BUREAU OF INDIAN STANDARDS

MINUTES

Committee	*Meeting No.*	*Day, Date and Time*	*Venue*
Graphic Art Technology Sectional Committee, MSD 6	**16th Meeting**	**Wednesday 29 November 2023 1100 hrs**	**Hybrid Meeting Green Room Manak Bhavan, Bahadur shah zafar marg, New Delhi.**

CHAIRMAN: Prof. (Dr.) Anjan Kumar Baral **MEMBER SECRETARY**: Ashish V Urewar, Scientist-C, MSD

MEMBERS PRESENT: Please see **Annex A**

Item 0 GENERAL

0.1 Welcome by BIS

Shri A. S. Bhatnagar, Sc. 'F' & Head, MSD, BIS extended a warm welcome to the Chairman and distinguished members present in the Publication and Graphic Technology Sectional Committee, MSD 6. He emphasis on attendance, active participation by experts, submission of comments on draft standards, ISO ballots. Further, he briefly gave an overview of the various works being done by the MSD 6 Sectional Committee and its various subcommittees.

0.2 Opening Remarks by the Chairman

Prof. (Dr.) Anjan Kumar Baral, Chairman, MSD 6 extended a warm welcome to the members present in the meeting. He informed the committee about the importance and role of printing technology in communication and data management even in this digital era. Though, India ranks as the number one worldwide, as far as the number of printing units are concerned, but still there is a long way to go, when it comes to adopting print standards into their work organizations. A lot needs to be done in this context, so as to make this industry progressive in the coming years. He believed that this committee has the potential to contribute effectively to formulate best possible printing standards for the printing world. At last, he solicited support of all committee members to strengthen standardization in this area.

Item 1 ACTION TAKEN REPORT

The Committee noted the information given at Item 1 of the agenda.

Item 2 CONFIRMATION OF THE MINUTES OF THE LAST MEETING

2.1 The minutes of the last meeting of Publication and Graphic Technology Sectional Committee, MSD 6 held on 26 July 2023, were confirmed.

Item 3 SCOPE AND COMPOSITION OF PUBLICATION AND GRAPHIC TECHNOLOGY SECTIONAL COMMITTEE, MSD 6, ITS SUB COMMITTEE AND PANELS

3.1 The Committee noted the present scope and reviewed the composition of MSD 06 Sectional Committee keeping in view the information on the attendance of the members in the last three meeting, as given in the **Annex. A** of the agenda.

While reviewing, the Committee decided the following:

SL. No	Organization	Member	Decisions
1.	Government Institute of Printing Technology, Mumbai	Shri Sameer Deshpande	Withdrawn due to non-participation.
2.	Production Manager, Sheetfed Module, ITC, Chennai.	Er. K. Natarajan	Withdrawn due to non-participation.
3.	*In Personal Capacity, New Delhi*	Prof. RajendraKumar Anayath	Withdrawn due to non-participation.
4.	*Manipal University, College of Printing*	Shri Ramnath Shenoy	Request received for withdrawl
5.	Color Dots Prepress Studio, New Delhi	Shri Tarun Chopra	Withdrawn due to non-participation.
6.	(NPES) National Printing Equipment Association, Noida	Shri Vinod Vittoba	Withdrawn due to non-participation.
7.	PRESSMAN SOLUTIONS I IDEALLIANCE SOUTH ASIA PRESSMAN ACADEMY FOR PRINT EDUCATION & RESEARCH	Shri K. Panthala Selvan	Withdrawn due to non-participation.
8.	Kumar Printers Private Limited, Gurugram	Shri Sandeep Bhargava	Withdrawn due to non-participation.
9.	Indian Institute of Mass Communication, New Delhi	Dr A. K. Pradhan	Withdrawn due to non-participation.
10.	India Today Group, Noida	Shri Ravi Kumar Srivastava	Withdrawn due to non-participation.
11.	Central Pulp and Paper Research Institute, Saharanpur	Sanjay Tyagi	Withdrawn due to non-participation.
12.	Kodak India Private Limited, Mumbai	Hitender Kumar	Withdrawn due to non-participation.
13.	Hologram Manufacturers Association of India, New Delhi	Shri Chander Shekhar Jeena	Withdrawn due to non-participation.
14.	Government Institute of Printing Technology, Mumbai	Shri Sameer Sadashiv Deshpande	Withdrawn due to non-participation.
15.	Delhi Printers Association, New Delhi	Shri B D Mendiratta	Withdrawn due to non-participation.
16.	The Regional Institute of Printing Technology, Kolkata	Shankhya Debnath	Withdrawn due to non-participation.
17.	Manipal University College of Printing, Manipal	Dr. Amrutharaj H. Krishnan	Withdrawn due to non-participation.

