

Camera Calibration Certificate

Object	Aerial Survey Camera Type	Lens Cone Type	Lens Serial-No	Remarks
	RC30	15/4 UAG-S	13211	

Acceptance	Characteristics	Acceptance	Remarks
	Radial distortion	yes	
	Photographic resolution	yes	
	Principal point of autocollimation (PPA)	yes	
	Principal point of symmetry (PPS)	yes	
	Fiducial marks	yes	
	Mean radial distortion	yes	
	Radial distortion for semi-diagonals referred to PPS	yes	

Inspection			Signature / Remarks
Date of calibration	28.11.2007		Lens cone operating hours _____
Inspector	Name	Dietsche Paul	Signature: <i>P. Dietsche</i>
	Position	Supervisor	
	Inspection-No	SO 112	
Inspection plan	Identification-No	487872	
	Version	14.04.1989	
Lens cone calibration	No	870105	
Process specification	Version	24.07.2006	

Maintenance			
The last date, when service/ overhaul of this lens cone was performed.	14.04.2004	Lens cone operating hours	600
Overhaul urgently required:	no		

This Camera Calibration Certificate contains five pages. It may not be reproduced other than in full. Camera Calibration Certificates without signature and seal are not valid.

RC30

15/4 UAG-S

No.13211

28.11.2007

Calibrated Focal Length (CFL)

Aperture	4.0
Filter on goniometer	VIS (400 - 700 nm)
Filter on camera	--
C.F.L. :	153.15 mm

Radial distortion [micrometers]

Referred to principal point of symmetry (PPS)

Positive values denote image displacement away from center

Radius [mm]	Half - Sides				Mean
	1	3	2	4	
10	0.9	0.3	0.6	0.1	0.4
20	1.5	0.7	1.1	0.3	0.9
30	0.8	0.6	0.9	-0.4	0.4
40	0.9	1.1	0.6	-0.7	0.4
50	1.0	0.9	0.2	-1.0	0.2
60	0.3	0.5	-0.1	-1.6	-0.2
70	1.3	0.2	-0.6	-1.6	-0.1
80	1.2	0.9	-0.2	-1.1	0.2
90	2.7	1.8	0.2	-0.6	1.0
100	2.7	2.0	0.5	0.3	1.3
110	2.9	1.9	1.2	0.6	1.6
120	3.1	2.0	-0.5	-0.3	1.0
130	0.9	1.3	-1.9	-1.2	-0.2
140	-1.3	0.2	-3.9	-2.5	-1.8
148	-2.6	-1.6	-4.5	-4.2	-3.2

Photographic resolution [line pairs per millimeter]

Internal 3-line test-chart contrast log 2.0

Apertur:	4,0
Filter:	VIS(400-700nm)
Film:	KODAK PANATOMIC X 2412
Developer:	KODAK HC110

Angle: [deg]	0	5	10	15	20	25	30	35	40	45
Radial:	93	104	115	90	62	75	72	121	113	83
Tangential:	93	116	114	97	82	68	55	88	87	66

AWAR (Area Weighted Average Resolution) in lp/mm

86


 SO 112

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Principal point of autocollimation (PPA)

Principal point of symmetry (PPS)

Referred to central cross (FC), see diagram

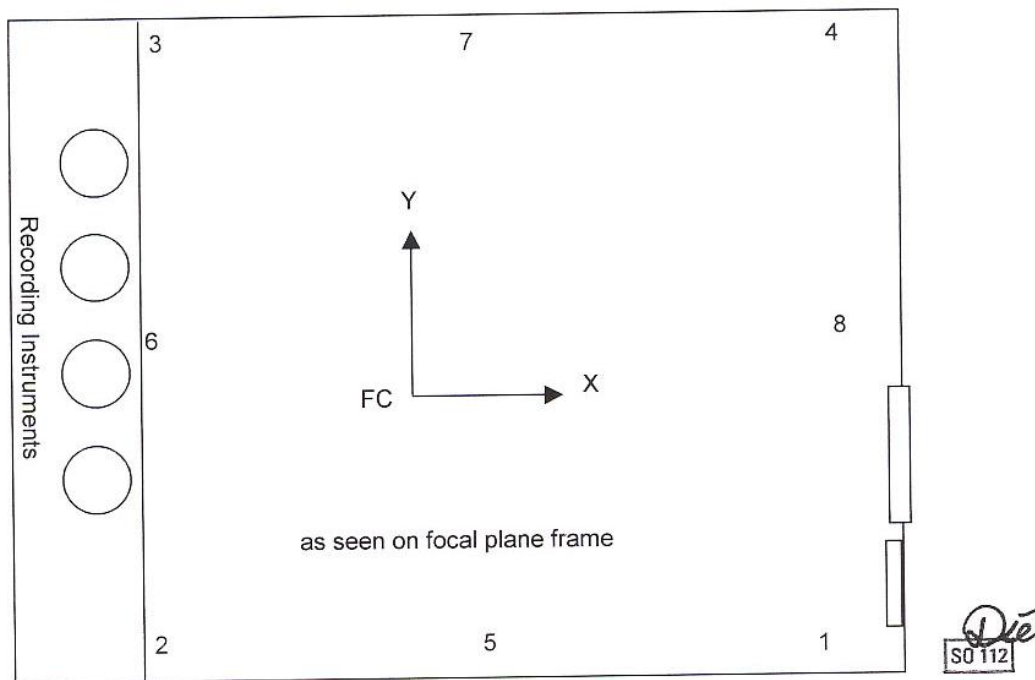
	x[mm]	y[mm]
PPA	-0.001	0.014
PPS	-0.003	0.010

