1.0 PROFILE

1.1 Background

NCB is the apex body providing R&D and technical services in cement and allied building materials. In 2013, Interlaboratory Services (ILS) of NCB was granted NABL accreditation as per ISO 17043:2010 for providing PT services on cement and fly ash. The present scope of accreditation in chemical field covers: limestone; clinker; cement; fly ash; concrete admixture; water for concrete; coal/coke/pet coke.

1.2 PT Scheme on OPC

ILS is now launching PT scheme on chemical testing of OPC (ILS/PT/64). The study is being coordinated by V Naga Kumar. The programme envisages testing of single homogenized sample of Ordinary Portland Cement (OPC) as per Indian standard methods of testing in chemical field. Around 30 laboratories are expected to participate. The registration for participation would be done on first-come-first-served basis. The scheme will be implemented as per ISO 17043:2010. The channels of communication will remain open throughout the scheme implementation period with all the participants.

1.3 Salient Features of the New Scheme

Each participating laboratory would be provided single sample for testing. Salient features of the scheme are as under:

- Simultaneous participation
- Sourcing of material
- Material homogenization and sample preparation
- Testing for homogeneity and statistical check of homogeneity
- Safe delivery of samples to participating laboratories
- Data analysis as per ISO 17043:2010 and ISO 13528:2015(E)
- Feedback of performance to participating laboratories
- Data confidentiality

All the PT activities will be coordinated by ILS. Material testing for initial checking, material homogenization and testing for homogeneity will be subcontracted by ILS to other laboratories of NCB. Activities like statistical check of homogeneity, compilation and analysis of results and report preparation will not be subcontracted. Complete confidentiality will be observed in the implementation of the scheme.
2.0 TECHNICAL DETAILS

2.1 Material Selection, Homogenization and Preparation of PT Item
The material for preparing PT item will be acquired from a suitable source. The quality of the material will be checked for suitability. The material will be homogenized and evaluated statistically for homogeneity for preparation of PT item. The prepared & packed PT item/sample will be checked for stability.

2.2 Sample Packaging and Delivery
The PT item (test sample) would be packed properly and safely for dispatch to the participants. Each participating laboratory would be provided single test sample. Necessary instructions and data reporting sheets also will be provided. Replacement would be provided in case of damage or loss during transit.

Indian participants would receive the sample at their address. Overseas participants would have to make arrangement for picking up the sample from NCB.

2.3 Sample Testing
The scheme covers testing of homogenized sample provided by ILS as per IS specification, for the following test parameters at participants’ laboratories.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>IS Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loss on ignition (LOI)</td>
<td>IS 4032:1985 (RA 2014)</td>
</tr>
<tr>
<td>Silicon dioxide (SiO₂)</td>
<td>IS 4032:1985 (RA 2014)</td>
</tr>
<tr>
<td>Iron oxide (Fe₂O₃)</td>
<td>IS 4032:1985 (RA 2014)</td>
</tr>
<tr>
<td>Aluminium oxide (Al₂O₃)</td>
<td>IS 4032:1985 (RA 2014)</td>
</tr>
<tr>
<td>Calcium oxide (CaO)</td>
<td>IS 4032:1985 (RA 2014)</td>
</tr>
<tr>
<td>Magnesium oxide (MgO)</td>
<td>IS 4032:1985 (RA 2014)</td>
</tr>
<tr>
<td>Sulphur trioxide (SO₃)</td>
<td>IS 4032:1985 (RA 2014)</td>
</tr>
<tr>
<td>Insoluble residue</td>
<td>IS 4032:1985 (RA 2014)</td>
</tr>
<tr>
<td>Sodium oxide (Na₂O)</td>
<td>NCB standard procedure, MS-13-2010</td>
</tr>
<tr>
<td>Potassium oxide (K₂O)</td>
<td>NCB standard procedure, MS-13-2010</td>
</tr>
<tr>
<td>Chloride (Cl)</td>
<td>IS 4032:1985 (RA 2014)</td>
</tr>
</tbody>
</table>

Note: 1. The laboratories are required to ensure availability of calibrated equipment, glassware, reference material, maintain required environmental conditions, and meet all IS requirements during testing. Conformance to the respective test procedures will have to be ensured.
2. Copy of MS-13-2010 will be provided.