The committee decided to co-opt the following members

1. Prof. B Kumar, In personal capacity
2. Shri Ganesh Kumar V.

3. Shri S Shrik anth, DGM (PP), BRBNMPL
1. Shri Das Damodaran, FARB Technologies

3.2 Scope & composition of Subcommittee for Review of Indian Standards, MSD 6:1

The Committee reviewed composition of MSD 6:1 as given in Annex B of the agenda and decided the following

SL. No	Organization	Member	Decisions
1.	Production Manager, Sheetfed Module, ITC, Chennai.	Er. K. Natarajan	Withdrawn due to non-participation.
2.	*In Personal Capacity, New Delhi*	Prof. RajendraKumar Anayath	Withdrawn due to non-participation.

3.3 Scope & composition of Subcommittee for scrutiny of ISO/TC130 Standards, MSD 6:2

The Committee reviewed composition of MSD 6:2 as given in Annex C of the agenda and decided the following

SL. No	Organization	Member	Decisions
1.	*In Personal Capacity, New Delhi*	Prof. RajendraKumar Anayath	Withdrawn due to non-participation.
2.	*Manipal University, College of Printing*	Shri Ramnath Shenoy	Request received for withdrawl

3.4 Scope & composition of Panel of experts for important issues, MSD 6/P-2

The Committee noted composition of MSD 6/P-2 as given in Annex D of the agenda.

Item 4 STANDARDS PUBLISHED/UNDER DEVELOPMENT

The Committee noted Item 4 of the Agenda regarding the Indian Standards published as given at **Annex E** of the Agenda.

Item 5 NEW WORK ITEM PROPOSAL

6.1 ISO (Gap Analysis) – Committee reviewed the information given in 6.1 of agenda and decided as following

Sl. No.	ISO No.	Title	Decision
1	ISO/TS 10128:2023	Graphic technology — Methods of adjustment of the colour reproduction of a printing system to match a set of characterization data	WC
2	ISO 15341:2014	Graphic technology — Method for radius determination of printing cylinders	WC

3	ISO 17762:2016	Graphic technology — Post-press — General requirements for transfer, handling and storage	WC
4	ISO 18619:2015	Image technology colour management — Black point compensation	WC
5	ISO/TS 18621-21:2023	Graphic technology — Image quality evaluation methods for printed matter — Part 21: Measurement of 1D distortions of macroscopic uniformity utilizing scanning spectrophotometers	WC
6	ISO/TS 18621-31:2020	Graphic technology — Image quality evaluation methods for printed matter — Part 31: Evaluation of the perceived resolution of printing systems with the Contrast–Resolution chart	WC
7	ISO 20294:2018	Graphic technology — Quantification and communication for calculating the carbon footprint of e-media	WC
8	ISO 20690:2018	Graphic technology — Determination of the operating power consumption of digital printing devices	WC
9	ISO 21632:2018	Graphic technology — Determination of the energy consumption of digital printing devices including transitional and related modes	WC
10	ISO 21632:2018/AMD 1:2020	Graphic technology — Determination of the energy consumption of digital printing devices including transitional and related modes — Amendment 1	WC

6.2 **FDIS/DIS DOCUMENTS:** Committee noted the information given in 5.2 of agenda.

6.3 NWIP: Committee reviewed the information given in 5.2 of agenda and decided as follows

i)	Calibration of multi-colour sheet-fed offset press	Committee decided that background work shall be carried out by; 1)Shri Kiran Prayagi 2) Mr. K. Panthala Selvan 3) Prof. Anjan Kumar Baral 4) Shri Kulakkada Pradeep
ii)	Flexographic plates preparation	The committee approved terms of reference (TOR) and recommended to screening committee of BIS
iii)	Sustainable printing	Committee decided that by 1st Jan 2024 background work shall be submitted by 1) Prof. Anjan Kumar Baral 2) Shri Prashant Atre 3) Shri Jose Thomas Also Shri Jose Thomas to submit the draft covering components/area for sustainability

		aspect in printing.
iv)	E-publishing Guideline	Committee decided Shri Mukt Nath Pandey as project leader and submit the draft in 8 weeks.

