# For BIS

# use only

**BUREAU OF INDIAN STANDARDS**

**AGENDA**

|  |  |  |  |
| --- | --- | --- | --- |
| **MEETING** | **DAY & DATE** | **TIME** | **VENUE** |
| Twenty Second Meeting of Educational Instruments and Equipment Sectional Committee, PGD 22 | 28 November 2024  Thursday | 1430 h | BIS HQ, New Delhi (Hybrid Mode)  VC Link- <https://bismanak.webex.com/bismanak/j.php?MTID=m2dd6bfb4106aaa5b1004df76b8347b17>  Password: PGD123 |

**Chairperson:** Dr. Sukhvir Singh, Emeritus Scientist

**Member Secretary:** Shri Ashutosh Rai, Scientist-C, PGD, BIS

# Item 0 GENERAL

* 1. **Welcome by the Head (PGD)/Member Secretary**

# Opening Remarks by the Chairperson

**Item 1 CONFIRMATION OF MINUTES OF LAST MEETING**

The Committee may confirm the minutes of the 21st meeting of PGD 22 circulated on 05 August 2024 in view of the non-receipt of comments.

# Item 2 COMPOSITION OF SECTIONAL COMMITTEE

**2.1** The composition of the Educational Instruments and Equipment Sectional Committee, PGD 22 is given at [**Annex I**](#_bookmark0)(Page 5-7 ). The Committee may please deliberate.

**2.2** A nomination request was obtained from Hindustan Pencils Pvt. Ltd. The Committee may please deliberate.

# Item 3 POSITION OF WORK

**3.1** The present program of work of the Educational Instruments and Equipment Sectional Committee, PGD 22 is given in **Annex II** (Pages 8-12). The Committee may please note.

# Standard Under Review- Carried Over

# The committee is requested to deliberate on the following standards, which have been carried over from the 2023-24 period.

|  |  |  |  |
| --- | --- | --- | --- |
| Sl No. | IS No. | Title | Remarks |
| 1 | IS 7020 : 1973 | Crystals and dielectric materials used in instrument industry | Inputs from Dr Satish Dubey has been received. The Committee may please deliberate. |
| 2 | IS 8622 : 1999 | Wire wound sliding contact rheostats for use in educational institutions - Specification (First Revision) | P draft period is over and no comments have been received. The committee may please deliberate and approve for wide circulation. |

* 1. **Review of Pre- 2000 Standards**

It has been decided by the Competent Authority of the Bureau to revise all the standards which are published before 2000 as a lot of technological advancement has been made in the last 24 years. The standards published before 2000 are given in the POW. Under this criterion, the standards proposed to be taken up for revision. Committee may deliberate for further actions.

|  |  |  |  |
| --- | --- | --- | --- |
| **Sl No.** | **IS No.** | **Title** | **Remarks** |
| 1 | IS 1444 : 1989 | Engineers Pattern Drawing Boards - Specification (Second Revision) | As decided in the last meeting, the documents were circulated with committee members for 30 days. No comments/inputs have been received on the documents, inview of this the committee may please approve these documents for reaffirm and archive. |
| 2 | IS 1955 : 1961 | Specification for prismatic compass, liquid |
| 3 | IS 1480 : 1970 | Specification metric scales for general purposes (First Revision) |
| 4 | IS 1957 : 1961 | Specification for prismatic compasses, non - Liquid | The document was shared with the Committee members, no comments has been received. The Committee may please deliberate. |
| 5 | IS 9107 : 1979 | Specification for autocollimator | This document has been assigned to Dr. Ramagopal for review. Inputs are still awaited, the committee may please deliberate. |
| 6 | IS 2539 : 1963 | Specification for plane tables | This standard has been assigned to the BIS officer for review through Action Research Project (ARP). The Committee may please the information. |
| 7 | IS 3686 : 1966 | Specification for student - Type microscope |
| 8 | IS 4328 : 1967 | Specification for monocular dissecting microscope |
| 9 | IS 4329 : 1967 | Specification for measuring (Travelling) microscope |
| 10 | IS 14633 : 1999 | Blackboards for class rooms - Specification |
| 11 | IS 5204 : 1969 | Specification for research microscope | This document has been assigned to Dr. Ramagopal and Dr. Satish for review. Inputs are still awaited, the committee may please deliberate. |

