



BUREAU OF INDIAN STANDARDS

MINUTES

<u>Name of the Committee</u>	<u>No of meeting</u>	<u>Date and Time</u>	<u>Day</u>	<u>Venue</u>
Automotive Braking and Steering Systems, Vehicle Testing and Performance Evaluation Sectional Committee, TED 4	41 th	06th June 2024 10: 30 AM onwards	Thursday	Physical meeting

CHAIRMAN: Shri A Akbar Badusha

MEMBER SECRETARY: G Ajit Kumar

HEAD (TED): Shri Deepak Kumar Aggarwal

MEMBERS PRESENT:

Organization	Member Name
Automotive Research Association of India, Pune	Shri A. Akbar Badusha
Ashok Leyland Limited, Chennai	Shri Faustino V
Ashok Leyland Limited, Chennai	Shri Kumaran N
Ashok Leyland Limited, Chennai	Shri D. Balakrishnan
Ashok Leyland Limited, Chennai	Shri Muthukumar N
Ather Energy Pvt Ltd	Shri Satish Kumar
Ather Energy Pvt Ltd	Shri V M Manal
Ather Energy Pvt Ltd	Shri Abhijit B.
Automotive Research Association of India, Pune	Dr Prashant Pawar
Automotive Research Association of India, Pune	Shri D. Pranab
Automotive Research Association of India, Pune	Shri N. Ramesh
Bosch Chassis Systems India Private Limited, Pune	Shri Chaitray Shinde
Bosch Chassis Systems India Private Limited, Pune	Shri Vinayak Patil
Brakes India Limited, Chennai	Sgri S. MURUGESAN
Brakes India Limited, Chennai	Shri G. Devendran
Brakes India Limited, Chennai	Shri B. Ruban Deva Prasath
Daimler India Commercial Vehicles Private Limited, Chennai	Shri Rama Manikandan
Daimler India Commercial Vehicles Private Limited, Chennai	Shri Mohan Kumar
Federal Mogul Motorparts India Limited, Chennai	Shri Venkatesh Sankaran

Global Automotive Research Centre, Oragaram	Shri S Perumal
Hero Motocorp Limited, New Delhi	Shri Piyush Chowdhry
Honda Motorcycle and Scooter India Private Limited, Gurgaon	Shri Vipin Sharma
Hyundai Motor India Engineering Private Limited, Hyderabad	Shri Satyanarayana Gupta Bolisetty
India Yamaha Motor Private Limited, Noida	Shri Navneet Kaushik
Indian Institute Of Technology–Madras	Dr. N. Karuppaian
International Centre of Automotive Technology, Manesar	Shri Gurkaran Singh
Mahindra and Mahindra Limited, Mumbai	Shri S Raghupati
Mahindra and Mahindra Limited, Mumbai	Shri Akshay AP
Mahindra and Mahindra Limited, Mumbai	Shri Kurupppasamy. T
Mahindra Trucks and Bus Division, Pune	Shri V G Kulkarni
Mando Automotive India Pvt. Ltd, Chennai	Shri Ashok Kumar M
Maruti Suzuki India Limited, Gurugram	Shri Arun Kumar
Maruti Suzuki India Limited, Gurugram	Shri Mayank Sharma
Rane Brake Lining Limited, Chennai	Shri Balaji Srinevasan
Renault India Private Limited, Mumbai	Shri Vijay Dinakaran
Renault India Private Limited, Mumbai	Shri Jebin Jowhar
Renault India Private Limited, Mumbai	Shri Sabarivasan KN
Renault India Private Limited, Mumbai	Shri Rajendra Khile
Renault India Private Limited, Mumbai	Shri Kansui Aoki
Sundaram Brake Linings Limited, Chennai	Shri B. Ganesh
Sundaram Brake Linings Limited, Chennai	Shri R. Balasubramanian
Tata Motors Limited, Pune	Shri vivek
Tata Motors Limited, Pune	Shri Uday Saunkhe
Toyota Kirloskar Motor Private Limited, Bidadi	Shri Paresh M Dharwad
TVS Motor Company Limited, Hosur	Shri R. Nagarajan
Volvo Group India Private Limited, Bengaluru	Shri Challapalli Nithin Roy
ZF Rane Automotive India Private Limited	Dr. RM. Thirupathi
Personal Capacity	Dr Janarthanan G

ITEM 0 WELCOME AND INTRODUCTORY REMARKS

Member Secretary welcomed all the members who has attended physically for the 41st Sectional Committee Meeting and also appreciated the contribution by members in the standardization activities of TED 04.