Item 6 REVIEW OF PUBLISHED INDIAN STANDARDS

Committee reviewed the information given in 7.1, 7.2 of agenda and decided as follows

Sl. No.	ISO No.	Title	Decision
1.	IS 1250: 2021 ISO 5776 :2016	Proof Corrections for Printers and Authors	Committee decided to retain the logography related portion as it may be required by Indian Printers engaged in export to South-East Asian countries. Committee decided to adopt ISO 5776:2022 with addition of note that Table 2& Table 3 also Annex B,C& D are not applicable to scheduled Indian language in the 8th schedule of Indian constitution.
2.	IS 12000 (Part 2): 2019	Guide for paper spoilage and wastage for printing industry Part 2 web offset processes	Committee decided that Shri. Kiran Prayagi to review the standard in 3 months time.

Item 7 DRAFT INDIAN STANDARD UNDER PRINT

Sl No.	Doc. No.	Title	Decision
1.	MSD 06/(23464)/ ISO 2834-1 :2020	Graphic Technology Laboratory Preparation of Test Prints Part 1: Paste Inks	Finalized
2.	MSD 06/(23474)/ ISO/TS 21830 : 2018	Image Technology Colour Management Black Point Compensation for N-Colour ICC Profiles	Finalized
3.	MSD 06/(23470)/ ISO 12640-4:2011	Graphic technology Prepress digital data exchange Part 4: Wide gamut display-referred standard colour image data	Finalized
4.	MSD 06/(23477)/ ISO 28178: 2022	Graphic technology Exchange format for colour and process control data using XML or ASCII text First Revision	Finalized
5.	MSD 06/(23473)/ ISO/TS 15311-2: 2018	Graphic technology Print quality requirements for printed matter Part 2: Commercial print applications utilizing digital printing technologies	Finalized
6.	MSD 06/(23479)/ ISO 16763: 2016	Graphic technology — Post-press — Requirements for bound products	Finalized

7.	MSD 06/(23478)/ ISO/TS 18621-11:2022	Graphic technology Image quality evaluation methods for printed matter Part 11: Colour gamut analysis	Finalized
8.	MSD 06/(23471)/ ISO 16762: 2016	Graphic technology Post-press General requirements for transfer handling and storage	Finalized
9.	MSD 06/(23476)/ ISO 15397: 2014	Graphic Technology Communication of Graphic Paper Properties	Finalized
10.	MSD 06/(23465)/ ISO 2834 -3:2008	Graphic Technology Laboratory Preparation Test Prints Part 2 Liquid Printing Inks	Finalized

Item 8 DRAFT INDIAN STANDARD UNDER PRINT

Committee noted the information given in 9 of agenda.

Item 9 Annual Action Plan

Committee noted the information given in 9 of agenda.

Item 10 Annual calendar for TC meeting

Committee noted the information given in 10 of agenda.

Item 11 Research Project- Procedure for approval of project

Committee noted the information given in 11 of agenda.

Item 12 Measures to ensure effective participation by Indian expert

Committee requested members suggest the ways through which more expert can be engaged in Standard Development activity in order to develop relevant and robust standards.

Item 13 Scientific Journals and periodicals to be subscribed by BIS

Committee requested members to suggest scientific journal and periodical which can be useful for this committee.

Item 14 International event / any other event

Committee requested members to suggest the event which can be participated in and can be useful for this committee.

Item 15 INTERNATIONAL ACTIVITY

Committee noted the information given in 15.1, 15.2 of agenda and decided five convenor for co-ordinating work of ISO/TC 130 working groups as follows

Expert	Working group
Shri Kiran Prayagi	ISO/TC 130/JWG 7, JWG 14, WG 3, WG4
Shri N Manku	ISO/TC 130 /WG12
Prof. Anjan Kumar Baral	ISO/TC 130 /WG 1, WG 5,WG 10,WG 11
Shri Panthala Selvan	ISO/TC 130 /WG 2, WG 13
Shri Jose Thomas	Joint ISO/TC 42-ISO/TC 130-CIE WG

Item 16 NEW INITIATIVES IN STANDARDIZATION

16.1 Recognition of Contributions of Technical Committees and its Members

The Committee noted the information of the agenda.

16.2 Accreditation of Standard Development Organizations (SDOs)

The Committee noted the information of the agenda.

