

Calibration Work Instruction WEC-02

Calibration / in-house check equipment criteria

Combination squares

1. The ruler to be calibrated as standard.
2. Protractor to be calibrated at 90° angle against square.
3. All markings shall be clearly visible.
4. Check for any damage.

Depth Gauges

1. The anvil faces shall be free from damage.
2. Graduated markings to be legible.
3. To be within *acceptance criteria* against the master slip gauges.
4. Checked in three places over full length

Dial Gauge Indicators

1. Graduated markings to be legible.
2. Checked in three places across the range.
3. To be within *acceptance criteria* against the master slip gauges.
4. Checked in three places over full length

External Micrometers, Verniers inside and out

1. The anvil faces shall be free from damage.
2. Graduated markings to be legible.
3. To be within *acceptance criteria* against the master slip gauges.
4. Checked in three places over full length

Internal Micrometers & Extension Rod Inserts

1. Not calibrated
2. To be used in conjunction with external micrometers.

Vernier Height Gauge

1. The anvil faces shall be free from damage.
2. Graduated markings to be legible.
3. To be within *acceptance criteria* against the master slip gauges.
4. Checked in three places over full length

Vernier Protractor

1. Graduated marking to be legible.
2. To be free from mechanical damage.

Set Square (Eng Squares)

1. To be in good general condition free from obvious damage and burrs.
2. Max deviation permissible against Master Square to be within *acceptance criteria* (Shall be compared on a surface plate and checked with feeler gauges between faces).

Steel Tapes

1. Not Calibrated
2. *All steel tapes used by Operations personnel to verify profiles for aerospace contracts shall be visually checked prior inspection, to ensure are legible and free from obvious damage and burrs.*
- 3.

Steel Rules

1. Graduated marking to be legible.

Plug Gauges

1. Shall be free from damage
2. To be within *acceptance criteria* with Faro Arm

Screw Gauges

1. To be visually only. Checked for damage and obvious wear

Slip Gauges

1. Calibrated every 2 years
2. Each slip shall be free from damage.
3. To be within *acceptance criteria* with Faro Arm

Spirit Level

1. Checked on level table turned through 180 degrees bubble to be within 0.25% of each other
2. To be free from mechanical damage.

Pressure Gauges

1. Calibrated externally.

Elcometers

1. To be calibrated internally using a set of micron gauges.

Welding sets:

1. MIG plants:
Calibrated internally - to defined acceptance criteria with a TEC ARC meter - externally calibrated to National Standards.
2. TIG plants:
Calibrated internally - to defined acceptance criteria, with a TEC ARC meter - externally calibrated to National Standards.

Note for aerospace :, All existing measurement equipment in use in WEC Machining, WEC JET and WEC Laser will be clearly identified and labelled with the calibration expiry date.

All personal equipment used will be recorded on Calibration register and etched with "for reference only".

Un-frequently used equipment will be controlled by the appointed personnel and stored in a locked cabinet - and calibrated and re-issued at request.

Note: All acceptance criteria are defined on Calibration Database.