Shri A Akbar Badusha, Chairman, welcomed all the committee members. He appraised the members that standards dealt with by this Committee are of immense importance as they have a direct impact on the notified regulations under CMVR by MoRTH. He requested all the members to take active part in the deliberations on various issues which were discussed as per the agenda. He also requested all the members to complete the work allotted to them within stipulated time frame so that the work of TED 04 is complete as per the time lines set for those activities.

Head TED welcomed the Chairperson and all the members who has attended 41st Sectional Committee Meeting. Head TED emphasized that safety has always been a top priority for all of us, hence TED 04 is a very important committee from the standpoint of the user or consumer. He also explained about guidelines received from BIS Management like organizing frequent meetings, incorporation of Academia and Additional domain experts in standard formulation activities.

Dr. N. Karuppaiah warmly welcomed all the members and invitees present for the 41st meeting of TED 04 in the physical mode. He appreciated the contribution made by the members towards the committee work. He apprised the committee that standards dealt with by this Committee are of immense importance and requested all the members to actively participate in the discussions on the various issues outlined in the agenda

ITEM 1 CONFIRMATION OF THE MINUTES OF PREVIOUS MEETING

The committee approved the minutes of 40th Meeting held on **12th December 2023**.

ITEM 2 COMPOSITION OF THE SECTIONAL COMMITTEE

2.1 The Committee noted the information as given in the agenda.

2.2 The Committee noted the information as given in the agenda.

2.3 The Committee noted the composition and decided to co-opt the following member and also decided to withdraw the nominations of the members who has not attended 40th and 41th SC meeting of TED 04 as per PNC09/18/2023-PNC-BIS dated 05/09/2023.

Sl. No.	ORGANIZATION NAME
1.	M/S. Ather Energy
2.	IIT Madras
3.	Mr. Janarthanan

2.4 The Committee noted the information as given in the agenda

2.5 The Committee noted the information as given in the agenda

ITEM 3 PENDING ISSUES /ACTIONS ARISING OUT OF THE PREVIOUS MEETING(S)

Sl No	Subject	Status/ Decision of committee during previous meeting	Decision in previous meeting	Current Status
1	New proposal for Amendment for standards pertains to friction materials	<p>Status in 39th Meeting M/S. Sundaram Brake Lining Ltd shared a List of Standards pertaining to friction material in which a new clause shall be incorporated which is “Friction Material shall be asbestos free”</p> <p>Decision in 39th Meeting: The responsibility for preparation of Amendments to all the standards pertaining to friction Materials is allocated to SBL and BIL.</p> <p>Decision in 40th Meeting: Committee decided to process the drafts for WC</p>		All the drafts are under WC, The committee noted the information and also authorized member secretary to process the draft for publication if no further comments were received during WC.
2	NWIP Proposals received.	<ul style="list-style-type: none"> ABS for 2 wheeled Motor cycle (ISO 12364) 		The committee deliberated

