

Wire Type IQI
according to EN 462-5
ISO 19232-5

Total Image Unsharpness Gage
according to ASTM E 2002

Image Quality Indicator for determination of unsharpness of X-ray images

The Duplex IQI is used in many X-ray applications, especially for digital X-ray-for evaluation of image unsharpness (film and digital image) and basic spatial resolution in digital image according to EN 13068 (Radioscopy), EN 14784 and ISO 13671 (CR-Computed Radiography with imaging plates), ISO 17636-2 (digital radiology of welds-flat panel detectors) or ASTM E 2597 (characterization of digital detector arrays), A new ISO standard is in preparation, describing possibility of using the Duplex IQI also for determination of focal spot size of X-ray tubes.

Image valuation with Duplex IQI

In radiography wire pair with largest diameter d has to be identified, which cannot be separated visually.

The radiographic film can be magnified up to 4X.

In digital radiology the separation between wires (Dip) is evaluated. Wire pair with largest d , showing Dip lower 20 percent of wire pair contrast, identifies total image unsharpness ($U=2d$) and basic spatial resolution ($SR_b = d$) of digital image.

Specification

IQI consists of 13 wire pairs from 1D with wire \varnothing 0.80 mm to 13D with wire \varnothing 0.05 mm

Material for wires 1D to 3D is tungsten and for wires 4D bis 13D is platinum

Distance between wires of each wire pair equals exactly diameter of wires

Wires are casted in a transparent, resistant and dimensional stable plastic material

Standard designation and serial number are also indelible casted and are shown on each image

Design-type test for Duplex IQI is in process at BAM/Berlin

Scope of supply

Duplex Wire Type IQI in wooden case with short instructions, Declaration of Conformity and individual test certificate with all relevant measurements.