**3.4 Standards to be Reaffirm & Archived**

Following are the standards, which may be less in use and there may be no technical advancement in these standards. The Committee may please deliberate upon the archival of these standards.

|  |  |  |  |
| --- | --- | --- | --- |
| Sl No. | IS | Title | Decision taken in meeting |
| 1 | IS 5146 : 1969 | Specification for sounding sextant | This document has been assigned to Dr Gagan Gupta. Inputs are still awaited; the Committee may please deliberate. |
| 2 | IS 7010 : 1973 | Specification for pivots for magnetic compasses | This document has been assigned to Dr Gagan Gupta. Inputs are still awaited, the Committee may please deliberate. |

# Item 4 ANNUAL PROGRAMME FOR STANDARDISATION

# The list of the standards identified related to the instruments details shared by Dr Gagan Gupta is attached below. The Committee may please deliberate.

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**Item 5 DATE AND PLACE OF NEXT MEETING**

Following tentative committee meeting date is proposed for FY 2024-25 for the committee to deliberate upon:

|  |  |  |  |
| --- | --- | --- | --- |
| **S.N.** | **Meeting No** | **Date/Day** | **Venue** |
| **1.** | **23rd meeting** | **28.02.2025/Friday** | **Virtual + Physical** |

# Item 6 ANY OTHER BUSINESS

**ANNEX- I**

***(Item* 2)**

### **Composition of Educational Instruments and Equipment, PGD 22**

|  |  |  |
| --- | --- | --- |
| 19th Meeting | 08 Nov 2023 | BIS New Delhi [Hybrid Meeting] |
| 20th Meeting | 01 March 2024 | BIS New Delhi [Hybrid Meeting] |
| 21st Meeting | 14 June 2024 | BIS New Delhi [Hybrid Meeting] |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Sl. No.** | **Organization represented** | **Principal member** | **Contact and email** | **Attendance**  **in the last three meetings** | | | |
| **Alternate member** | **19th** | **20th** | **21st** |  |
| **1.** | In personal capacity | Dr. Sukhvir  Singh  (Chairman) | sukhvirster@gmail.com  9958571458 | P | P | P | 3/3 |
| **2.** | Central  Scientific  Instruments  Organization,  Chandigarh | Dr. Amit  Lochan Sharma | amitsharma.csio@csio.res.in  09417850180 | P | P | P | 3/3 |
| Dr. Raj Kumar | raj.optics@csio.res.in  08437760400 |
| **3.** | CSIR - National Physical Laboratory, New Delhi | Dr. Premshankar K. | [dubeypk@nplindia.org](mailto:dubeypk@nplindia.org)  9968408417 | P | P | P | 2/3 |
