

## Introduction

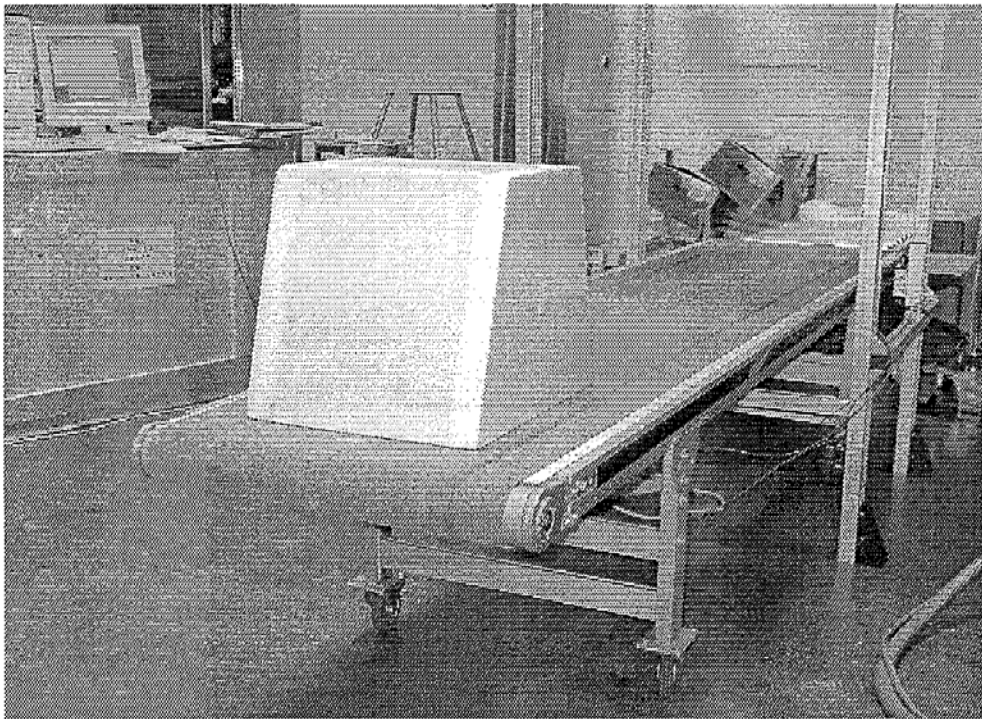
There are two tests prescribed for Irregular Shaped objects. R129 section 11.1.4.5 describes these two tests.

The final section in this document discusses the OIML differentiation between intrinsic error and scale interval (d).