SI No	Subject	Status/ Decision of committee during previous meeting	Decision in previous meeting	Current Status
		<ul style="list-style-type: none"> • Requirements of Storage Tanks of Air Braking System (ISO 11943) • Requirements of Automatic Brake Adjusters (ABA) (ISO 12409) 		<p>and decided to assign ISO 12364 to M/s. Honda Motorcycles to review the standard and submit their recommendation for adoption within 30 days.</p> <p>As well as ISO 11943 and ISO 12409 were assigned to M/s. Ashok Leyland and M/s BIL to review the standard and submit their recommendation for adoption within 30 days.</p>
3	Amendment proposal to IS 14664: 2010 automotive vehicles – performance requirements and testing procedure for braking systems of two and three wheeled motor vehicles	<p>Amendment proposal has been received from M/s. Ather Energy on IS 14664 (Please see Annex 3 of agenda).</p> <p>Comments were received from M/s. Mahindra (see Annex 4 of agenda) and M/s. BIL (see Annex 5 of agenda)</p>		<p>The committee deliberated and decided to form a panel under the convenorship of Shri Manel to deliberate whether to incorporate the activation of brake lamp/stop lamp by an amendment or through a revision of standard.</p>
4	IS 17132 Guideline Specifications for Replacement Brake Lining Assemblies and Drum Brake Linings for Power-Driven Vehicles and Their Trailers	<p>Decision in 38th Meeting</p> <p>After incorporating all the comments, the draft was again recirculated among the committee members for receipt of inputs.</p> <p>New comments were received from TML and BIL.</p> <p>The committee deliberated on the comments received from TML and BIL and decided to incorporate TML comments and process the draft for publication.</p> <p>Regarding BIL comments the committee appreciated the work done by BIL and decided that further study is required on it and also advised all the committee members to go through the comments and share their inputs at the earliest.</p>	<p>Decision in 39th Meeting</p> <p>The committee deliberated and decided to revise the standard,</p> <p>The responsibility for preparation of draft was allocated to M/s.. BIL and M/s.. SBL and submit the draft within 4 weeks to BIS Secretariat.</p> <p>Decision in 40th Meeting</p> <p>The detailed study in included in Annex 2 of agenda. The committee advised the panel to have a meeting for preparation of draft and also authorized member secretary to</p>	<p>The Panel meeting was held on 6 May 2024 and draft was send for WC for 30 days.</p> <p>Comments were received from BIL (see Annex 6 of agenda) which are editorial in nature.</p> <p>The committee decided to once again send this draft for WC for 30 days and advised all the members to thoroughly go through it and share their inputs also advised TED to deliberate with CMD to verify whether all the certification related clauses were</p>

Sl No	Subject	Status/ Decision of committee during previous meeting	Decision in previous meeting	Current Status
			process the draft for WC for 60 days.	incorporated in IS 17132. The committee also authorized member secretary to process the draft for publication, if no further comments were received during WC.
5	New subject for standardization (Ride and Handling)	<p>Decision in 37th meeting</p> <p>Mr. Jayanta Chakrabarty on behalf of the Panel had briefed about current status of Part 4 and Part 5; Panel meeting planned on 7 October 2021 couldn't be held due to non-receipt of further comments from Members. Mr Jayanta stated that another 15 days' time will be given to the members for receipt of inputs, based on that a panel meeting will be called to finalize the Part 4 and Part 5 of Ride and Handling Standards.</p> <p>Decision in 38th Meeting</p> <p>The panel convenor informed that a panel meeting will be held in the month of February to finalize these parts. Shri Rakesh from M&M Ltd on behalf of the Panel had briefed the committee about key parameters considered while formulating the standard and also deliberated the current status of Part 4 and Part 5 of Ride and Handling standards. The committee requested the Ride and Handling Panel under the convenorship of Shri Kailash Jat to organize a panel meeting in the month of February by also including the stake holders who has expressed their willingness for participation and finalize the draft</p>	<p>Status in 39th Meeting</p> <p>The Panel had organized a meeting on 21/04/2023 at ARAI Pune and 2 more virtual meeting on 20/07/2023 and 21/07/2023 to deliberate on Part 4 and part 5 of Ride and Handling.</p> <p>The panel decided to organize one more meeting for finalization of Part 4 and Part 5. The Panel Convenor informed that he will schedule the panel meeting at the earliest and update the same in 39th SC Meeting of TED 04.</p> <p>Decision in 39th Meeting</p> <p>One behalf of Panel Shri Vivek from M/S. Tata Motors had given brief presentation to the committee about the status of Part 4 and Part 5 of ride and Handling.</p> <p>The committee appreciated the panel work and requested to expedite the standard formulation. The committee also</p>	The panel briefed the committee about part 4 and part 5 of ride and handling, the committee deliberated and decided to process the drafts for WC for 60 days.