Item 17 STANDARDIZATION CELLS

The Committee noted the information of the agenda.

Item 18 GENDER RESPONSIVE STANDARDS INITIATIVE

The Committee noted the information of the agenda.

Item 19 BIS CERTIFICATION SCHEMES

The Committee noted the information of the agenda.

Item 20 INFORMATION ON FREEE-SALE OF STANDARDS BY BIS

The Committee noted the information of the agenda.

Item 21 NATIONAL INSTITUTE FOR TRAINING IN STANDARDISATION

The Committee noted the information of the agenda.

Item 22 NOMINATING YOUNG PROFESSIONALS IN BIS TECHNICAL COMMITTEES

The Committee noted the information of the agenda.

Item 23 BIS CONNECT

The Committee noted the information of the agenda

Item 24 DATE AND PLACE FOR THE NEXT MEETING

The next meeting date will be decided as per convenience of members tentatively in first week of March 2023

Item 25 ANY OTHER BUSINESS:

ANNEX A

MEMBERS PRESENT

1. Prof. (Dr.) Anjan Kumar Baral, Guru Jambheshwar University of Science & Technology - Chairman, MSD 06
2. Shri Muktnath Pandey, Director, Avantika Printers Ltd, New Delhi
3. Shri Sunil Jain, Delhi Printers Association, New Delhi
4. Shri N. S. Manku, M/sJoy D-Zign Engineers Pvt. Ltd, New Delhi

VIRTUAL PRESENT

5. Dr. K. Senthil Vadivu, Anna University, Chennai
6. Dr. J P Nirmala, Anna University, Chennai
7. Dr. M. NandaKumar, AGPC, Shivakasi, Tamilnadu
8. Shri Prashant Dixit, Directorate General of Quality Assurance, New Delhi

9. Prof. Madura Mahajan, COET, Pune, Maharashtra
10. Shri Jose Thomas, Future Schoolz, Kochi
11. Shri Kulakkada Pradeep, Future Schoolz, Kochi
12. Shri Hari Prem (Shri Prashant Vats), Indian Printing Packaging and Allied Machinery Manufacturers' Association (IPAMA), Noida
13. Dr. Amrutharaj H. Krishnan, Manipal University College of Printing, Manipal
14. Shri Vinod Vittoba, National Printing Equipment Association, Noida
15. Shri K. Panthala Selvan, Pressman Solutions, Chennai
16. Shri Ishant Kalkal, M/s RSG Solutions, New Delhi
17. Shri Shankhya Debnath, The Regional Institute of Printing Technology, Kolkata
18. Shri Prashant Atre, M/s TOYO Inks ARETS India Pvt Ltd
19. Shri Ashokan Krishnamoorthy, Trigon Digipack Pvt. Ltd., Mumbai
20. Dr. Sunil Kumar, IN PERSONAL CAPACITY
21. Prof. Kiran Prayagi, In Personal Capacity, Mumbai

BIS Officers

22. Shri. Anuj S Bhatnagar, Sc. F, (MSD), BIS, New Delhi
23. Shri Ashish V Urewar Sc. C, (MSD) & Member-Secretary, MSD 6, BIS, New Delhi

MANAGEMENT & SYSTEMS DEPARTMENT
TERMS OF REFERENCE (TOR) FOR R&D PROJECT

1. **TOR**: **Study of Preparation Methods of Flexographic plates.**

2. **Background**:

2.1 This project is related to the Graphic Art Technology Sectional Committee (MSD 6) which falls under the purview of the Management System Divisional Council (MSDC) within the Bureau of Indian Standards (BIS).
2.2 Flexographic printing plates are basically flexible photopolymer plates, used in flexo printing presses to transfer ink onto a flexible substrate; such as paper or film. The printing plates are a

critical element of the flexographic printing process and the final quality of the printed image is largely dependent on the quality of the flexo plates used.

2.3 As the technology for flexographic printing continues to evolve, both quality and efficiency are improving. In order to remain competitive in the marketplace, flexographic printers must stay informed about the latest developments. The challenge for plate manufacturers has always been to create a more environmentally friendly plate without losing the benefits and advantages of quality and efficiency.

2.4 Most flexo plates today are exposed using direct 'computer-to-plate' technology (CTP) or thermal plate processing. Water-washable plates were developed to meet the possible challenges and to help printers and converters approach their operations from a much more holistic perspective for taking care of environment. In addition to delivering excellent quality, these plates ensure a lower CO2 footprint during the plate preparation and in print production with a much higher press OEE (Overall equipment Efficiency).