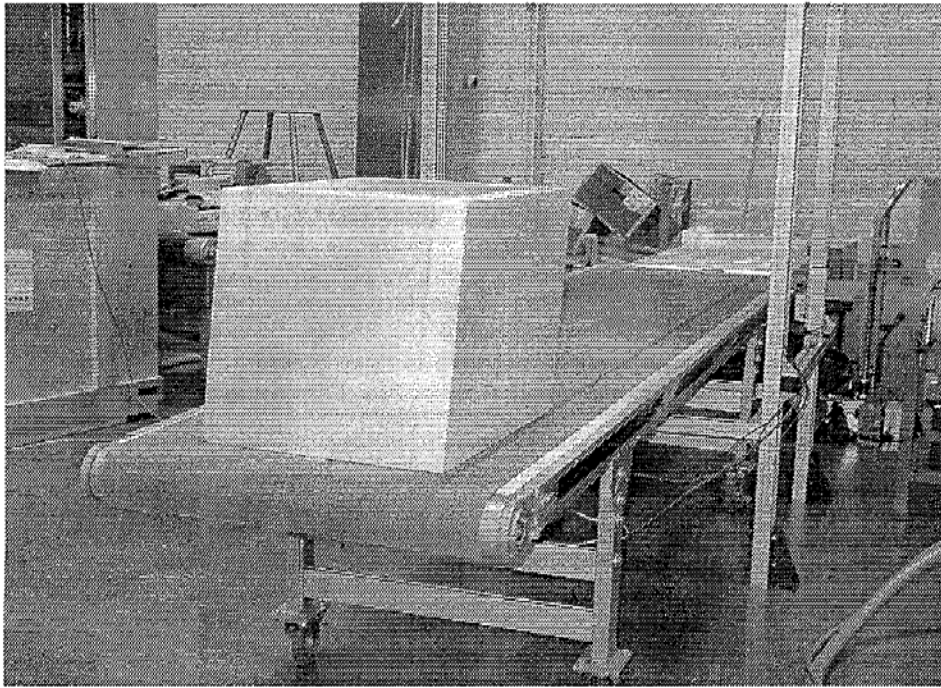
## Shape of Object Test

The boxes in the next 3 Figures are used in the Shape of Object test which is described in OIML R129 11.1.4.5, A.1.5, and B.2. The size of the test objects need to be known the level of uncertainty described in section 11.1.4.2. Three test objects are used, each object is tested three times.

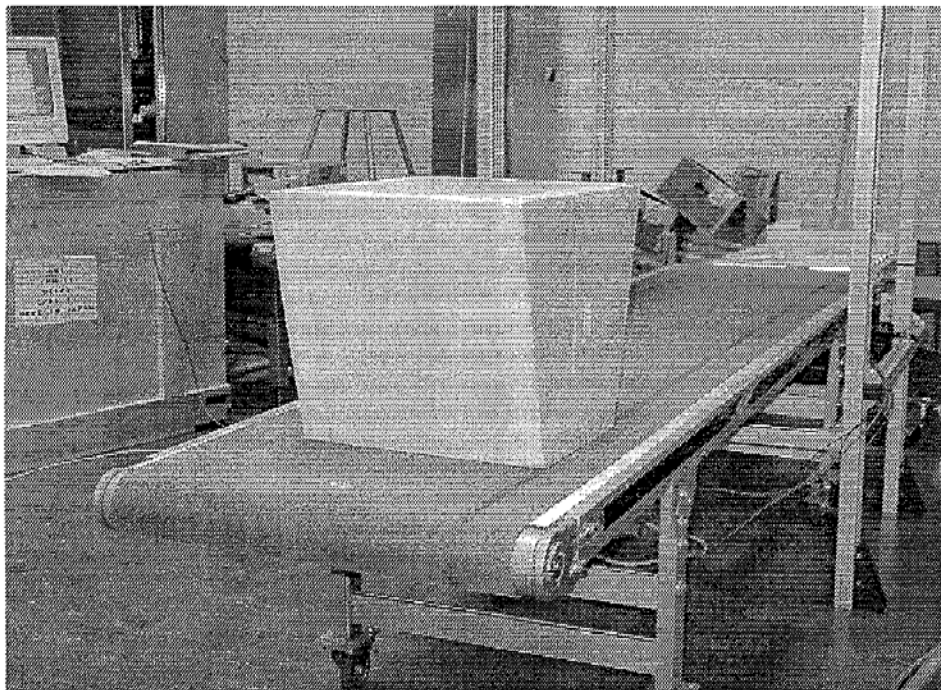
Box 1 is described as a trapezoid box with base under. The box shown should measure 498mm long by 401mm wide by 400 mm height.



Box 2 is described as a parallelepipedum where all sides are parallel with one at least one angle obtuse (for a parallelepipedum two angles would be obtuse).



