



## **MINUTES OF THE MEETING**

### **26<sup>th</sup> Meeting**

**Aircraft and Space Vehicles  
Sectional Committee  
TED 14 (Virtual – 20.04.2023)**

### **Chairperson**

**Dr. D.B. Bhatt  
Former Group Director  
ISRO SAC Ahmedabad**

### **Member Secretary**

**Shivam Aggarwal  
Scientist-C  
BIS Headquarters**

### **Item 0 Welcome and Opening Remarks**

**0.1** Attendance of the meeting is enclosed at Annex-A.

### **0.2 Welcome by Member Secretary (TED 14)**

Member Secretary welcomed all the participants to the 26<sup>th</sup> meeting of ‘Aircraft and Space Vehicles Sectional Committee (TED 14)’ and requested Chairperson, TED 14 for opening remarks.

### **0.3 Opening Remarks by the Chairman (TED 14)**

Dr. D. B. Bhatt, Chairman of the committee, welcomed the members present in the meeting. He informed that IN-SPACE has been formed under Department of Space to promote and authorize space activities in the country. He requested for active participation from member organizations of Industry, Academics, Govt agencies etc. He apprised committee about discussions on SNAP 2022-27, Future standardization process, Harmonization of standards held during the workshop of Chairpersons at NITS, Noida on 18.04.2023. He suggested that we can seek participation from co-operative groups instead of individual industry. He also suggested to use AI model to search for particular standards such as standards for fasteners for aerospace industry.

### **Item 1 Confirmation of Minutes of the last Meeting**

The committee formally confirmed the minutes of the last meeting held on 24.08.2022.

### **Item 2 Scope and Composition of Committee**

**2.1** The committee noted the low participation of members during the meeting. In order to have enhance participation from the members, the committee decided to contact the experts individually and to write letters to the management of the organizations for revision of nomination.

**2.2** The committee accepted the nomination of M/s IN-Space, Bopal, Ahmedabad, Gujarat. (Principal Member: Sh. Paragjyoti Garg, Alternate Member: Sh. Kaushik R V).

### Item 3 Issues Arising out of Previous Meetings

#### 3.1 Panel on ‘Aerospace Quality Management Systems’.

*Review of IS 16000:2004 Aerospace Quality Management Systems - Requirements*

The committee NOTED the information given in the agenda.

#### 3.2 Panel for drafting of ‘Special Publication on Fastener for Aerospace’.

HAL was requested to share the details of the fasteners being used in their aircrafts.

The committee NOTED the information given in the agenda.

#### 3.3 Revision of IS 9624:1980

The committee requested the panel to hold the meeting and take forward the revision of IS 9624.

### Item 4 Draft Standards/Amendments for Finalization

S. No.	IS No.	Title of Standard	Decision taken by the committee
1.	IS 6724:1972	Specification for Aircraft Sealing Wire	The committee finalized the document for printing.
2.	IS 7263:1973	Directions of Operation of Toggle Switches on Aircraft	The committee finalized the document for printing.
3.	IS 7264:1974	Dimensions For Aircraft Pressure Refuelling Connection	The committee finalized the document for printing.
4.	IS 7857:1975	Specification for Aircraft Fuel Nozzle Grounding Plugs and Sockets	The committee finalized the document for printing.
5.	IS 11715: Part 1:2011 (Identical adoption of ISO 3353: Part 1:2020)	Aerospace - Lead and runout threads: Part 1 rolled external threads First Revision	The committee finalized the document for printing.
6.	10494 (Part 2):2011  ISO 6966-2:2005	Aircraft ground equipment - Basic requirements: Part 2 safety requirements First Revision	The committee finalized the document for printing.
7.	IS 11715 : Part 2:2012 (Identical adoption of ISO 3353: Part 2:2020)	Aerospace - Lead and runout threads: Part 2 internal threads First Revision	The committee finalized the document for printing.

8.	IS 13153:1991 (Identical adoption of ISO 8279:2008)	Aerospace Plain Hexagon Nuts MJ Series Strength Classification 1100 MPa Maximum Operating Temperature 235 c Specification	The committee finalized the document for printing.
9.	IS 15469:2012 ISO 3185:2008	Aerospace - Bolts, normal Bihexagonal head, normal shank, short or medium length MJ threads, metallic material, coated or uncoated, strength classes less than or equal to 1 100 MPa - Dimensions (First Revision)	The committee finalized the document for printing.
10.	IS 15437:2003 ISO 5856-1991	Aerospace - Screws, 100° normal countersunk head, internal offset cruciform ribbed drive, normal shank, short or medium length MJ threads, metallic material, coated or uncoated, strength classes less than or equal to 1 100 MPa - Dimensions	The committee finalized the document for printing.
11.	IS 15192:2002	Aerospace - Nuts - Tolerances of form and position	The committee finalized the document for printing.
12.	IS 13283:1991	Aerospace - Self - Locking, hexagon nuts (MJ Series) - Strength classification 1100 MPa - Maximum operating temperature 425 degree C specification	The committee finalized the document for printing.
13.	IS 7856:1975	Safety features for ground power units for direct current aircraft servicing and engine starting	The committee finalized the document for printing.

