Key development related to the use of reclaimed asphalt pavement in hot mix asphalt	8
Figure 2-1 Change in the composition of the binder with aging and rejuvenation – recreated from (values are approximate).....	20
Figure 2-2 Microstructural images of binder after aging and rejuvenation	26
Figure 2-3 Influence of dosage and diffusion on the asphalt binder structure.....	27
Figure 2-4 Effect of rejuvenators on rutting	33
Figure 2-5 Rutting resistance of rejuvenated mixes compared to virgin mix	34
Figure 3-1 Images of Rolling Thin Film Oven	47
Figure 3-2 Images of Pressure Aging Vessel.....	49
Figure 3-3 Outline of the research work	56
Figure 3-4. Fourier Transformed Infrared test setup	58
Figure 3-5 Dynamic creep compression test.....	60
Figure 3-6 Typical creep curve	60
Figure 3-7 Components of strain	61
Figure 3-8 Hamburg equipment.....	62
Figure 3-9 Sample setup for Hamburg test	63
Figure 3-10 IDEAL RT test setup.....	64
Figure 3-11 IDEAL CT test setup.....	66
Figure 4-1 Variation in Marshall Stability with aging.....	74

Figure 4-2 Permanent strain variation with aging periods.....	76
Figure 4-3 Cracking Tolerance index variation with time.....	77
Figure 4-4 AFR and Peak load variation with time.....	77
Figure 4-5 TSR variation with time.....	79
Figure 4-6 Resilient Modulus variation with time.....	80
Figure 4-7 Recoverable strain variation with time.....	80
Figure 5-1 Experimental plan schematics.....	89
Figure 5-2 FTIR Spectra of Rejuvenator A.....	92
Figure 5-3 FTIR Spectra of Rejuvenator B.....	93
Figure 5-4 Variation in High temperature performance grade with increase in dose for rejuvenators.....	94
Figure 5-5 Rutting resistance of recycled mixes.....	96
Figure 5-6 Fatigue resistance of recycled mixes.....	97
Figure 5-7 Moisture resistance of recycled mixes.....	98
Figure 6-1 Flowchart of the experimental program.....	105
Figure 6-2 Penetration test setup.....	107
Figure 6-3 Test assembly for softening point test.....	108
Figure 6-4 (a) Dynamic shear rheometer (b) 25 mm parallel plate geometry (c) 8 mm parallel plate geometry.....	109
Figure 6-5 Master curve illustration.....	112
Figure 6-6 Implication of Glover Rowe parameter.....	113
Figure 6-7 FTIR Spectra of Rejuvenator B.....	121
Figure 6-8 FTIR Spectra of Rejuvenator W.....	122
Figure 6-9 FTIR Spectra of Rejuvenator E.....	122
Figure 6-10 FTIR Spectra of Rejuvenator R.....	123

Figure 6-11 Penetration trend with rejuvenator dose.....	127
Figure 6-12 Softening point trend with rejuvenator dose	128
Figure 6-13 High temperature Performance Grade trend with rejuvenator dose.....	129
Figure 6-14 Intermediate temperature Performance Grade trend with rejuvenator dose	130
Figure 6-15 Zero Shear Viscosity trend with rejuvenator dose	131
Figure 6-16 Crossover frequency trend with rejuvenator dose	132
Figure 6-17 Glover Rowe parameter trend with rejuvenator dose	133
Figure 6-18 Non-recoverable creep compliance trend with rejuvenator dose	134
Figure 6-19 RILEM criteria trend with rejuvenator dose	135
Figure 6-20 Rutting and fatigue performance results of different clusters	140
Figure 6-21 Rheological properties of recycled binders with different rejuvenators	143
Figure 6-22 Rutting and Fatigue Performance of recycled mixes with different rejuvenators	144
Figure 7-1 Sensitivity of Cracking Tolerance Index to aging time	154
Figure 7-2 Sensitivity of peak load and Asphalt Flexibility Ratio to aging time	155
Figure 7-3 Sensitivity of Rutting Tolerance index to aging time	158
Figure 7-4 Sensitivity of Tensile Strength Ratio to aging time	160
Figure 7-6 Sensitivity of resilient modulus to aging time	161