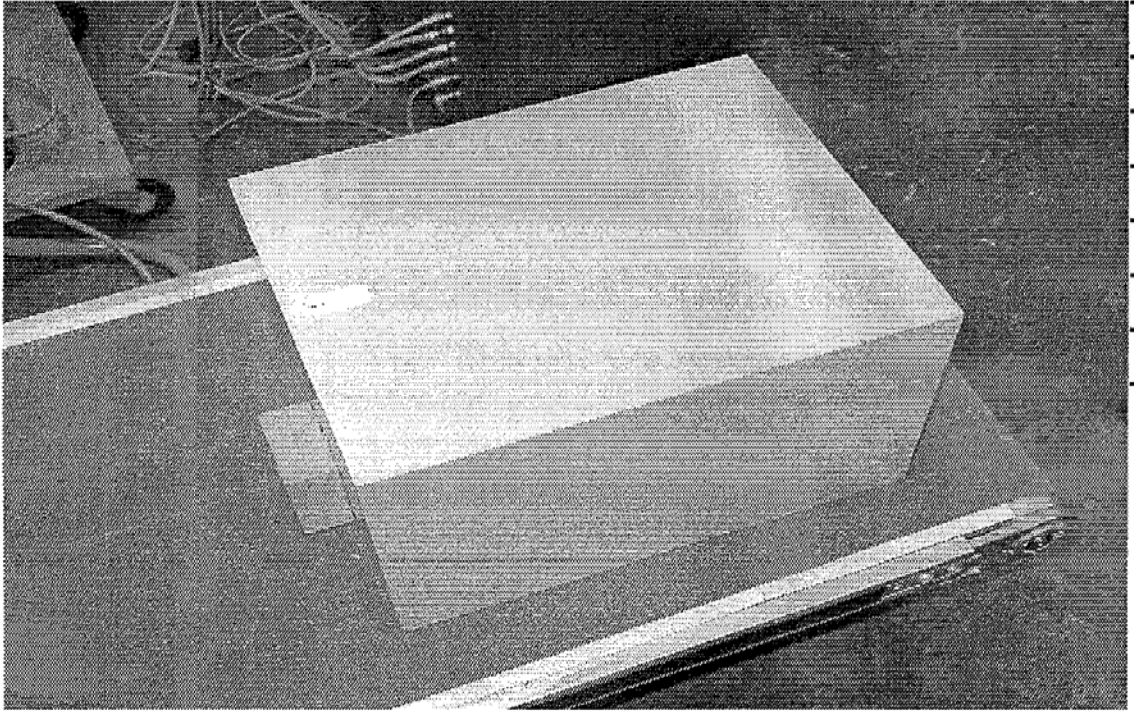
Box 3 is just box 1 turned upside down (base on top).



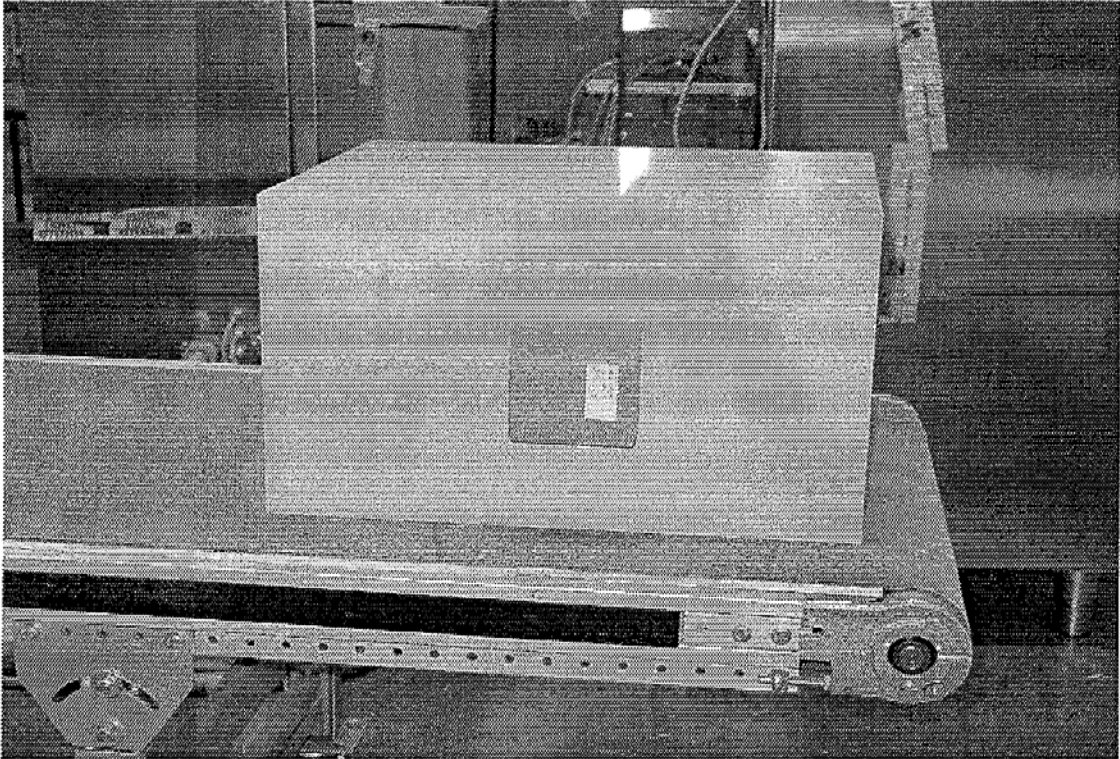
## Protrusion on Surface Test

The following objects are used as part of the Protrusion on Surface test. The Protrusion on Surface test is described in section 11.1.4.9, A.1.5, and B.3.9.