### **Item 5 Draft Standard/ Amendments for Approval for Wide Circulation**

The committee decided the following:

S. No.	IS No.	Title of Standard	Remarks
1.	IS 11903:1986	Specification for caps for aircraft tyre tube valves	The committee decided to wide circulate the document for 60 days.
2.	IS 11554:1986	Methods Of Test For Air - Land Cargo Pallet Nets	The committee decided to wide circulate the document for 60 days.

3.	IS 8169:1997	Air Cargo Equipment Base Restrained Certified Containers Exclusively For The Lower Deck Of High - Capacity Air - Craft	The committee decided to wide circulate the document for 60 days.
4.	IS 11680:1986	Specification For Hexagonal Slotted Castellated Nuts MJ Series	The committee decided to wide circulate the document for 60 days.
5.	IS 12043: Part 1: 1987	Specification For Electrical Connectors For Aircraft: Part 1 General Requirements	The committee decided to wide circulate the document for 60 days.
6.	IS 12678:1979	Aerospace - Ground equipment - Graphical symbols for operator	The committee decided to wide circulate the document for 60 days.
7.	IS 6722:1972	Dimensions For Aircraft Jacking Pads	The committee decided to wide circulate the document for 60 days.
8.	IS 13932:1994	Aircraft - Electrical Cables - Identification Marking	The committee decided to wide circulate the document for 60 days.
9.	IS 12863:1989	Symbols for the Pictorial Standardization Of Aircraft Cargo Handling Systems for Unit Load Devices ULDs	The committee decided to wide circulate the document for 60 days.
10.	IS 7879: Part 1: 1975	Glossary Of Aeronautical And Astronautical Terms Part 1 General	The committee decided to wide circulate the document for 60 days.
11.	IS 7879: Part 2: 1975	Glossary Of Aeronautical And Astronautical Terms Part 2 Motion Of Aircraft	The committee decided to wide circulate the document for 60 days.
12.	IS 7879: Part 3: 1975	Glossary Of Aeronautical And Astronautical Terms Part 3 Structure	The committee decided to wide circulate the document for 60 days.
13.	IS 7879: Part 4: 1980	Glossary Of Aeronautical And Astronautical Terms Part 4 Aerodynamics	The committee decided to wide circulate the document for 60 days.
14.	IS 7879: Part 5: 1982	Glossary Of Aeronautical And Astronautical Terms Part 5 Aerodynes Heavier-Than-Air Aircraft	The committee decided to wide circulate the document for 60 days.
15.	IS 7879: Part 6: 1978	Glossary Of Aeronautical And Astronautical Terms Part 6 Space Terms	The committee decided to wide circulate the document for 60 days.
16.	IS 7879: Part 7: 1984	Glossary Of Aeronautical And Astronautical Terms Part 7 Air Traffic And Ground Services	The committee decided to wide circulate the document for 60 days.

17.	IS 7879: Part 8:1987	Glossary Of Aeronautical And Astronautical Terms Part 8 Power Plant	The committee decided to wide circulate the document for 60 days.
18.	IS 14389:1996	Aircraft - Pallet dolley - Functional requirements	The committee decided to wide circulate the document for 60 days.

### **Item 6 Drafts under Preparation/Circulation**

The committee NOTED the information given in the agenda.

### **Item 7 Comments on Published Standards**

No comments received on Published Standard.

The committee NOTED the information.

### **Item 8 New Subjects**

The committee DECIDED to adopt following ISO standards and wide circulate for 60 days:

1. ISO 14300-1 - Structuring of a project
2. ISO 23462 Guidelines to define the management framework for a space project
3. ISO 10795 - Programme management - Vocabulary
4. ISO 17666 - Risk management
5. ISO 27026 - Breakdown of project management structures
6. ISO 11893 - Programme management – Project organization
7. ISO 15865 - Qualification assessment
8. ISO 21349 - Project reviews
9. ISO 16091 - Integrated logistic support
10. ISO 10789 - Information and documentation management
11. ISO 11231 - Probabilistic risk assessment (PRA)
12. ISO 16192 - Experience gained in space projects (Lessons learned) - Principles and guidelines
13. ISO 14300-2 - Product assurance
14. ISO 27025 - Programme management - Quality assurance requirements
15. ISO 23460 - Dependability assurance requirements
16. ISO 23461 - Nonconformance control system
17. ISO 14620-1 - Safety Requirements
18. ISO 16290 - Definition of the technology readiness levels
19. ISO 14621-1 & 2 - EEE parts
20. ISO 16404 - Requirements management
21. ISO 21350 - Off-the-shelf item utilisation
22. ISO 21351 - Functional & technical specification
23. ISO 10794 - Materials, mechanical parts and processes

### **Item 9 Technical Issues**

No issues are pending at present.