Sl No	Subject	Status/ Decision of committee during previous meeting	Decision in previous meeting	Current Status
		and sent it to BIS Secretariat for processing it for P draft circulation	requested Panel to arrange practical demonstration of standards developed on ride and handling.	
6	Automotive Vehicles – Noise Emitted by Moving Vehicles Specification Method and of Measurement Part2 : Other Than L2 And L5 Category	<p>Decision in 39th Meeting The committee authorized member secretary to process the Amendment 1 to IS 3028(Part 1) and IS 3028(Part 3) to publication. if no comments were received within WC duration.</p> <p>For Amendment 1 to IS 3028(Part 2) the committee deliberated on the comment received from TML and requested Noise panel to organize a panel meeting within 2 weeks to deliberate on the comment and give updated draft to BIS secretariat which can be processed for publication.</p>	<p>Amendments 1 to IS 3028 (Part 1) has been published.</p> <p>The committee noted the information.</p> <p>Amendment 1 to IS 3028 (Part 3) is under Gazette stage.</p> <p>The committee noted the information.</p> <p>For Amendment 1 to IS 3028 (Part 2) A panel meeting was held to deliberate on comments received and draft was modified and once again sent for WC and no further comments were received. Hence document was processed for publication The committee noted the information.</p>	<p>Amendments 1 to IS 3028 (Part 1) and Amendment 3 to IS 3028 (Part 3) has been published. Amendment 1 to IS 3028 (Part 2) is under publication stage.</p> <p>The committee noted the information.</p>
7	Amendment 2 to IS 15986: 2015 Automotive Vehicles – Uniform Provisions Concerning the Approval of Vehicles of Categories M1 and N1 with Regard to Braking	<p>Decision in 37th meeting The committee noted the status and requested all the committee members to go through the draft and kindly share their inputs</p> <p>Decision in 38th Meeting Comments were received from ARAI and BIL.</p> <p>The committee deliberated on the comments received from BIL and ARAI and decided to incorporate these comments in the draft.</p>	<p>Decision in 39th Meeting The committee deliberated on comments from MSIL as they are editorial in nature, committee decided to accept the comments.</p> <p>The committee deliberated on comments from M/S. BIL & ARAI and requested M/S. BIL & ARAI to have deliberations among themselves and send the updated draft within 4 weeks to BIS Secretariat</p>	<p>A Panel Meeting was held on 6 May 2024 and draft amendment has been finalized in panel meeting and the draft was processed for publication (see Annex 7 of agenda)</p> <p>The committee noted the information.</p> <p>New Amendment proposal was received from MSIL (see Annex 10 of agenda). The proposal was circulated among the</p>

Sl No	Subject	Status/ Decision of committee during previous meeting	Decision in previous meeting	Current Status
		<p>MSIL requested additional time of 20 days for sharing their comments, The committee advised MSIL to share their comments to ARAI and have deliberations with ARAI regarding their comments.</p> <p>The committee also requested ARAI to modify the draft as per comments received from BIL and MSIL and sent it to BIS Secretariat.</p> <p>This updated draft will be once again sent for WC for 30 days, If No further comments were received the committee authorized Member Secretary to process the document for publication</p>	<p>which can be processed for publication.</p> <p>Decision in 40th Meeting:</p> <p>ARAI and M/s. BIL informed that they have deliberated on comments received on Amendment 2 to IS 15986 and the document has been modified, very soon it will be shared with BIS Secretariat.</p> <p>The committee noted the information.</p>	<p>committee members.</p> <p>The committee deliberated and decided to process the draft to WC for 60 days and also authorized member secretary to process the draft for publication, if no further comments were received during WC.</p>

ITEM 4 REVIEW OF STANDARDS

The following standards/Amendments published.