| **4.** | Controllerate of  Quality  Assurance  (Instruments),  Raipur,  Dehradun | Shri A.  Radhakrishanan,  JAG(NFSG),  Director (I)  Shri Manjit  Singh (PScO),  Dy. Controller | instarmt-dgqa@nic.in,  011-23013566  jctech-cqai-mod@nic.in  0135 - 2527514 | P | P | P | 3/3 |
| **5.** | Geodetic and  Research  Branch Survey  of India,  Dehradun | Shri Neeraj Gurjar | [neeraj.gurjar.soi@gov.in](mailto:neeraj.gurjar.soi@gov.in)  8600518174 | P | P | - | 2/3 |
|  |  | Shri Deepak Kumar | [deepak.soi@gov.in](mailto:deepak.soi@gov.in)  9990463164 |
| **6.** | Indian  Association of  Physics  Teachers, Delhi | Dr. Mamta | mamta.phy26@gmail.com 9818076507 | P | P | P | 3/3 |
| **7.** | Instrument  Research and  Developmen  Establishment  (IRDE),  Dehradun | Kumar Abhijeet | [abhijeet-kr.irde@gov.in](mailto:abhijeet-kr.irde@gov.in)  9412985314 | - | P | - | 1/3 |
| K. K. Kailasia | kamleshkumarkailasia@yahoo.com  8171221351 |
| **8.** | Malaviya  National  Institute of  Technology,  Jaipur | Dr. Rajendra Kumar Goyal | rkg.meta@mnit.ac.in 9423534247 | P | - | P | 2/3 |
| Dr. Rajeev Agrawal | ragrawal.mech@mnit.ac.in 9631659867 |
| **9.** | National  Council of  Educational  Research &  Training  (N.C.E.R.T), Delhi | Dr. Gagan Gupta | ggupta.ncert@nic.in,  ggupta@gmail.com  9654121185 | - | P | P | 2/3 |
| Prof Alka Mehrotra | meh\_alka@yahoo.co.in 01126592214, 989156907 |
| **10.** | Office of the  Development  Commissioner  (MSME), New  Delhi | Sh S. Vijaya Kumar, | [vsalavadi@dcmsme.gov.in](mailto:vsalavadi@dcmsme.gov.in)  8971423923 | - | P | P | 2/3 |
| Shri Aluri Suresh | [alurisureshgaru@yahoo.co.in](mailto:alurisureshgaru@yahoo.co.in)  9440400444 |
| **11.** | Optics and Allied Engineering Private Limited, Bengaluru | Dr Ramagopal V Sarepaka | [ramagopal@opticsindia.com](mailto:ramagopal@opticsindia.com)  8884457623 | P | P | P | 3/3 |
|  |
| Shri D. Rajendra Kotaria | [drk@opticsindia.com](mailto:drk@opticsindia.com)  9886772206 |
| **12.** | The Ambala  Scientific  Instruments  Manufacturers Association,  Ambala Cantt. | Shri Ashwani  Goel | [ashwanigoel40@gmail.com](mailto:ashwanigoel40@gmail.com)  9896201350 | P | P | P | 3/3 |
| Shri Puneet Gupta | [asimaindia@gmail.com](mailto:asimaindia@gmail.com)  +91-1714005370, 4003837 |

**Annex-II**

**Program of Work**

***(Item No. 3)***

**SCOPE**:

1. Formulation of standards for instruments and equipment for school and college Laboratories.
2. Formulation of standards for surveying instruments, drawing instruments;