The committee noted the information.

### **Item 10 International Activities**

**10.1** The committee approved the nomination of Sh. Paragjyoti Garg to ISO/TC 20/SC 14.

**10.2** The committee agreed to the participation of Sh. Paragjyoti Garg in upcoming ISO/TC 20/SC 14 meeting from 29 May to 02 June 2023.

**10.3** The committee requested HAL for revised nomination to ISO/TC 20 and its sub-committees.

**10.4** Sh. Paragjyoti Garg (IN-SPACE) informed that GoI has opened the space operations to be carried out by private organizations and Indian Space Policy 2023 is under formulation. He further informed that an active participation of India at ISO/TC 20 is required. In view of this, the committee DECIDED to change the participation at ISO/TC 20 from O-membership to P-membership and requested Member Secretary to take necessary action in this regard.

### **Item 11 Programme of Work (including periodic review of Indian Standards)**

The program of work of TED 14 can be accessed through following link-

[https://www.services.bis.gov.in:8071/php/BIS\\_2.0/bisconnect/pow/](https://www.services.bis.gov.in:8071/php/BIS_2.0/bisconnect/pow/)

The committee noted the information.

### **Item 12 Date and Place of Next Meeting**

The Committee decided to hold the next meeting of TED 14 tentatively after one month. The exact date of the meeting would be decided in consultation with the Chairman.

### **Item 13 Any Other Business**

**13.1** The committee agreed to transfer IS 9290:1979 (Specification for Aircraft Fuel Servicing Vehicles) to TED 14.

**13.2** The committee NOTED the information.

**13.3** The committee DECIDED the following:

S. No.	IS No.	Title of Standard	Remarks	Decision taken during last meeting
a.	IS 7829:1975	Marking of aircraft gas cylinders	This standard conforms to ISO/R 443-1965, which has been withdrawn.	The committee requested member secretary to explore the latest practices

			The committee may discuss the applicability of this standard.	being followed against the standard.
b.	IS 6741:1972	Numerals for aircraft instrument dials and number plates	This standard conforms to ISO/R 267-1962, which has been withdrawn.  The committee may discuss the applicability of this standard.	The committee requested member secretary to explore the latest practices being followed against the standard.
c.	IS 6743:1972	Sizes and mounting dimensions of aircraft instrument cases (Rear - Mounting Type)	This standard conforms to ISO/R 103-1959, which has been withdrawn.  The committee may discuss the applicability of this standard.	The committee requested member secretary to explore the latest practices being followed against the standard.
d.	IS 7832:1975	Dimensions for aircraft connections for ground air - Conditioning	This standard conforms to ISO/R 1036-1969, which has been withdrawn.  The committee may discuss the applicability of this standard.	The committee requested member secretary to explore the latest practices being followed against the standard.

**13.4** The committee decided to hold a seminar for the industry to sensitize them for the standards being developed by TED 14.

## Annex-A

**Attendance TED 14 – 26th Meeting (20 April 2023)**

<b>Sl No</b>	<b>NAME OF MEMBER</b>	<b>NAME OF ORGANIZATION</b>	<b>ATTENDEE EMAIL</b>
1	Dr. D B Bhatt <b>(Chairperson)</b>	In Personal Capacity	bhattdileep@gmail.com
2	Shri D K Sinha	Aeronautical Development Agency, Bengaluru	dpksinha.ada@gov.in
3	Shri Manish Saxena	Indian Space Research Organization, Bengaluru (ISRO)	msaxena@isro.gov.in
4	Shri Afzal Das	Indian Space Research Organization, Bengaluru (ISRO)	-
5	Shri M L Sidana	In Personal Capacity	<a href="mailto:manosidana@yahoo.com">manosidana@yahoo.com</a>
6	Shri Paragjyoti Garg	IN-SPACE	<a href="mailto:paragjyoti.garg@IN-Space.gov.in">paragjyoti.garg@IN-Space.gov.in</a>
7	Shri Pratap Panda	HAL	kirtiraipratap@gmail.com