

GUIDELINES FOR ACCREDITATION OF NEW MATERIALS AND TECHNIQUES

1. Highway Research Board of Indian Roads Congress operates Accreditation of New Materials and Techniques to manufacturers/promoters covering planning, design, construction and maintenance of Highways and Bridges. The 'Committee for Accreditation of New Materials and Techniques' is composed of road and bridge experts from Central Road Research Institute(CRRI) Ministry of Road Transport & Highways(MORTH); National Highways Authority of India (NHAI); National Rural Road Development Agency(NRRDA), Central Public Works Department (CPWD), Border Roads Organization (BRO), Military Engineering services (MES), State PWDs; Highways Research Station (HRS), Chennai; Gujarat Engineering Research Institute (GERI), Vadodara, IIT Delhi, IIT Roorkee, National Highways Builders Association (NHBF) and Consulting Engineering Association of India(CEAI)

2 The Committee accords accreditation to new material or technique after review of technical details, test details and other information furnished about the product / technique.

3 The applicant has to pay an advance processing fee of Rs 50,000 by DD drawn in favour of Secretary General, IRC payable at New Delhi alongwith the following reports (one set):

- a) Evaluation Report.
- b) Physical and Chemical Composition.
- c) Location and availability in India and abroad.
- d) Projects where used in India or abroad.
- e) Product Specifications in line with MORTH Specifications for Roads and Bridge work (*Fourth Revision*). 2001.
- f) Laboratory Test Reports from Central Road Research Institute (CRRI) / Government approved laboratories/ Indian Institute of Technologies (IIT)
- g) Cost Comparison under Indian Conditions.

4 Your technical representative is required to make a presentation before the above said Committee for about 20 minutes. 30 sets of documents at Para 3 above are required on the day of meeting for circulation amongst the members of the Committee.

5 The, accreditation is granted to the applicant on trial basis for a period of two years if the Committee is satisfied about the cost effectiveness of the new material/technique.

TERMS OF REFERENCES (TOR) OF EXPERT COMMITTEE UNDER HIGHWAY RESEARCH BOARD FOR ACCREDITATION OF NEW MATERIALS / TECHNIQUES FOR ROAD AND BRIDGE WORKS IN INDIA

1. The Expert Committee shall be constituted under the aegis of Highway Research Board (HRB), specifically to recommend usage of patented/ accredited new materials/techniques in the ongoing road and bridge works, on experimental basis. The duration of the temporary usage shall be 2 years from the date of approval.
2. The proposals shall be addressed by the interested manufacturer/promoter to the Secretary General, Indian Roads Congress (IRC) supported by technical specifications, Test reports from approved test houses, together with performance reports from user departments.
3. A processing fee of Rs 50,000 for each product to be accredited is to be levied, on the receipt of which the product would be placed before the Committee for consideration.
4. The Expert Committee would examine the proposal, obtain further information, if necessary and give its decision. The Secretary General, IRC would notify approval of any material or technique for adoption on the IRC Website and also in the Indian Highways.
5. The Client / user department shall monitor the performance of the patented / accredited new material / technique for its compatibility and durability in Indian environment and furnish detailed report to HRB indicating their experience and satisfactory / un-satisfactory performance periodically. The Committee could, henceforth, also cancel the accreditation of any product in case of non receipt of six-monthly Performance Reports.
6. The temporary permission / accreditation issued by IRC shall automatically terminate at the end of period notified, unless renewed.
7. The HRB shall advise the relevant committees of IRC for considering / recommending the usage of accredited new material / techniques based upon satisfactory performance report from the client and Head of user department, from their experience.
8. For renewal of already accredited materials/techniques, a processing fee of Rs 50,000 would be charged. The Expert Committee would re-examine the proposal in depth and give its decision and could also get additional Performance Reports from other user agencies, to judge the credibility of already accredited material/ technique

9. The usage of an accredited new material / technique would be included in the code of practice, special and other publications issued by IRC, only after fulfilling the step 7 and approval of the IRC Council. The Right to reject any claim would be with the IRC.
10. The temporary approval, trial usage in any work shall not entitle the manufacturer/vendor, to use it as a "Certificate" for marketing purposes either in India or in other countries.
11. The IRC as a body shall not be responsible for adverse performance or failure of a stretch of road or part of bridge where the accredited new material / product has been tried on experimental basis.
12. The Expert Committee would regularly meet within a period of one month.
13. The Expert Committee would dispose of the applications within one month from the date of receipt after discussing the proposal.