Fiducial marks

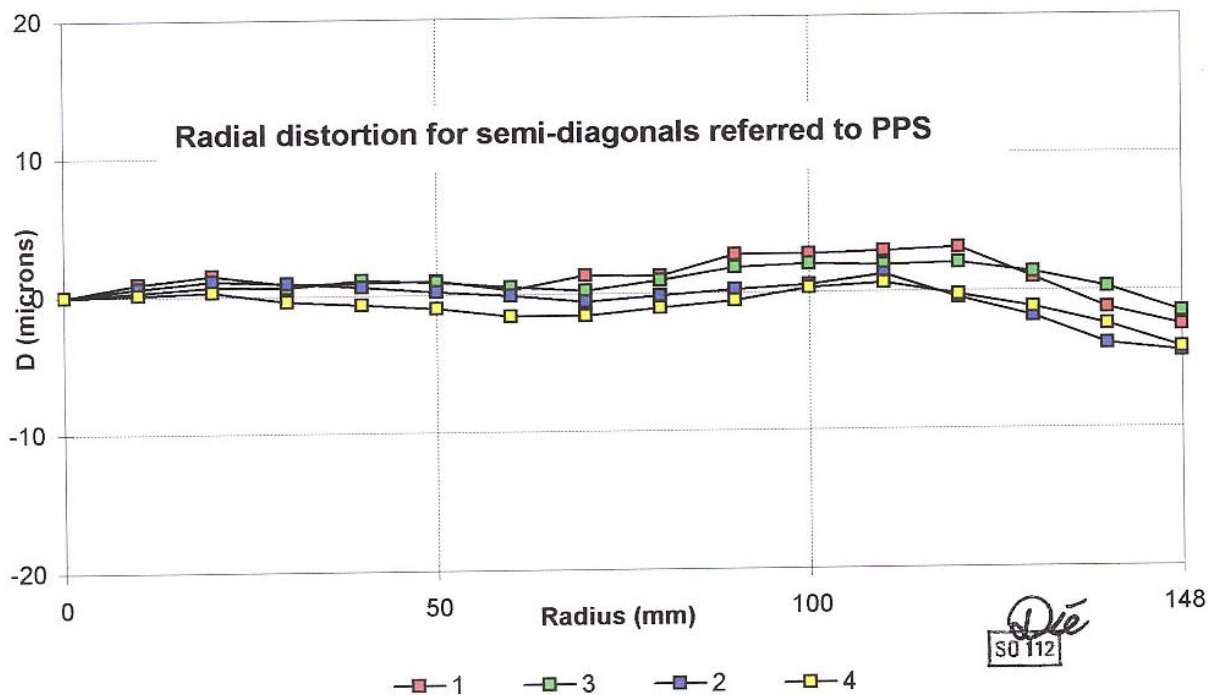
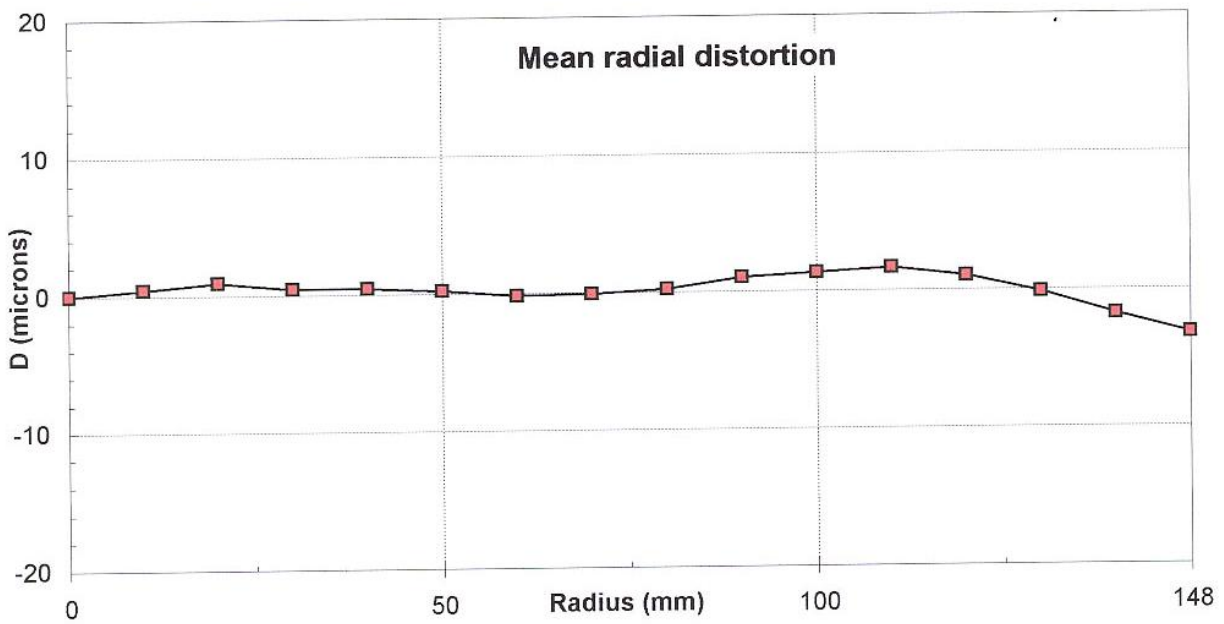
Referred to central cross (FC)

	x[mm]	y[mm]
1	106.004	-106.008
2	-106.001	-105.999
3	-106.003	106.007
4	105.998	105.996

	x[mm]	y[mm]
5	0.006	-110.013
6	-110.006	0.000
7	-0.016	110.001
8	109.997	-0.010



Aperture:	4.0
Filter on goniometer:	VIS (400 - 700 nm)
Filter on camera:	--
C.F.L. :	153.15 mm



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