

CAMERA CALIBRATION CERTIFICATE

CAMERA TYPE : RC20
LENS TYPE : 21/4 NAGA-F
LENS NO. : 7171

CALIBRATION DATE : 26.02.91

WILD LEITZ LTD

Leica

*Leica Heerbrugg Ltd
CH-3435 Heerbrugg*

*Calibration Department
Supervisor*

*WILD
240*

CAMERA CALIBRATION

CAMERA: RC20 LENS: 21/4 NAGA-F NO.: 7171 CALIBRATION DATE: 26.02.91

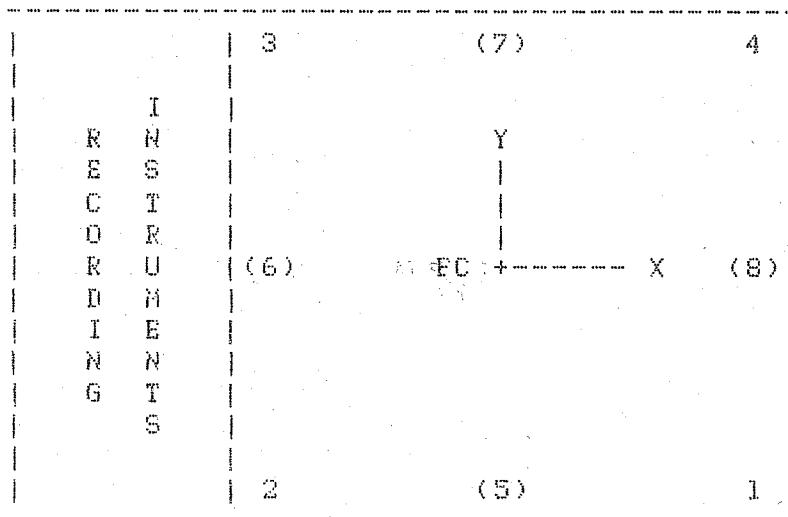
PRINCIPAL POINT OF AUTOCOLLIMATION (PPA) AND
PRINCIPAL POINT OF SYMMETRY (PPS)

REFERRED TO FC, SEE DIAGRAM

	X (MM)	Y (MM)
PPA	-0.007	0.003
S	-0.009	-0.006

TRIDUCIAL MARKS, REFERRED TO FC

	X (MM)	Y (MM)		X (MM)	Y (MM)
1	105.996	-105.999	5	0.001	-110.004
2	-106.000	-106.004	6	-109.997	0.005
3	-106.001	106.003	7	0.001	110.005
4	105.998	106.002	8	110.000	0.003



AS SEEN ON FOCAL PLANE FRAME



CAMERA CALIBRATION

CAMERA: RC20 LENS: 2 1/4 NAGA-F NO.: 7171 CALIBRATION DATE: 26.02.91

APERTURE : F / 4.0
 FILTER ON GONIOMETER : 450 NM
 FILTER ON CAMERA : --
 PRINCIPAL DISTANCE FOR FOCUSSING DISTANCE 900 M : 213.55 MM

RADIAL DISTORTION (MICROMETERS)

 REFERRED TO PRINCIPAL POINT OF SYMMETRY (PPS)
 (POSITIVE VALUES DENOTE IMAGE DISPLACEMENT AWAY FROM CENTER)

RADIUS MM	SEMI - DIAGONALS				MEAN
	1	3	2	4	
10	-0.5	-1.2	-0.4	-1.0	-0.7
20	-1.0	-1.2	-0.9	-1.1	-1.0
30	-1.5	0.2	-1.4	-0.1	-0.7
40	-1.5	1.5	-1.7	0.8	-0.2
50	-1.3	1.2	-1.7	1.4	-0.1
60	-2.5	1.5	-2.1	1.0	-0.5
70	-3.3	0.4	-2.9	0.4	-1.3
80	-4.2	-0.5	-4.1	-0.7	-2.3
90	-4.0	-0.6	-4.2	-1.2	-2.5
100	-4.1	-1.5	-2.9	-2.0	-2.6
110	-2.1	-1.4	-1.1	-1.2	-1.4
120	0.0	-1.1	0.5	-0.8	-0.3
130	2.1	0.4	2.4	1.3	1.5
140	4.3	1.7	4.7	2.4	3.2
148	4.8	2.0	4.5	3.1	3.6

PHOTOGRAPHIC RESOLUTION (LINE PAIRS PER MILLIMETER)