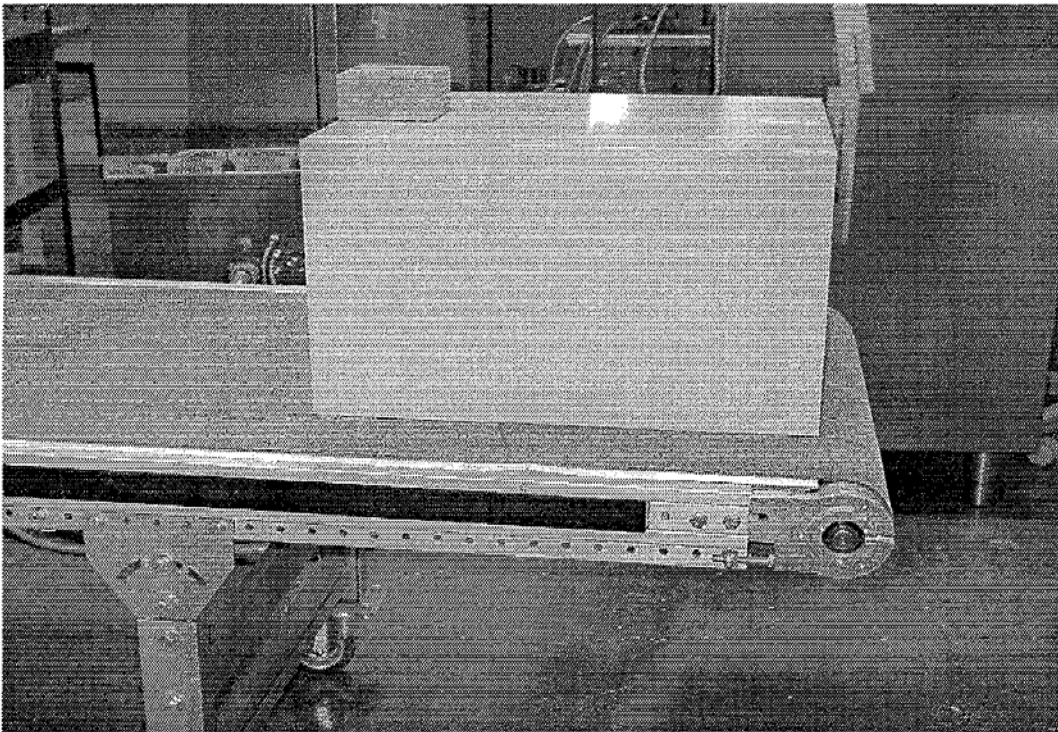
Test object 1 is a cuboid test object with a smaller cuboid attached at the leading edge at belt level. The combined object should dimension as 551 mm long by 401 mm wide by 300mm high.



Test object two is created with the same components used to create test object one. This time the smaller object is attached to the larger object on the side of the box perpendicular to belt travel. The smaller object is located approximately in the middle of the larger box.. Expected measurement is 501mm length by 450.5mm width by 300 mm height..



The third test object is created by placing the smaller rectangular box on top of the larger. Expected measurement is 501mm length by 401mm width by 350.6 mm high.



## **Intrinsic Error**

There was a great deal of discussion while defining a protrusion as to whether or not the manufacturer's declared threshold for detecting a protrusion should be tied to "d". It might be useful to define the protrusion threshold in terms of the intrinsic error of the device. R129 defines intrinsic error as: "The error of a measuring instrument determined under reference conditions." ( see section 2.24, 4.6d ). The dimensioner could detect protrusions that are multiples of the intrinsic error. Reported dimensions and test object would remain a multiple of (d).