- IS 11825:2023 Automotive Vehicles - Method of Weighment (First Revision)
- IS 12851:2023 Automotive Vehicles - Hydraulic Brake Systems Tubings - Performance Requirements
- IS 14269:2024 Automotive Vehicles Integral Power Steering Gear Method of Test (First Revision)
- Amendment 1 to IS 12832: 2010 Automotive vehicles - Interior noise - Method of measurement and requirements (First Revision)

The committee noted the information.

The followings standards have been reaffirmed:

- IS 9211 : 2003 Terms and definitions of weights of road vehicles other than 2 and 3 wheelers (Second Revision)
- IS 13224:1991 Automotive vehicles - Hydraulic braking systems - Master cylinder - Performance requirements.
- IS 12218 : 2018 Method of measurement of approach, departure and ramp angles of automotive vehicles (First Revision).
- IS 15783 : 2008 Road vehicles - Brake control levers for two and three wheeled motor vehicles – Specification.

- IS 7079 : 2008 Automotive vehicles - Brake hose assemblies for hydraulic braking systems used with non - Petroleum base brake fluid specification (Third Revision).
- IS 13249 : 2014 Automotive vehicles - Braking systems - Rubber seal for disc brake cylinder - Performance requirements (First Revision).
- IS 11852 : 2019 Automotive vehicles - Uniform provisions concerning the approval of vehicles of categories m2, m3, N and t with regard to braking (Third Revision).
- IS 11877 : 2019 Automotive Vehicles — Maximum Speed of Automotive Vehicles — Method of Evaluation (First Revision).
- IS 17128 (Part 1) : 2019 Automotive vehicles - vehicle dynamics test methods Part 1 general test conditions.
- Is 17128 (Part 2) : 2019 Automotive Vehicles - Vehicle Dynamics Test Methods Part 2 Steady-State Test Procedure for Vehicle Stability and Controllability - Open-Loop and Closed Loop Test.

The committee noted the information.

The following drafts are under publication stage:

- IS 11739 Method of recording dust ingress in automotive Vehicles
- IS 11839 Procedure for splash proof testing of automotive vehicles
- IS 11849 Method of determination of Centre of Gravity of automotive vehicles
- IS 11850 Automotive vehicles - Odometer system - Method of evaluation
- IS 11851 Method of evaluation of acceleration of automotive vehicles
- IS 12831 Automotive vehicles - Braking systems – Banjo bolt connections – Dimensions
- IS 13207 Automotive vehicles - Hydraulic braking systems Wheel cylinder performance requirements
- IS 13225 Automotive vehicles - Hydraulic braking systems - Rubber cups – Specification
- IS 14283 Automotive vehicles - Accelerator control systems - Safety requirements.
- IS 14557 Automotive vehicles - Cooling performance - Method of measurement.

The committee noted the information.

The following drafts are under progress:

IS Number	Title	Previous Meetings	Current Status
IS 12105:2014	Methods of test for valves of automotive air brake Systems (First revision)	Decision in 38th Meeting The committee requested Shri Sachin Deshmukh to expedite the review process and sent the draft to BIS Secretariat within 30 days. Decision in 39th Meeting The committee requested Member Secretary to follow-up with M/S. ZF India Pvt Ltd.	The committee advised panel convenor to complete the review within 30 days.
IS 13603 : 2014	Automotive vehicles - Air brake systems - Performance requirements for brake chamber (First Revision)		
IS 13604 : 2014	Automotive vehicles - Air brake systems - Performance requirements for dual brake valve (First Revision)		

