Tinius Olsen Testing Machine Company
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TO: Tinius Olsen Customers
FROM: Laurie Mart, Quality Manager
Shawn Byrd, Technical Manager
DATE: March 29, 2021
RE: Decision Rule Information per ISO 17025:2017sec. 7.1.3

Dear Tinius Olsen Customer,

As your calibration provider, we are contacting you to clarify our position regarding **Decision Rule** and our A2LA Scope of Accreditation. From ISO 17025 sec. 7.1.3, "When the customer requests a statement of conformity to a specification or standard for the calibration, the specification or standard and the decision rule shall be clearly defined. Unless inherent in the requested specification or standard, the decision rule selected shall be communicated to, and agreed with, the customer."

When sending out our Reminder Letters for equipment that is due to be calibrated, we typically include a 'Scope Summary sheet' based on our A2LA Scope of Accreditation. The summary sheet includes a column that calls out the applicable standard or specification to which your testing machine or instrument is calibrated.

- **Tinius Olsen's accredited calibrations determine pass/fail compliance status (Decision Rule) based on factors inherent within the applicable published standard and our own documented uncertainty budget(s)**.
- Please note, some calibrations do not call out "pass" or "fail" but instead list **classification status (Decision Rule) which is based on factors inherent within the applicable published standard and our own documented uncertainty budget(s).**
  *Customer should specify requested class requirements or Tinius Olsen will provide best achievable classification.

**From ILAC G8:09 – Guidelines on Decision Rules (Sec. 4.2)**
"A decision rule can be either be binary or non-binary. This means either "pass" or "fail" only for binary conditions and some "conditional" terms for non-binary." When determining decision rule, measurement uncertainty must also be accounted for. If you have questions regarding risk analysis, determining Decision Rule, or need additional information we refer you to **ILAC G8 09:2019.**

We have updated and revised the A2LA Scope Summary sheets to provide clarity regarding our accredited calibration services and to better define the standards on which each procedure and the Decision Rule is established. The revised form now includes the following information:

- Applicable Tinius Olsen procedure # used for the calibration/verification
- Description of the verification
- Applicable standard(s) on which Decision Rule is established
- Whether the resulting certificate will report pass/fail or a classification

The updated A2LA Scope summary is included here for your reference.

TINIUS OLSEN
Testing Machine Co., Inc.

| A2LA SCOPE SUMMARY | | | |
|---|---|---|---|
| **Tinius Olsen Procedure** | **Calibration / Verification** | **Applicable Standard** | **Pass/Fail** |
| 1000 | Force -Universal or other testing machines | ASTM E4 | P/F |
| 1100 | Force | ISO 7500-1 | *Class |
| 1110 | Torque | ASTM E2624 | P/F |
| 1150 | Tension Creep | ISO 7500-2 | P/F |
| 1155 | Dead Weight Str Ruptures/Creeps (up to 40 lbs) | ISO 7500-2 or ASTM E139 and AC7101 | *Class |
| 1300 | Dynamic | NASM 1312 | *Class |
| 1500 | Balance & Scales<br>Class I, II, & III Scales –using Class 1 Weights - max capacity 1200 g<br>Class III & Unmarked Scales – using Class F Weights - max capacity 13000 g | NIST Hbk 44 | P/F |
| 2000 | Strain (extensometers, deflectometers, etc.) | ASTM E83 | *Class |
| 2100 | Strain (extensometers, deflectometers, etc.) | ISO 9513, ISO 5893 | *Class |
| 2600 | Displacement on a testing machine | ASTM E2309 | *Class |
| 2700 | Rates - Load rate or Strain rate | Tinius Olsen Procedure 2700 | *Class |
| 2800 | Crosshead Speed Rate | ASTM E2658 | *Class |
| 3000 | Brinell (1-3000 kgf) | ASTM E10 | P/F |
| 3500 | Knoop/Vickers - Indirect verification<br>Vickers: 100, 200, 300, 500 gf, 1 kgf, 5 kgf, 10 kgf, 30 kgf & 120 kgf<br>Knoop: 100, 200, 300, 500, 1000 gf | ASTM E92 and E384 | P/F |
| 4000 | Rockwell - Indirect verification<br>Scales: A, BW, C, D, EW, FW, HW, MW, RW, 15/30/45 N & 15/30/45 TW | ASTM E 18 | P/F |
| 5000 | Metals Impact - direct/dimensional verification (includes replicate review at Tinius Olsen facility) | ASTM E23 | P/F |
| 6000 | Specimen Alignment | ASTM E 1012, GE S-400 and AC7101 | *Class |
| 7000 | Melt Indexer (extrusion plastometer) | ASTM D1238 | P/F |
| 7100 | Melt Indexer (extrusion plastometer) | ISO 1133-1 | P/F |
| 8000 | Plastic Impact (includes replicate review at Tinius Olsen facility) | ASTM D 256 and/or ISO 180, ISO 13802 | P/F |
| 8100 | Plastic Impact Notcher | ASTM D256, ASTM D6110, ISO 179, and ISO 180 | P/F |
| 0730 | Plastic Impact Notcher | ASTM D256, ASTM D6110, ISO 179, and ISO 180 | P/F |
| 9000 | Heat Deflection/Vicat testing machine | ASTM D648 | P/F |

*Customer should specify requested class requirements or Tinius Olsen will provide best achievable classification.

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As the customer, it is your responsibility to request a statement of conformity. We realize there is no single decision rule that can cover all situations applicable to statements of conformity. Please inform us if you would like to request an alternate specification or standard for your calibration. You may direct your request to the quality department where it will be reviewed for technical approval.

Sincerely,

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