LIST OF ACCREDITED NEW MATERIALS/TECHNIQUES AND THEIR USAGE

The Committee for Accreditation of New Materials and Techniques formed under the aegis of Highway Research Board of Indian Roads Congress to accredit patented or new materials / techniques, developed in India / abroad and evaluated as per recognized National / International Specifications has accredited the following new materials/techniques for a period of 2 years for being used on trial basis:

Sl No.	Name of the New Material / Technique	Usage
1	Imperial Smelting Furnace (ISF) Slag	As fine and coarse aggregates & as filler for road embankment.
2	Wacker BS [®] Drysoil	Acts as a water repellent in cohesive and inferior soils.
3	SoilFix – Bound Pavement Stabiliser (HTR365)	For stabilization of sub-base and base course layers for road pavement.
4	Metallurgical Slag (Waelz Kiln Slag)	Used in embankment, sub-base and bituminous /concrete pavement.
5	RBI Grade 81 - Soil Stabilizer	For improving the engineering properties of soil.
6	Recron 3 S - Synthetic Triangular Fibre	Synthetic triangular fibres to improve engineering properties of concrete.
7	Zycosoil [™] Nano Technology	In water-proofing of roads.
8	Brifen Wire Rope Safety Fence	For safety on expressways, dual carriageway, highways and hill roads.
9	Renolith Based Technology	A polymer based formulated product which when mixed with cement and soil, sets to a hard concrete like structure with high compressive strength alongwith good flexibility and low water absorption.
10	Woven Jute Geotextiles	To improve properties of subgrade of roads and hill slopes.
11	Evercrete [®] - DPS	Concrete preserver and water proofing product, spray applied to concrete and cementations surfaces to preserve, waterproof, strengthen and harden the treated areas.
12	Asphaltoseal	On concrete decks for waterproofing purpose in lieu of mastic asphalt under BC overlay.
13	Diamond Grade Cubed Reflecting Sheeting – DG ³	Reflective sheeting.
14	Cold Applied Reflective Road Marking Paint	Reflective road marking paint.
15	Granulated Copper Slag	For road and embankment construction.
16	Consolid System	For stabilisation of sub base/base courses and in embankment.
17	ARRB Australia Make Handheld Roughometer-II	For measuring roughness values of pavements.
18	Pavement Quality Indicator PQI-301 (Non-Nuclear) TRANSTECH, USA Make	For measuring density readings of newly-laid asphalt pavements.
19	Shell Thiopave	Asphalt modifier additive used for enhancing the mechanical properties of the pavement
20	Probid +3.01 Software	Tool for Costing, Budgeting, Planning, Resource Management, and Bidding of Highway Projects
21	Dura-Guard [™] - Double Walled Corrugated Duct	For encasing utilities along highways.
22	PRS-Professional Reinforcement Solutions	Cellular confinement and geogrid technology used as base course.
23	Sinak S 102	Curing and waterproofing compound used to achieve specified strength with improved surface durability.
24	Nu-Phalt Infra Red Pothole Recycling	For repairing of potholes.

	Repairing System	
25	PR Plast S	Additive for improving the characteristics of hot mix asphalt in wearing course or binder course of the roads.
26	Stainless Steel Reinforcement Bars	Structural Steel for reinforced concrete structures.
27	Sparkle – Tata BP Made Solar Road Studs	Road safety product used in accident prone area, hilly roads, urban area, etc.
28	SRMB Azar	Composite Sacrificial Zinc Coating (ZINGA) to control the menace of corrosion on structural and civil structures
29	Evotherm Warm Mix Technology	Eco-friendly pavement construction technology
30	Carboncor	Road paving products used in cold mixes for repairs and surfacing
31	Geogreen Blanket	For slope protection and road embankment protection
32	Asphalt Rheology Technique	For determination of binder grade to predict the performance of the Asphalt used in road paving
33	Trupave	Hybrid geo-synthetics paving mat for highway applications
34	Soiltech MK-III	Polymer based stabilisers used for soil stabilisation
35	Delta Denmrk Make Retro Sign GR3 Retroreflectometer	For measuring retro-reflectivity of road signages
36	Delta Denmrk Make LTL XL Retroreflectometer	For measuring retro-reflectivity of pavement markings

LIST OF COMPANIES SUBMITTED PERFORMANCE REPORT

Sl. No .	Name of the Accredited Material/ Technique and Name & Address of the Company	Accreditation issued on (approved in meeting)	Brief about the new material/ Technology	Details of Performance report Location where product used Performance letter issued by	Remarks
1	RBI Grade 81 - Soil Stabilizer M/s. Legend Surface Developers Pvt. Ltd., NEW DELHI	21/11/2008	Soil Stabilizer: Chemical Agent for improving the engineering properties	1)Used at CSD Canteen, Delhi and performance report by Lt Col ,Garrison Engineer 2)Used on State Highways 48 , Chitradurga and performance report by Mineral Enterprise Ltd, 3) Used at Nyoma Airfield Ladak and performance report by by Chief Engineer , Engineering Branch	Satisfactory
2	Recron 3 S M/s. Reliance Industries Limited, New Delhi	21/11/2008	Synthetic Triangular Fibres to improve engineering properties of concrete	1) Used at runway, air force station, Tezpur performance report by Major Garrison Engineer 2) Used at taxiway and apron at Bhubaneswar and performance by Airport Authority of India, Bhubaneswar 3) used at car parking and roads in Airport , and performance report by AAI, Ahemedabad 4) Used on roads AHCS Air Force , Palam and performance report by Lt Col, Garrison Engineer	Satisfactory
3	Zycosoil™ Nano Technology M/s Zydex Industries, Vadodara	21/11/2008	Nano Technology Soil Water Proofing for Roads	1) Used on NH 6 , Chhattisgarh and performance report by DGM, Ashoka Buildcon 2) Used at GIDC industrial road and performance report by Vishvakarma	Satisfactory