IS Number	Title	Previous Meetings	Current Status
IS 13363: 2017	<p>Automotive vehicles - Air brake systems - Performance requirements for drain valves</p> <p>Review Allotted to Shri Sachin Deshmukh</p>	<p>Decision in 40th Meeting The committee deliberated and decided to have a panel meeting with SIAM members and ACMA members under the convenorship of Shri Sachin Deshmukh for preparation of draft based on review analysis.</p>	
IS 14785:2000	<p>Automotive vehicles - Determination of road- load constants by coast down test method.</p> <p>Review Allotted to ARAI</p>	<p>Decision in 39th Meeting The committee authorized member secretary to process the draft for P draft circulation which was received from ARAI.</p> <p>Decision in 40th Meeting Committee deliberated and decided to process the draft for WC</p>	The document is under WC. The committee members may share their inputs on the draft.
IS 14610 : 1999	<p>Automotive vehicles - Fuel consumption on chassis dynamometer – Method of measurement</p> <p>Review Allotted to ICAT</p>	<p>Decision in 39th Meeting: ICAT informed the committee that they will complete the review within 4 weeks and send it to BIS Secretariat, committee noted the information.</p>	The committee advised ICAT to complete the review within 30 days.
IS 2742 (Part 6) : 2018	<p>Automotive vehicles - Brake linings: Part 6 compressive strain test methods</p> <p>Responsibility of Review was assigned to M/s.. Sundaram Brake Linings Limited, Chennai.</p>	<p>Decision in 39th Meeting: SBL informed the committee that they will complete the review within 4 weeks and send it to BIS Secretariat. Committee noted the information.</p> <p>Decision in 40th Meeting The committee advised SBL to expedite the review analysis.</p>	The committee advised Mr Janarthanan to complete the review within 30 days.
IS 2742 (Part 7) : 2018	<p>Automotive vehicles - Brake linings: Part 7 shear test procedure for disc brake pad and drum brake shoe assemblies.</p> <p>Responsibility of Review was assigned to M/s.. Sundaram Brake Linings Limited, Chennai</p>	<p>Decision in 39th Meeting: SBL informed the committee about current status of review.</p> <p>The committee also requested to prepare the draft standard and send it to BIS Secretariat which may be circulated among the committee members for further receipt of inputs.</p> <p>Decision in 40th Meeting The committee advised SBL to expedite the review analysis.</p>	The draft is under WC. The committee noted the information and also authorized member secretary to process the draft for publication if no further comments were received during WC.
IS 16137 (Part 1) : 2014	Automotive vehicles - Methods of measurement of braking	Decision in 39th Meeting:	The draft has been received from

IS Number	Title	Previous Meetings	Current Status
	coefficient of road surfaces: Part 1 SRTT method Responsibility of Review was assigned to M/S. ICAT	ICAT has briefed the committee about the review status but committee requested to prepare the draft standard and send it to BIS Secretariat which may be circulated among the committee members for further receipt of inputs Decision in 40th Meeting The committee advised ICAT to expedite the review analysis.	ICAT and has been processed for WC (see Annex 8 of agenda). The committee also authorized member secretary to process the draft for publication if no further comments were received during WC.
IS 16137 (Part 2) : 2014	Automotive vehicles - Methods of measurement of braking coefficient of road surfaces Responsibility of Review was assigned to M/S. ICAT	Decision in 39th Meeting: ICAT has briefed the committee about the review status but committee requested to prepare the draft standard and send it to BIS Secretariat which may be circulated among the committee members for further receipt of inputs. Decision in 40th Meeting The committee advised ICAT to expedite the review analysis.	The draft has been received from ICAT and has been processed for WC (see Annex 9 of agenda). The committee also authorized member secretary to process the draft for publication if no further comments were received during WC.

ITEM 5 INTERNATIONAL ACTIVITIES

The committee noted the information as given in agenda

ITEM 7 MEETING CALENDAR FOR THE YEAR 2024-25

Meetings	Tentative Date
42st Sectional Committee Meeting	13/09/2024
43nd Sectional Committee Meeting	07/02/2024

The committee approved the above tentative plan of meetings for the year 2024-25.

ITEM 8 LIST OF STANDARDS PERTAINING TO TED 04

The committee noted the information given in the agenda

ITEM 9 DATE AND PLACE FOR THE NEXT MEETING

The committee decided to have 42th Sectional Committee Meeting of TED 04 in month of September 2024. The venue and mode of meeting will be decided upon consultation with chairman.

ITEM 10 ANY OTHER BUSINESS

There being no other comments/proposals, the meeting ended with a vote of thanks by the Chair.