SAMPLE

KOWOTEST
Gesellschaft für Prüfausrüstung mbH

Konformitätserklärung / Declaration of Conformity

EG-Konformitätserklärung nach DIN EN 45014

EC Declaration of Conformity according to DIN EN 45014

Mit dieser Konformitätserklärung erklärt die Firma

With this Declaration of Conformity it is confirmed by

KOWOTEST Gesellschaft für Prüfausrüstung mbH
Solinger Strasse 186
40764 Langenfeld / Deutschland

dass die Produkte

that products

Bezeichnung
Doppel-Drahtsteg-BPK

description
Duplex Wire Type IQI
Total Image Unsharpness Gage

Maschinentyp
Bildgüteprüfkörper

machine type
Image Quality Indicator

Modell Nr.
BPK EN 462-5

model no.
IQI EN 462-5

Code Nr.
11 00155

code no.
11 00155

in Übereinstimmung mit den nachfolgend genannten Normen und Vorschriften hergestellt worden sind.

are manufactured in accordance to all standards listed below.

EN 462-5

ISO 19232-5

ASTM E 2002

Ort und Datum der Ausstellung
Langenfeld, 20.05.2010

Place and date of issue
Langenfeld, 2010-05-20

Qualitätsbeauftragter / Quality Mandatory

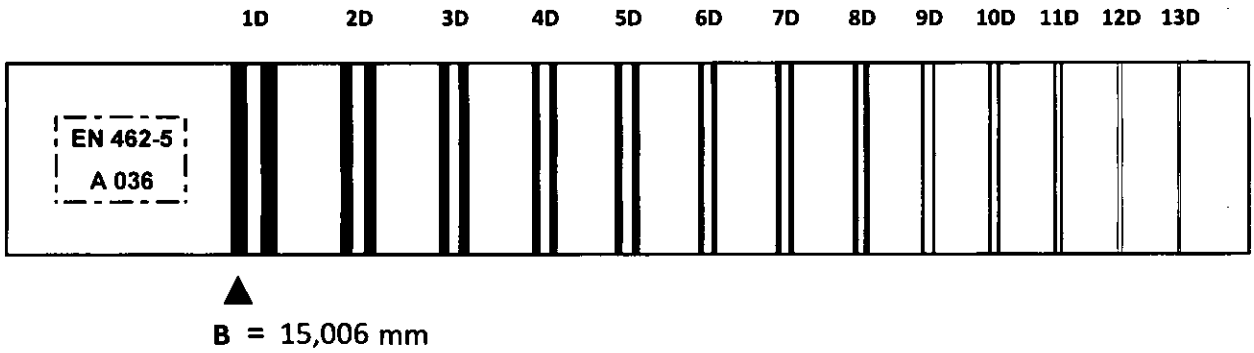
Andre Storm

KOWOTEST GMBH FÜR ZERTIFIKATE

KOWOTEST
Gesellschaft für Prüfausrüstung mbH

PRÜFBERICHT Nr. **TEST CERTIFICATE No.**	**300105310PB**	nach:: according to:	**EN 462-5, ISO 19232-5** **ASTM E 2002**

Prüfobjekt Test Object	Doppel-Drahtsteg-BPK Duplex Wire Type IQI Total Image Unsharpnes Gage	Serien-Nr. Serial No.	**A 036**



B = 15,006 mm

	d - Soll / nominal		d - Draht / wire		d - Abstand / distance		d - Draht / wire	
	mm		mm	+/- %	mm	+/- %	mm	+/- %
1 D	0,800	+/- 0,020	0,810	1,3	0,820	2,5	0,804	0,5
2 D	0,630	+/- 0,020	0,617	-2,1	0,639	1,4	0,621	-1,4
3 D	0,500	+/- 0,020	0,498	-0,4	0,509	1,8	0,496	-0,8
4 D	0,400	+/- 0,010	0,396	-1,0	0,406	1,5	0,397	-0,8
5 D	0,320	+/- 0,010	0,323	0,9	0,324	1,3	0,322	0,6
6 D	0,250	+/- 0,010	0,248	-0,8	0,249	-0,4	0,249	-0,4
7 D	0,200	+/- 0,010	0,196	-2,0	0,204	2,0	0,196	-2,0
8 D	0,160	+/- 0,010	0,160	0,0	0,163	1,9	0,160	0,0
9 D	0,130	+/- 0,005	0,129	-0,8	0,132	1,5	0,130	0,0
10 D	0,100	+/- 0,005	0,102	2,0	0,101	1,0	0,100	0,0
11 D	0,080	+/- 0,005	0,081	1,3	0,079	-1,3	0,081	1,3
12 D	0,063	+/- 0,005	0,064	1,6	0,064	1,6	0,062	-1,6
13 D	0,050	+/- 0,005	0,052	4,0	0,051	2,0	0,052	4,0

Drähte 1 D bis 3 D bestehen aus Wolfram (W) - Reinheit min. 99,90 %
Drähte 4 D bis 13 D bestehen aus Platin (Pt) - Reinheit min. 99,95 %

Wires 1 D to 3 D consist of Tungsten (W) - purity min. 99,90 %
Wires 4 D to 13 D consist of Platin (Pt) - purity min. 99,95 %

OK ✔

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angenfeld, 25.10.2010
Abteilung QC-SC / Department QC-SC

GLC Certified ISO 9001

Element Nr. D = duplex	Bildun-schärfe *U* mm	Draht-Ø und -abstand *d* mm	Element No. D = duplex	Image Un-sharpness *U* mm	Wire-Ø and -distance *d* mm
1 D	1,60	0,800	8 D	0,32	0,160
2 D	1,26	0,630	9 D	0,26	0,130
3 D	1,00	0,500	10 D	0,20	0,100
4 D	0,80	0,400	11 D	0,16	0,080
5 D	0,64	0,320	12 D	0,13	0,063
6 D	0,50	0,250	13 D	0,10	0,050
7 D	0,40	0,200			

Image Quality Indicator for determination of image unsharpness / Duplex Wire Type IQI
according to EN 462-5 / ISO 19232-5 / Total Image Unsharpness Gage according to ASTM E 2002

Application of Duplex Wire Type IQI / Total Image Unsharpness Gage

For evaluation of image unsharpness (film and digital image) and basic spatial resolution in digital images according to EN 13068 (Radioscopy), EN 14784 (Computed Radiography with imaging plates), ISO 17636-2 (digital radiology of welds) or ASTM E 2597 (characterization of digital detector arrays).

In digital radiology the Duplex Wire Type IQI should always be used together with a Wire Type IQI or a Hole Type IQI. The Duplex Wire Type IQI has to be placed on the source-side of the specimen for determination of the total image unsharpness. It has to be placed directly on the input window of the digital detector for measurement of its basic spatial resolution. The IQI axis should be tilted between 2°... 5° relative to the detector pixel lines to avoid Aliasing effects.

Image valuation of Duplex Wire Type IQI

The radiographic film image should be examined with a low power magnifying glass (with magnification up to X 4) and the wire pair with the largest ***d*** identified, which cannot be separated visually.

In digital radiology the IQI image is evaluated by a profile function perpendicular to the IQI wires for the separation (dip) between the wires pairs. The wire pair with the largest ***d*** determines the image unsharpness, whose dip separation is below 20% of the wire pair contrast.

The image unsharpness ***U*** is given by 2***d*** (with ***d*** as diameter of wire and distance between wires) and shown against the element number in the table above. The basic spatial resolution is given by ***d***.

Note: *Duplex Wire Type IQI is not an alternative to Wire Type IQIs or Hole Type IQIs, as it is only for examination of Image Unsharpness.*