ABBREVIATIONS

40A	Binder with 40% aged binder and rejuvenator A
80A	Binder with 80% aged binder and rejuvenator A
40B	Binder with 40% aged binder and rejuvenator B
80B	Binder with 80% aged binder and rejuvenator B
A	Asphaltenes
A1	First acidaffins
A2	Second acidaffins
AASHTO	American Association of State Highway and Transportation Officials
AFR	Asphalt Flexibility Ratio
AI	Aging index
ANOVA	Analysis of Variance
APO	Arizona pine oil
ASTM	American Society of Testing and Material
B	Commercial rejuvenator B
B4	Binder with rejuvenator B and 40% RAP binder
B8	Binder with rejuvenator B and 80% RAP binder
BOF	Bio rejuvenator fluid
BYE	Binder Yield Energy
C=C	Alekne functional class
C=O	Aldehydes and Ketones functional class
C-H	Alknes/Alkenes/Arenes
CWE	Cationic water-based emulsion
CII	Colloidal Stability Index

cm	Centimeter
C-N	Amine functional group
CO ₂	Carbondioxide
CR	Commercial Rejuvenators
cSt	Centi stokes
CT _{index}	Cracking tolerance index
D	Diameter of the sample
DBM	Dense bituminous macadam
DCC	Dynamic creep compression
df	Degrees of freedom
DS	Dynamic stability
DSR	Dynamic shear rheometer
DTS	Dynamic testing system
E	Waste engine oil
E4	Binder with waste engine oil rejuvenator and 40% RAP binder
E8	Binder with waste engine oil rejuvenator and 80% RAP binder
EN	European
FI	Flexibility index
FTIR	Fourier Transform Infrared Spectroscopy
G*	Complex shear modulus
GDP	Gross Domestic Product
G _f	Fracture energy
G _g	Glassy modulus
G-R	Glover-Rowe
GTRV	Global total rank value

h	Height of the sample
HPE	Heavy paraffinic extract
HMA	Hot Mix Asphalt
HSD	Honest significant difference
HWRT	Hamburg wheel rut test
Hz	Hertz
IDEAL-CT	Indirect Tensile Cracking Test
IDEAL-RT	Indirect Tensile Rutting Test
IRC	Indian Road Congress
IS	Indian Standard
ITS	Indirect tensile Strength
ITS _{dry}	Indirect tensile Strength of sample in dry condition
ITS _{wet}	Indirect tensile Strength of sample in wet condition
J _{nr3.2}	Non-recoverable creep compliance at 3.2 kPa
kBr	Potassium Bormaide
kg	kilogram
kPa	Kilo pascals
l ₇₅	displacement at 75% of peak load (post-peak)
LAS	Linear amplitude sweep
LTA	Long term aging
LVDT	Linear Variable Differential Transformer
LVE	Linear viscoelastic
min	Minutes
Mm	Millimetre
MoRTH	Ministry of Road Transport and Highways

MPa	Mega Pascals
M_R	Resilient Modulus
MS	Masrshall Stability
ms	Milli seconds
MSE	Mean square erorr
NAPA	National Asphalt Pavement Association
NCHRP	National Cooperative Highway Research Program
N-H	Amine functional class
NMAS	Nominal maximum aggregate size
nPB	n-propyl bromide
NV	Normalized value
O-H	Alcohols and phenols functional class
PAV	Pressure aging vessel
PND	Petroleum neutral distillate
PG	Performance grading
PGH	High temperature performance grading
PGI	Intermediate performance grading
P_{max}	Maximum load
PP	Parallel plate
R-index	Rheological index
R	Commercial rejuvenator R
R4	Binder with rejuvenator R and 40% RAP binder
R8	Binder with rejuvenator R and 80% RAP binder
rad	Radians
RAP	Recycled/Recliamed Apshalt Pavement

RILEM	Réunion Internationale des Laboratoires et Experts des Matériaux
rpm	Rotations per minute
RTFO	Rolling Thin Film Oven
RT _{index}	Rutting tolerance index
RV	Ranked Value
SHRP	Strategic Highway Research Program
SP	Softening point
SS	Sum of squares
STA	Short term aging
SUPERPAVE	Superior Performing Asphalt Pavements
t	Time
T	Torque
τ_f	Shear strength
TRV	Total rank value
TSR	Tensile strength ratio
TTSP	Time temperature superposition principle
VG	Viscosity grading
VMA	Voids in Mineral Aggregate
W	Waste vegetable oil
W4	Binder with waste vegetable oil rejuvenator and 40% RAP binder
W8	Binder with waste vegetable oil rejuvenator and 80% RAP binder
ω	Frequency
ω_c	Cross-over frequency
WCO	Waste cooking oil
WEO	Waste engine oil

WF	Weightage factor
WVO	Waste vegetable oil
ZSV	Zero shear viscosity
δ	Phase angle
θ	Deflection
τ	Shear stress
γ	Shear strain
μ	Poissons ratio
ΔH	Horizontal deformation