Sl. No .	Name of the Accredited Material/ Technique and Name & Address of the Company	Accreditation issued on (approved in meeting)	Brief about the new material/ Technology	Details of Performance report Location where product used Performance letter issued by	Remarks
				Consultant <i>Only trail had laid , no performance report</i> 1 @ NH 6 Durg by Ashoka Buidcon 2 @ NH 30, Patna bypass by PWD, Bihar 3@ Tapi river canal by GERI	
4	Renolith based Technology M/s Khopoli Polymer Products, Mumbai	10/12/2008	Renolith, a polymer based formulated product which when mixed with normal Portland cement and soil, sets to a hard concrete like structure with high compressive strength alongwith good flexibility and low water absorption.	1) Used on internal roads in housing colony constructed by CIDCO Mumbai performance report by CIDCO	Satisfactory
5	Asphaltoseal M/s Tiki Tar industries, Mumbai	29/07/2009	Use on concrete decks for waterproofing purpose in lieu of mastic asphalt under BC overlay.	1) Used on Mandavi bridge and performance report by Afcons 2) used at four laning of NH 45 and performance report by Afcons 3) Used on Mihan flyover Nagpur and performance report by Afcons 4) Used on NH 45 VIB and performance report by IJM	Satisfactory

Sl. No	Name of the Accredited Material/ Technique and Name & Address of the Company	Accreditation issued on (approved in meeting)	Brief about the new material/ Technology	Details of Performance report Location where product used Performance letter issued by	Remarks
6	Diamond Grade Cubed Reflecting Sheeting – DG3 M/s 3M India Ltd, New Delhi	29/07/2009	Reflecting sheeting.	1) used on NH 8 and performance report by EE PWD UP	Satisfactory
7	Cold applied retro reflective road marking paints M/s Innovative Reflector Private Ltd, Karaikudi	30/07/2009	Reflective road marking paint	1) Used on Kummangudi- Kundrakudi road and performance report by ADE , PWD, Tiruppathur and Director ,HRS Chennai had issued circular to SE, PWD for use of Cold applied retro reflective road marking paints in all future projects and maintenances	Satisfactory
8	ARRB Australia Make Handheld Roughometer-II M/s M/s. Taisei Internacional, Chennai	30/07/2009	Used for measuring roughness value.	1) Performance reports By PWD Regional Laboratories Rajasthan 2) performance report by PWD Central Laboratory Rajasthan 3) By Regional Laboratories PWD, Rajasthan 2 by Central Laboratory PWD Kota Rajasthan Gujarat <i>Used by;</i> 1) @ HRS Chennai, 2) @ IIT Bombay 3) @ PWD Mizoram 4) @ PWD Delhi 5) @ IIT Bombay 6) @ PWD Mizoram 7) @ PWD Delhi	Satisfactory

Sl. No .	Name of the Accredited Material/ Technique and Name & Address of the Company	Accreditation issued on (approved in meeting)	Brief about the new material/ Technology	Details of Performance report Location where product used Performance letter issued by	Remarks
9	Pavement Quality Indicator PQI-301 (Non-Nuclear) TRANSTECH, USA Make M/s M/s. Taisei Internacional, Chennai	30/07/2009	Used for measuring density readings of newly-laid asphalt pavements.	1 Performance report by Regional Laboratories PWD, Rajasthan 2 Performance report by Central Laboratory PWD Rajasthan Gujarat <u>Used by</u> 3 @HRS Chennai, 4 @ R&D division, Gujarat 5 @ DGBR s	Satisfactory
10	Evercrete[®] - DPS M/s	25/08/2009	Concrete preserver and water proofing product, spray applied to concrete and cementations surfaces to preserve, waterproof, strengthen and harden the treated areas.	Used on Bandra- Kurla Concrete road and performance report by EE, MMRDA	Satisfactory

List defaulting Manufacturers / Promoters, who's first Performance Reports had become due by January & April 2010

Sl. No.	Name of the New Material/Technique	Date of issue of Accreditation Certificate	Manufacturers/ Promoters
1	Woven Jute Geotextiles	July 2009	M/s. Gloster Jute Mills Ltd, Kolkata
2	Probid +3.01 Software	October 2009	M/s. AEC Logic Private Limited, Hyderabad
3	Dura-Guard TM - Double walled corrugated duct	October 2009	M/s. Dura-Line India Pvt. Limited, New Delhi
4	PRS-Professional Reinforcement Solutions	October 2009	M/s. PRS Mediterranean Ltd., Israel
5	Sparkle – Tata BP Made Solar Road Studs	October 2009	M/s. Trans Metalite India Limited, New Delhi
6	Brifen Wire Rope Safety Fence	October 2009	M/s. Hill & Smith India Pvt. Limited, England
7	Stainless Steel Reinforcement Bars	November 2009	M/s. Outokumpu India Pvt. Limited, New Delhi