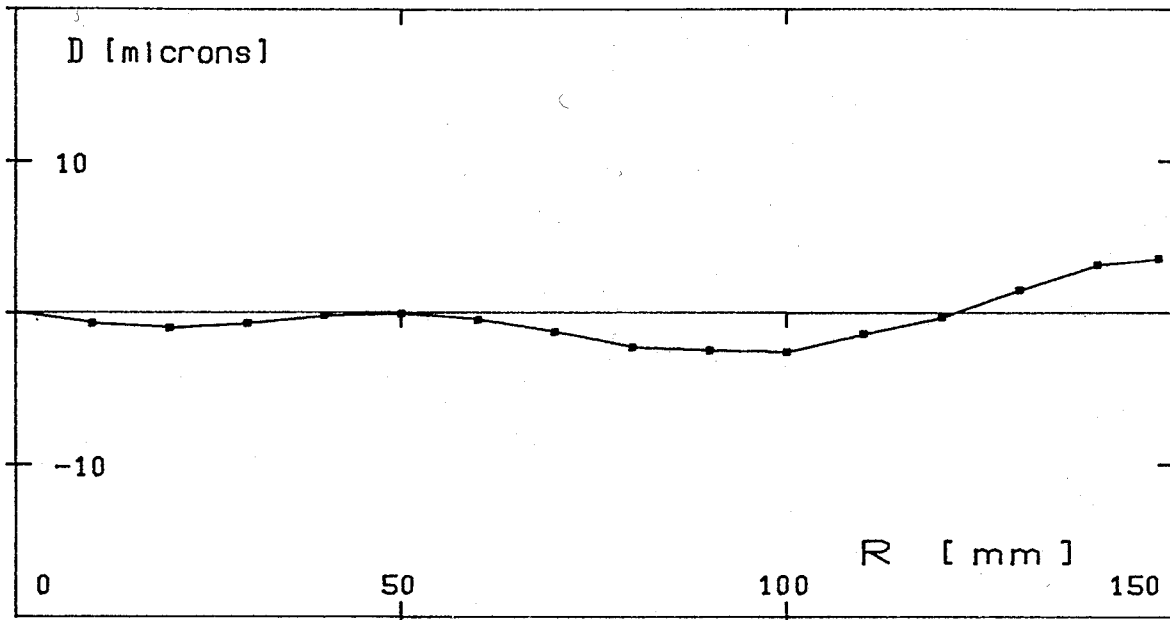
 INTERNATIONAL 3-LINE TEST-CHART, CONTRAST (LOG) : 2.0
 APERTURE : 4.0
 FILTER : 450 NM
 FILM : AGFAPAN 25 PROFESSIONAL (ASA SPEED: 25)
 DEVELOPER : KODAK HC110 PREPARATION 2 SOLUTION C

ANGLE: (DEGREES)	0	5	10	15	20	25	30	35
RAD.	75	75	83	82	50	43	37	49
TANG.	75	75	82	70	53	49	50	40

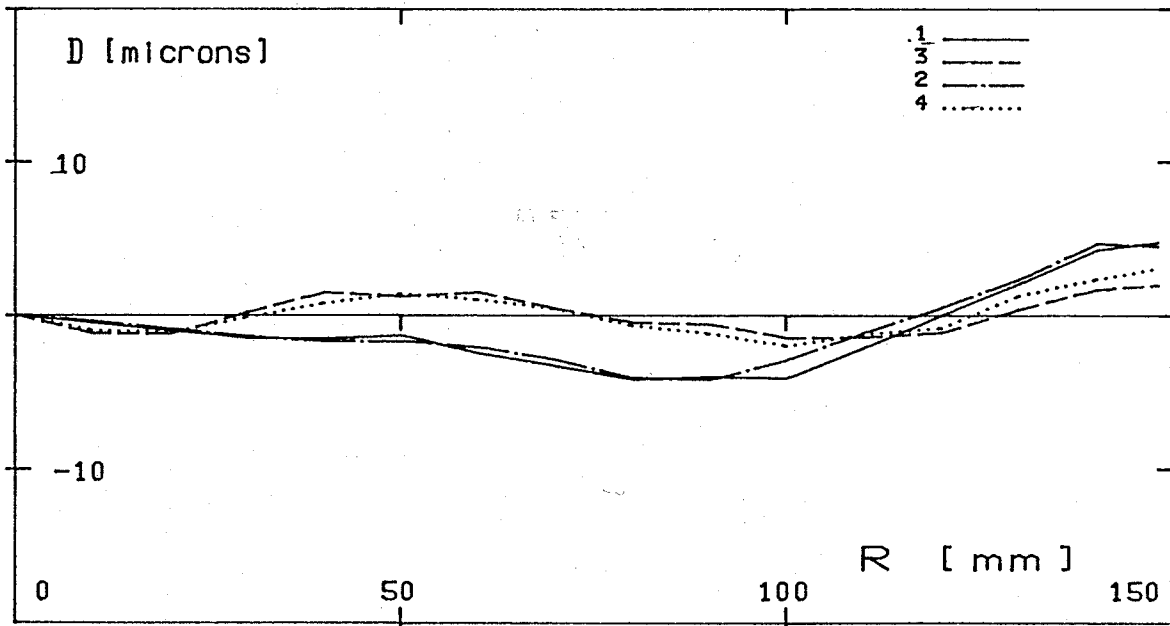
AWAR (AREA WEIGHTED AVERAGE RESOLUTION) IN LP/MM : 55

310

APERTURE : F / 4.0
FILTER ON GONIOMETER : 450 NM
FILTER ON CAMERA : --
P.D. (900 m) : 213.55 MM



MEAN RADIAL DISTORTION CURVE



RADIAL DISTORTION FOR SEMI-DIAGONALS REFERRED TO PPS