|  |  |  |
| --- | --- | --- |
| 1 | **IS 1360 : 2023** | Engineers’ Pattern Tee Squares — Specification ( third revision ) |
| 2 | **IS 1444 : 1989** | Engineers Pattern Drawing Boards — Specification (Second Revision) |
| 3 | **IS 1480 : 1970** | Specification metric scales for general purposes (First Revision) |
| 4 | **IS 1481 : 1970** | Specification for metric steel scales for engineers (First Revision) |
| 5 | **IS 1491 : 2023** | Metric Scales for Architectural Purposes — Specification (First Revision) |
| 6 | **IS 1492 : 1970** | Specification for metric surveying chains (First Revision) |
| 7 | **IS 1561 : 2023** | Set Squares for Use of Drawing Offices — Specification ( Second Revision ) |
| 8 | **IS 1562 : 2023** | Specification for metric diagonal scales Cartographers, Surveyors and Engineers |
| 9 | **IS 1563 : 2023** | Protractors for Use of Drawing Offices — Specification ( Second Revision ) |
| 10 | **IS 1764 : 1961** | Specification for trough compass |
| 11 | **IS 1779 : 1961** | Specification for 4 – Metre levelling staff folding type |
| 12 | **IS 1842 : 1961** | Specification for surveying chain pins Arrows |
| 13 | **IS 1955 : 1961** | Specification for prismatic compass liquid |
| 14 | **IS 1957 : 1961** | Specification for prismatic compasses non - Liquid |
| 15 | **IS 2233 : 2023** | Straightedges for Drawing Office Use - Specification |
| 16 | **IS 2286 : 1963** | Specification for pantograph |
| 17 | **IS 2288 : 1963** | Specification for ranging rods |
| 18 | **IS 2466 : 1963** | Specification for beam compasses |
| 19 | **IS 2533 : 1978** | Specification for geometry boxes First Revision |
| 20 | **IS 2539 : 1963** | Specification for plane tables |
| 21 | **IS 2988 : 1995** | Vernier theodolite - Specification First Revision |
| 22 | **IS 3081 : 1994** | Microscopes - General purposes - Dimensions and marking First Revision |
| 23 | **IS 3099 (Part 12) :1992** | Microscopes - Slips and slides specification Part 1 microscope slips Part 2 microscope slides First Revision |
| 24 | **IS 3113 : 1965** | Specification for prismatic binoculars for common use |
| 25 | **IS 3135 : 1965** | Specification for cathetometer |
| 26 | **IS 3206 : 1989** | Engineers Drawing Instruments - Dividers - Specification (First Revision) |
| 27 | **IS 3207 : 1989** | Engineers Drawing Instruments - Rotating Compasses |
| 28 | **IS 3208 : 1989** | Engineers drawing instruments - Half set of compasses - Specification (First Revision) |
| 29 | **IS 3209 : 1989** | Engineers Drawing Instruments - Spring Bow Compasses - Specification (First Revision) |
| 30 | **IS 3210 : 1989** | Engineers Drawing Instruments -Drawing Pens |
| 31 | **IS 3211 : 1991** | Engineers Drawing Instruments Pen Points First Revision |
| 32 | **IS 3212 : 1991** | Engineers drawings instruments lengthening bars |
| 33 | **IS 3213 : 1991** | Engineers Drawing Instruments - Handles - Specification (First Revision) |
| 34 | **IS 3214 : 1991** | Engineers Drawing Instruments Pencil Points - Specification (First Revision) |
| 35 | **IS 3215 : 1991** | Engineers Drawing Instruments - Needle Points - Specification (First Revision) |
| 36 | **IS 3216 : 1989** | Engineers Drawing Instruments Needles - Specification (First Revision) |
| 37 | **IS 3217 : 1991** | Engineers Drawing Instruments Pickers - Specification (First Revision) |
| 38 | **IS 3218 : 1968** | Specification for parallel rulers 150mm Link Type |
| 39 | **IS 3219 : 1966** | Specification For Engineers Drawing Instruments Boxes for Leads and Needles |
| 40 | **IS 3220 : 1966** | Specification For Engineers Drawing Instruments Screw Drivers |
| 41 | **IS 3221 : 1966** | Sets for drawing instruments |
| 42 | **IS 3222 (Part 1) : 1989** | Instrument screws - Specification Part 1 fasteners for drawing instruments (First Revision) |
