

MEETING	DATE & TIME	VENUE
17th meeting of Industrial Automation Systems and Robotics Sectional Committee, PGD 18	14:00 Hrs – 17:00 Hrs Friday, 22 March 2024	Meeting Link: https://bismanak.webex.com/bismanak/j.php?MTID=mf68530059311de3166603a4b6728871f Meeting No.: 2519 622 9331 Password : APT2R9peZ89 (27827973 from video systems)

CHAIRMAN: Shri Manoj Belgaonkar, GM (Regulations, Standards and Quality Management), Siemens India Limited, Mumbai

MEMBER SECRETARY: Shri Kundan Giri, Scientist-C/ Deputy Director, PGD, BIS, New Delhi

MEMBERS PRESENT

S. No	Name of representative	Name of the Organization	Contact details
1.	Shri Yuva Raj Nitin	Bhabha Atomic Research Center, Radiation Medicine Centre, Mumbai	yuvrajnitinbarc@gmail.com
2.	Dr. Amit Thakur	Bhabha Atomic Research Centre, Mumbai	thakur@barc.gov.in
3.	Shri Amaren P Das	Bhabha Atomic Research Centre, Mumbai	apdas.2035@britatom.gov.in
4.	Shri Yellapa	Bharat Dynamics Limited, Hyderabad	caddne.bdl@bdl-india.in
5.	Shri K Ganesh Kumar	Bharat Heavy Electrical Limited, New Delhi	kkganesh@bhel.in
6.	Shri Prashant Katkar	Bosch Rexroth India Limited, Ahmedabad	prashant.katkar@boschrexroth.co.in
7.	Shri Varad N Acharya	Bosch Rexroth India Limited, Ahmedabad	varad.acharya@boschrexroth.co.in
8.	Shri Dip Narayan Ray	CSIR - Central Mechanical Engineering Research Institute, Durgapur	dnray@cmeri.res.in
9.	Shri S Nagarajan	Defence Bio-Engineering and Electromedical Laboratory, Ministry of Defence, Bengaluru	nagarajans.debel@gov.in
10.	Shri Gurvinder Singh Virk	Endoenergy Systems Private Limited, Mohali	gsvirk@endoenergy.com
11.	Shri Gulshan Kumar	IPSS Sail, New Delhi	gulshank2001@gmail.com
12.	Shri Anirban Guha	Indian Institute of Technology Bombay, Mumbai	anirbanguha@iitb.ac.in
13.	Prof. Vineet Vashista	Indian Institute of Technology Gandhinagar	vineet.vashista@iitgn.ac.in
14.	Shri Vibhor Pandhare	Indian Institute of Technology Indore	vibhorpandhare@iiti.ac.in
15.	Shri Vijay Narayanasamy	Perfint Healthcare Private Limited, Chennai	vijaydeivan@perfinthealthcare.com
16.	Shri Pugal Puhazhendi	Perfint Healthcare Private Limited, Chennai	pugal@perfinthealthcare.com
17.	Shri Rajendran Menon	Rockwell Automation India Private Limited, Mumbai	ramenon@ra.rockwell.com
18.	Shri Yogesh Kamath	Siemens Limited, Mumbai	yogesh.kamath@siemens.com
19.	Shri Snehasis Banerjee	Tata Consultancy Services Limited, Mumbai	snehasis.banerjee@tcs.com
20.	Shri Tushar Baviskar	Tata Motors Limited, Pune	tushar.baviskar1@tatamotors.com
21.	Shri Amilineni Adithya	Tata Motors Limited, Pune	adithya.amilineni@tatamotors.com

22.	Shri Santhakumar Mohan	The Robotics Society of India, Chennai	santhakumar@iitpkd.ac.in
23.	Shri Yogesh Agarwal	Timetooth Technologies Private Limited, Noida	yogesh@timetooth.com
24.	Prof. M. Singaperumal	Personal Capacity	m.singaperumal@gmail.com

Item 0. GENERAL

0.1 Welcome address by the Member Secretary

Shri Kundan Giri, Scientist C & Member Secretary on behalf of Bureau of Indian Standards, welcomed the Chairman and all the members present in the meeting. He appraised the members about the recent reforms in Standards formulation in BIS. He explained the purpose of the meeting and clarified the goals of recent reform, performance index of the committee, mandatory attendance, R&D schemes and expectations from the members.

0.2 Opening remarks by the Chairman

Shri Manoj Belgaonkar, the Chairman of PGD 18, extended a warm welcome to all the esteemed members assembled for the meeting. He expressed his gratitude to the committee members for their presence and collaboration.

He emphasized the importance of collective effort and encouraged committee members to take up R&D projects, attend meetings of the sectional committee and give comments on the circulated P-drafts. He asked the members to take up R&D projects on upcoming standards. Drawing attention to the significance of the ISO documents currently in circulation through ballots, he urged members to scrutinize them meticulously. He highlighted that these standards would ultimately become the adopted Indian standards, underscoring the need for thorough review and consideration.

Concluding his remarks, the Chairman asked the Member Secretary to commence the proceedings of the meeting.

