

## **TERMS OF REFERENCE FOR THE R&D PROJECT**

**1. Title:** Study on Production Control activity.

**2. Background:**

**2.1** This is related to the Management and Productivity Sectional (MSD 4) Committee which falls under the purview of the Management System Divisional Council (MSDC) within the Bureau of Indian Standards (BIS).

**2.2** The prime objective of Production Control is to help a company become more competitive and profitable. An effective Production Control function endeavors to fulfil this objective by keeping a balance between satisfying sales demands, achieving high plant utilization and maintaining low investment in stocks and work-in-progress. An optimum balance between these often conflicting objectives will only be achieved by a production control system designed to meet the specific needs of the company and run by well trained and dedicated staff.

**2.3** The following six standards on Production Control are being considered for review:

<b>Sl. No.</b>	<b>IS No.</b>	<b>Title</b>
1.	IS 15446 (Part 1) : 2004	Guide to Production Control: Part 1 Introduction
2.	IS 15446 (Part 2) : 2004	Guide to Production Control: Part 2 Production Programming
3.	IS 15446 (Part 3) : 2004	Guide to Production Control: Part 3 Ordering Methods
4.	IS 15446 (Part 4) : 2004	Guide to Production Control: Part 4 Dispatching (Shop - Floor Control)
5.	IS 15446 (Part 5) : 2004	Guide to Production Control: Part 5 Relationship Between Production Control and Other Management Function
6.	IS 15446 (Part 6) : 2004	Guide to Production Control: Part 6 Computer Aided Production Control

**2.4** These standards are guides for the effective Production Control. It covers aspects such as Total Quality Management (TQM), Impact of Technology on Production Control, Production Control Techniques and so on.

**2.5** Different organizations/industry have initiated different reforms in their working to ensure effective Production Control. In addition, since these standards were developed, there has been a change in the techniques and technology of Production Control. All these changes require the review of standards on Production Control.

### **3. Objective:**

**3.1** To provide analytical report that should help in revision of IS 15446 series standards.

**3.2** To have a comprehensive study on reforms in theory and practice of production control. This may require feedback from stakeholders. The study should include the best practices being practiced internationally and also identify the challenges being faced in production control.

### **4. Scope:** The scope of this R & D is as follows:

- To study the existing Indian Standards and International standard available on the topic.
- To identify production control practices and issues.
- To identify Gap area
- To study impact of digital technology, tools, in production control; their benefits and challenges and also emerging techniques required to be adopted in the production control
- To propose a measures to enhance production efficiency.
- To develop an organizations' capability in achieving Sustainable Development Goals through production control.

### **5. Research Methodology:** 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 papers;
- Any studies being conducted by any organization; and
- Any other sources;

**5.2 Field visit** -Carry out field study in six different types of industry (2 for each small/medium/large scale industry). The plan of field visit shall be proposed by researcher to BIS for approval and proposer to conduct those visits as per approved proposal.

**5.3 Field survey and Data collection** - Data collected through Questionnaire/ Feedback/ survey/ Brainstorming sessions during field visit shall form the part of the report.

**5.4 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.

**5.5** 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. Delivery Milestones and Review Process:**

Timeline for the project is 6 months from the date of award of the project.

### **7.1 Stages for Review:**

**7.1.1 Stage I:** At the end of 2<sup>st</sup> month, project researcher shall prepare a comprehensive plan identifying the following:

- a) Details of literature review carried out and summarized report;
- b) Identification of different organizations, stakeholders, beneficiaries and regulators to be visited (see 4.3);
- c) Information to be collected through interactions from the above-mentioned stakeholders and visits to be carried out. The format / information to be gathered should be shared with BIS.

BIS will evaluate the plan and provide feedback, if any.

**7.1.2 Stage II:** At the end of 5<sup>rd</sup> month, project researcher shall submit draft report with the following information:

- a) Reports of visits carried out to different organizations;
- b) Details of the data collected while interaction with different stakeholders; and
- c) Analysis of data and correlation with the findings;
- d) Inference drawn

BIS will evaluate the draft report and provide feedback/recommend changes, if required.

After 6 months, project researcher shall submit final project report incorporating recommendations/feedback and survey questionnaire to BIS

## **8. Support from BIS:**

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

## **9. Nodal Officer:**

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