2.5 Printing industry has initiated various reforms in flexographic plate preparation to ensure effective print production. The project is envisaged to have a comprehensive review, assessment and stabilization of flexographic plate preparation methods with respect to all the stakeholders being involved in this area.

3. **Objective**:

The project is intended to provide systematic analysis to formulate standard on flexographic plate preparation methods. The project envisages to have a comprehensive study and analysis on the various practices of flexographic plate preparation in printing industry and collect feedback from all the stakeholders on water washable and chemical washable plates and also to identify the possible challenges in using water washable plates and to carry out testing with specified parameters for optimal printing output on various printing substrates. The study will also include the best practices being followed flexography printing, internationally.

4. **The scope encompasses the following key areas**:

- To study the International standard available on the topic.
- To identify water and chemical washable flexographic plate preparation practices and the various issues involved.
- To identify the gap areas in relation to the present flexo printing plates preparation methods.
- To carry out testing with specified parameters for water washable flexographic plates for optimal printing output on various printing substrates.
- To propose a measure to enhance the efficiency of water washable flexographic plates.

5. **Research Methodology**: Suggested methodology for the proposed R&D should be as follows:

5.1 **Literature Review –** Undertake literature review on production control including but not restricted to the following and provide comparative analysis:

- Indian and International standards;
- Research articles/papers;
- Any studies being conducted by any organization; and
- Any other sources.

5.2 **Field visit -**

Carry out field study in different types of organization/ industry/ institutions. The proposer is expected to suggest number of visits to carry out to different types of organization/ industry/ institutions. The field visit plan should be suggested in such a way so that it should cover the entire production control ecosystem. Once the field visit plan suggested by researcher is approved by BIS, it is expected by researcher to conduct those visits as per proposal.

5.3 **Testing** - Identify the Industrial laboratory for testing. Visit the lab to conduct the test for specified parameter, record the parameter being tested and test method being followed.

5.4 **Data collection** - It is expected to interact with different stakeholders and collect data during field visits. Also carry out testing Data collected through Questionnaire/ Feedback/ survey/ Brainstorming sessions should be analyzed and interpreted.

5.5 **Analysis and report preparation –** It is expected that proposer shall prepare the analytical report covering different aspects of scope supported by relevant data. Data collected should be analyzed and inference drawn shall be made a part of the report.

5.6 Based on information collected, proposer shall inform BIS regarding changes to be incorporated in the existing standards and submit the project report.

6. Outline of the tasks and final deliverables expected from the Proposer(s):

- Project report, in hard copy and digital formats, covering all aspects mentioned in scope
- Questionnaires, discussion and visit reports, to be appended with the project report.

7. Criteria for Identification of Proposer to conduct Research work

Infrastructure shall be available with the proposer for conducting research work.

Capabilities, experience, and competence in the field of production control, to conduct R&D/survey.

Proposer shall be a member of the Sectional Committee or the academic institution and universities having MoU with BIS.

Note — The acceptance of proposal is subjected to the approval of Sectional Committee and Screening Committee of BIS based on the above and BIS norms. The CVs of proposer should demonstrate their qualifications, experience, and a track record in similar projects.

8. Delivery Milestones and Review Process

Total Estimated Time is 6 months from the date of award of the project. The project will follow the following timeline:

8.1 Stages for Review:

Stage I: At the end of 2nd month, proposer shall prepare a comprehensive plan identifying the following:

- Details of literature review carried out and summarized report;
- Identification of organizations, users and different stakeholders to be visited.

- Information to be collected through interactions from the above-mentioned stakeholders and visits to be carried out;

Member Secretary will evaluate the plan and provide feedback, if any.

Stage II: At the end of 4th month, proposer shall submit draft report with the following information:

- Reports of visits carried out to different organizations
- Details of the data collected while interaction with different stakeholders; and
- Analysis of data and correlation with the findings.

The concerned Sectional Committee will evaluate the draft report and provide feedback/recommend changes, if required. In next 2 weeks, proposer shall submit final project report incorporating recommendations/feedback of Committee.

9 Support from BIS

BIS will provide access to latest editions of Indian and International Standards and available literature with BIS

10. Nodal Officer

Mr. Ashish V Urewar, Sc. C/Deputy Director, MSD, BIS, may be contacted at msd@bis.gov.in for any queries on the research project.