Item 1 CONFIRMATION OF MINUTES OF THE LAST MEETING

Since no comments were received, the Committee confirmed the minutes of the 16th meeting of Industrial Automation Systems and Robotics Sectional Committee, PGD 18 held on 20th November 2023.

Item 2 REFORMS IN THE PROCESS OF STANDARDISATION

The Committee noted the information given in the agenda.

Item 3 STATUS REPORT ON THE ANNUAL ACTION PLAN 2023-24

Item 3.1 Carry Over Projects from 2022-23

Nil

Item 3.2 Standards Due for Review in 2023-24

SN	IS No./ Title	Status before the meeting	Decision of the committee
1	IS 14662 : 2018/ISO 8373 : 2012 Robots and robotic devices - Vocabulary (First Revision)	The standard has been published as IS 14662 : 2024/ ISO 8373 : 2021 Robotics Vocabulary. The committee may please note.	The committee noted the information given in the agenda.
2	IS 16608 : 2018/ ISO 13482 : 2014 Robots and robotic devices - Safety requirements for personal care robots	Follow-up email to Prof. M Singaperumal for review was sent on 16 January 2024 and reminder email was sent on 14 March 2024., response is awaited. Further, In the 6 th meeting of ISO/TC 299 it was clarified that this will standard will not be subsumed in ISO 10218-2 but will continue as a standalone standard.	The committee decided to reaffirm IS 16608 till the new version of ISO 13482 is published.
3	IS 17192 (Part 1) : 2019/ISO 18646-1 Robotics - Performance Criteria and Related Test Methods for Service Robots Part 1 Locomotion for Wheeled Robots	The standard was reaffirmed. No further action is required.	The committee noted the information given in the agenda.
4	IS 17193 : 2019 ISO/TS 15066 : 2016 Robots and Robotic Devices - Collaborative Robots	The standard was reaffirmed. No further action is required.	The committee noted the information given in the agenda.
5	IS 14530 (Part 1) : 2019 ISO 10218-1 : 2011 Robots and Robotic Devices - Safety Requirements for Industrial Robots Part 1 Robots (First Revision)	The standards were wide circulated on 17-01-2024. Since no comments were received the committee may finalize the standard for sending to publication.	The committee finalized the document for publication as identical adoption of ISO 10218-1 : 2024.
6	IS 14530 (Part 2) : 2019 ISO 10218-2 : 2011 Robots and Robotic Devices - Safety Requirements for Industrial Robots Part 2 Robot Systems and Integration (First Revision)	The standards were wide circulated on 17-01-2024. Since no comments were received the committee may finalize the standard for sending to publication.	The committee finalized the document for publication as identical adoption of ISO 10218-2 : 2024.

Item 3.3 Standards due for 2024-2025

SN	IS No./ Title	Status before the meeting	Decision of the committee
1	IS 13547 (Part 1) : 2010/ISO 9409-1 : 2004 Manipulating industrial robots - Mechanical interfaces: Part 1 plates (Second Revision)	The current version of base standard is ISO 9409-1 : 2004. The committee may deliberate.	The committee decided to allocate ARP in the next meeting.
2	IS 13547 (Part 2) : 2010/ISO 9409-2 : 2002 Manipulating industrial robots - Mechanical interfaces: Part 2 shafts (First Revision)	The current version of base standard is ISO 9409-2 : 2002. The committee may deliberate.	The committee decided to allocate ARP in the next meeting.
3	IS 14531 : 2005/ISO 9946 : 1999 Manipulating industrial robots - Presentation of characteristics (First Revision)	The current version of base standard is ISO 9946 : 1999. The committee may deliberate.	The committee decided to allocate ARP in the next meeting.
4	IS 14533 : 2005/ISO 9283 : 1998 Manipulating industrial robots - Performance criteria and related test methods (First Revision)	The current version of base standard is ISO 9283 : 1998. The committee may deliberate.	The committee decided to allocate ARP in the next meeting.
5	IS 14776 (Part 1) : 2000/ISO/TR 10314-1 : 1990 Industrial automation - Shop floor production: Part 1 reference model for standardization and a methodology for identification of requirements	The current version of base standard is ISO 10314-1 : 1990. The committee may deliberate.	The committee decided to allocate ARP in the next meeting.
6	IS 14776 (Part 2) : 2000/ISO/TR 10314-2 : 1991 Industrial automation - Shop floor production: Part 2 application of the reference model for standardization and methodology	The current version of base standard is ISO 10314-2 : 1991. The committee may deliberate.	The committee decided to allocate ARP in the next meeting.
7	IS 13450 (Part 4/Sec 1) : 2020/IEC 60601-4-1 : 2017 Medical Electrical Equipment Part 4 Guidance and Interpretation Section 1 Medical electrical equipment and medical electrical systems employing a degree of autonomy	The current version of base standard is IEC 60601-4-1 : 2017. The committee may deliberate.	The committee decided to allocate ARP in the next meeting.
8	IS 17192 (Part 2) : 2020/ISO 18646-2:2019 Robotics - Performance Criteria and Related Test Methods for Service Robots Part 2 Navigation	The standards were wide circulated on 17-01-2024. Since no comments were received the committee may finalize the standard for sending to publication.	The committee finalized the document for publication as identical adoption of 18646-2:2024.