| 43 | **IS 3686 : 1966** | Specification for student - Type microscope |
| 44 | **IS 4328 : 1967** | Specification for monocular dissecting microscope |
| 45 | **IS 4329 : 1967** | Specification for measuring Travelling microscope |
| 46 | **IS 4380 : 1967** | Specification for abney level |
| 47 | **IS 4590 : 1980** | Specification for secondary level (First Revision) |
| 48 | **IS 5146 : 1969** | Specification for sounding sextant |
| 49 | **IS 5148 : 1969** | Specification for hand magnifiers Circular - 50 75 and 100 mm |
| 50 | **IS 5153 : 1969** | Specification for proportional compasses - 150 200 and 300 mm |
| 51 | **IS 5204 : 1969** | Specification for research microscope |
| 52 | **IS 5205 : 1969** | Specification for drawing pins |
| 53 | **IS 5213 : 1969** | Specification for French curves for drawing office use |
| 54 | **IS 5694 : 1970** | Specification For Engineers Drawing Instruments Dotting Pens |
| 55 | **IS 5726 : 1970** | Specification For Engineers Drawing Instruments Bordering Pens |
| 56 | **IS 5737 : 1970** | Specification For Engineers Drawing Instruments Curve Pens |
| 57 | **IS 5928 : 1970** | Specification for tangent clinometer |
| 58 | **IS 6425 : 1971** | Specification for dioptometer Lensometer |
| 59 | **IS 6471 : 1971** | Specification for spectrometer Student Type |
| 60 | **IS 7010 : 1973** | Specification for pivots for magnetic compasses |
| 61 | **IS 7011 : 1973** | Specification for back - Silvered mirrors used in insturment industry |
| 62 | **IS 7020 : 1973** | Crystals and dielectric materials used in instrument industry |
| 63 | **IS 7047 : 1973** | Timbers used in instrument industry |
| 64 | **IS 7078 : 1973** | Plastics used in instrument industry |
| 65 | **IS 7543 : 1975** | Specification for planimeters |
| 66 | **IS 7544 : 1975** | Specification For Parallel Ruler Roller Type |
| 67 | **IS 7919 : 1975** | Specification for refractometer - abbe type |
| 68 | **IS 8275 : 1976** | Specification for binocular eyepication for microscope |
| 69 | **IS 8311 : 1976** | Specification for instrument jewels |
| 70 | **IS 8330 : 2004** | Tripods for surveying instruments - Fixed leg type -Specification (Second Revision) |
| 71 | **IS 8390 : 1977** | Specification for are combs |
| 72 | **IS 8622 : 1999** | Wire wound sliding contact rheostats for use in educational institutions - Specification (First Revision) |
| 73 | **IS 8630 : 1977** | Specification For Engineers Drawing Instruments Double Line Pens |
| 74 | **IS 8651 : 1977** | Specification for flame photometer |
| 75 | **IS 8661 : 1977** | Specification for polarimeter and saccharimeter Optical |
| 76 | **IS 8679 : 1978** | Specification for triangular scales |
| 77 | **IS 8680 : 1978** | Specification For Engineers Drawing Instruments Compass Bow Pen Double Knee Jointed with Sector Head Joints |
| 78 | **IS 8681 : 1978** | Specification For Engineers Drawing - Instruments Compass Bow Pencil Double Knee Jointed with Sector Head Joints |
| 79 | **IS 8691 : 1986** | Specification for mirror stereoscope (First Revision) |
| 80 | **IS 8916 : 1978** | Specification for spherometer |
| 81 | **IS 9107 : 1979** | Specification for autocollimator |
| 82 | **IS/ISO 9176 : 1988** | Tubular technical pens - Adaptor for compasses |
| 83 | **IS/ISO 9177-1 : 2016** | Mechanical Pencils for Technical Drawings Part 1 Classification Dimensions Performance Requirements and Testing |
| 84 | **IS/ISO 9177-2 : 2022** | Mechanical pencils for technical drawings Part 2 Black leads Classification and dimensions |
| 85 | **IS/ISO 9177-3 : 2022** | Mechanical pencils for technical drawings Part 3 Black leads Bending strengths of HB leads |
| 86 | **IS/ISO 9178-1 : 1988** | Templates for lettering and symbols Part 1 general principles and identification markings |
