

CODE OF PRACTICE FOR THE AREA MEASUREMENT

INTERNATIONAL COUNCIL OF TANNERS

Code of Practice for the area measurement of leather by the pinwheel measuring machine

1. *Calibration and storage of templates.* New templates should be verified by an impartial scientific body which can accurately determine the size of a template. Used templates should be re-submitted for testing every 12 months.
Each machine should be provided with templates appropriate to the size of the leather measured. Templates should be kept flat and at room temperature away from light.
2. *Calibration of machine with template.* Regular calibration of the machine with templates is a necessary and convenient safeguard of accuracy and in the best interests of all parties. The machine must be calibrated with the template of approximately the same area of the leather to be measured. The templates should be passed through the machine a sufficient number of times and in such a way that all pinwheels are tested. It is good practice to calibrate the machine at least at the start of each work period, i.e. twice a day. Additional random tests by supervisory staff are also recommended.
3. *Conditioning of leather.* Leather for check measurement should be exposed to an atmosphere of 50 to 70% relative humidity at 16 to 21°C (60 to 70°F) in such a way that each skin has free access to the surrounding air for at least 48 hours.
If the foregoing is found difficult to achieve in practice then it should be ensured that the leather has a moisture content of 14 to 18% since the moisture content materially affects the measurement.
4. *Operation of the machine with leather*
 - a) It is self-evident that the dial-pointer must be allowed to return to zero before each measurement. This can be ensured either by careful work and supervision of operators or by installation of the damper which slows up the return of the pedal to its starting position until after the pointer has returned to zero.
 - b) Machines should not be run at any speed different from that recommended by the manufacturer.
 - c) It is good practice for the area of a piece of leather to be marked or recorded by the operator who reads the dial measurement. Where "straight through" operation is used, careful supervision is needed to avoid "calling-out" errors, or preferably, the machine should be fitted with two dials.
 - d) To avoid errors due to parallax, the operator should face the dial squarely and the distance between the pointer and the dial face should be the minimum.
 - e) It is good practice for supervisory staff to carry out or supervise re-measurements at random on samples of measured leather.
5. *Method of measurement.* The leather should be fed into the machine with the higher friction surface coming into contact with the pinwheels. It should be absolutely flat and without creases at the moment when it passes between the pinwheels and the top of the transport roller. In the case of soft leathers this may involve pulling the leather from belly to belly or from edge to edge with sufficient force to prevent the pins pushing the leather into the transport feed roller slots, the leather being held in such a manner that it remains flat as it passes through the machine. Any area gained in pulling the leather in this way will be lost in the direction at right angles to it, as, provided the pinwheel machine is zeroed correctly, it cannot over-measure.

(Barcelona 1970)
6. *Tolerances.* A general tolerance of $\pm 2\%$ (on the whole parcel and not on individual hides or skins) is recommended. Many countries, notably UK, also accept a tolerance of $\pm 3\%$ for softer, stretchier leathers, such as clothing leathers, light-weight suedes, chamois leathers and bellies.