2.4 Reporting of Results
The participating laboratories will be required to conduct the tests as required in the specification and report average result for each test for the sample, to the accuracy mentioned in the results reporting sheet; deviation, if any, will have to be reported. Test results would have to be sent to the coordinator through e-mail for quick transmission, followed by hard copy.

2.5 Analysis of Results
Received test results will be evaluated as per ISO 17043:2010 and ISO 13528:2015[E]. Evaluation would be done for variation, for each test parameter and ‘Z’ score of laboratory performance calculated.

2.6 Statement of Confidentiality
All laboratories would be given code number, upon receipt of test results. Confidentiality of received data, analysis and feedback would be ensured. Identity (list) of participants will not be disclosed. However, it may be disclosed to NABL, if required.
2.7 Report
   Report containing details of the scheme, evaluation, laboratory performance sheet would be prepared and provided to the participating laboratories. Copy of the report may be given to NABL, if required.

2.8 Appeal
   Participants may appeal to NCB against the evaluation of their performance for the scheme.

2.9 Feedback
   All the participating laboratories will be individually conveyed the status of their performance, with remarks.

3.0 REGISTRATION FOR PARTICIPATION
   The laboratories having facilities for chemical testing of OPC can register by sending filled up Form 1 (enclosed) to NCB, for participation in the scheme.

4.0 TIME LINE
   The last date for registration in the scheme is 31st July 2020. The test sample would be dispatched to participants by 15th August 2020. The study is scheduled to be completed by 30th September 2020.

5.0 PARTICIPATION FEE
   Rs. 24,000.00 (Rs. Twenty Four Thousand) plus GST @ 18%. Total Rs. 28,320.00 (Rs. Twenty Eight Thousand Three Hundred Twenty only).
   Overseas Participants: USD 1000 (USD One Thousand)

6.0 POST-PROGRAMME SUPPORT
   Laboratories willing to take assistance for improving their performance in the aftermath of the programme would receive support at the cost agreed upon.

V Naga Kumar
(PT Coordinator)

Date: 13.07.2020

Contact Details of PT Coordinator:
   V Naga Kumar
   Deputy Manager
   Centre for Quality Management,
   Standards and Calibration Services
   National Council for Cement and Building Materials
   34 Km Stone, Delhi-Mathura Road (NH-2)
   Ballabgarh – 121004 (Haryana)
   Phone No: 0129-4192239/305
   E-mail: ncb.cqc@gmail.com
   Fax: 0129-2242100/2246175
National Council for Cement and Building Materials
Interlaboratory Services

CONSENT FORM FOR PARTICIPATION IN PT SCHEME

TITLE: NCB PROFICIENCY TESTING SCHEME ON OPC
(CHEMICAL PARAMETERS): ILS/PT/64

Name of the Laboratory: ..........................................................................................

Address: ...............................................................................................................

.........................................................................................................................

Pin code: .................

Telephone: ......................... e-mail: .........................................................

Name of the Contact Person: .................................................................

Designation: ......................... e-mail: .........................................................

Telephone: .............................. Mobile: ......................................................

Is your laboratory accredited with ISO 17025: YES ☐ NO ☐

If, NO: Laboratory shall need to provide the traceability of the measurement equipment
along with Form 1.

We are interested to participate in the above scheme.

The participation fee along with applicable taxes for the scheme is being made as per the
following:

Payment details: SB Collect** ------------------------ dated ------------------------

for Rs. ------------------------ GST No. ----------------------------------

Date: .................................. Authorized Signatory ..............................

<table>
<thead>
<tr>
<th>Participation Fee</th>
<th>Rs. 24,000.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>GST @ 18%</td>
<td>Rs. 4,320.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>Rs. 28,320.00</strong></td>
</tr>
</tbody>
</table>

PAN No.: AAATN2477N; GST No. 06AAATN2477N1Z6

**SB Collect: **

www.onlinesbi.com → SBI collect → Proceed → State of
corporate/Institution: (All India) → Type of corporate/Institution: (Govt. Department) →

Please forward scanned copy of payment details separately.