| 87 | **IS/ISO 9178-2 : 1988** | Templates for lettering and symbols Part 2 slot widths for wood cased pencils clutch pencils and fine - Lead pencils |
| 88 | **IS/ISO 9178-3 : 1989** | Templates for lettering and symbols Part 3 slot widths for technical pens with tubular tips in accordance with ISO 9175 - 1 |
| 89 | **IS/ISO 9179-1 : 1988** | Technical drawings - Numerically controlled draughting machines |
| 90 | **IS/ISO 9180 : 1998** | Black leads for wood - Cased pencils - Classification and diameters |
| 91 | **IS 9440 : 1979** | Specification for laboratory balances |
| 92 | **IS 9441 : 1979** | Specification for sextant |
| 93 | **IS 9514 : 1980** | Specification for front surface aluminized mirrors |
| 94 | **IS 9571 : 1980** | Specification for photoelectric colorimeter Single Beam |
| 95 | **IS 9607 : 1980** | Specification for tertiary level |
| 96 | **IS 9613 : 1980** | Specification for primary level |
| 97 | **IS 9680 : 1980** | Materials for light duty springs for instrument industry |
| 98 | **IS 9865 : 1981** | Specification for laboratory weights |
| 99 | **IS 9892 : 1981** | Specification for subtense bar |
| 100 | **IS 9898 : 1981** | Specification for heliotrope surveying |
| 101 | **IS/ISO 9960-1 : 1992** | Draughting instruments with or without graduation Part 1 draughting scale rules |
| 102 | **IS/ISO 9962-1 : 1992** | Manually operated draughting machines Part 1 definitions classification and designation |
| 103 | **IS/ISO 9962-2 : 1992** | Manually Operated Draughting Machines Part 2 Characteristics Performance Inspection and marking |
| 104 | **IS/ISO 9962-3 : 1994** | Manually orerated draughting machines Part 3 dimensions of scale rule chuck plates |
| 105 | **IS 10695 : 1983** | Specification for pocket stereoscope |
| 106 | **IS 10995 : 1984** | Specification for tuning fork |
| 107 | **IS 10996 : 1984** | Specification For Stop Clock With Fly-Back Action |
| 108 | **IS 11152 : 1984** | Specification for laboratory stands Metallic |
| 109 | **IS 11445 : 1985 ISO 11554: 2006** | Specification for parallax bar Stereometer |
| 110 | **IS 11781 : 1986** | Specification for stencil templates and pen tips for english lettering |
| 111 | **IS 11961 : 1986** | Specification for 4 - Metre levelling staff Telescopic |
| 112 | **IS 12353 : 1988** | Specification for stencil templates for geometrical figures |
| 113 | **IS 12397 : 1988** | Specification for metallic dissecting trays |
| 114 | **IS B12397 : 1988** | Specification for metallic dissecting trays |
| 115 | **IS 12399 : 1988** | Specification for tripod stands |
| 116 | **IS 12428 : 1988** | Specification for scribing tools |
| 117 | **IS 14253 : 1995** | Educational instruments and equipment - Wire gauze for school and laboratory use - Specification |
| 118 | **IS 14260 : 1995 ISO 9385** | Glass and glass - Ceramics - Knoop hardness test |
| 119 | **IS 14440 : 1997** | Drawing Instruments - Tubular Tips For Hand Held Technical Pens Using India Ink On Tracing Paper - Specification |
| 120 | **IS 14633 : 1999** | Blackboards for class rooms -Specification |
| 121 | **IS 14859 : 2000** | Specification for Hindi Devnagari stencil templates and pen tips |
| 122 | **IS 15084 : 2002** | Spring balance - Tension type For Use In Schools - Specification |
| 123 | **IS 15085 : 2001** | Decimeter cube For Use In School-Specification |
| 124 | **IS 15085 : 2001** | Decimeter Cubes for Use in Schools |
| 125 | **IS 15197 : 2002** | Kerosene heating lamp for use in school and college laboratories -Specification |
| 126 | **IS 15242 : 2002** | Magnets For Use In Schools And Colleges - Specification |
| 127 | **IS 16506 (Part 2) : 2021 ISO 9211-2:2010** | Optics and photonics Optical coatings Part 2 Optical Properties |