SOS GROUP

ASML PAS5500/80B “AS IS”
Serial nr 6176
Vintage 1993

Information contained in this presentation is confidential

ASML PAS5500/80B
Serial nr 6176
Vintage 1993, 200mm
Location warehouse Shanghai

The PAS 5500/80, 0.48NA i-line stepper is designed for mass production at 0.5 µm and achieves extremely high throughput the manufacturing of multiple generations of half-micron design rules by optimizing both depth of focus and resolution for critical process layers.

- Manufacturer: ASML, the Netherlands
- Model: PAS 5500/80, i-line stepper
- Vintage: 1993
- Reduction ratio: 1:5
- Wafer size 4-8 inch (currently at 6 inch)
- Field size: 21 mm x 21 mm
- Design resolution: 0.50 um

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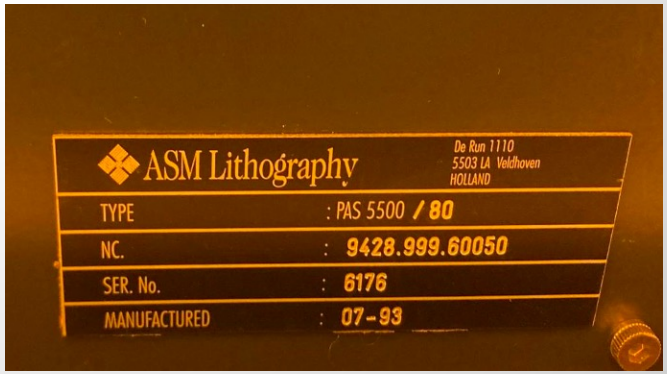

OPTIONS

- SECS
- SINGLE_RETICLE_SMIF
- PEP_1_PRODUCTIVITY_UPGRADE
- MARK_SENSOR
- BATCH_STREAMING

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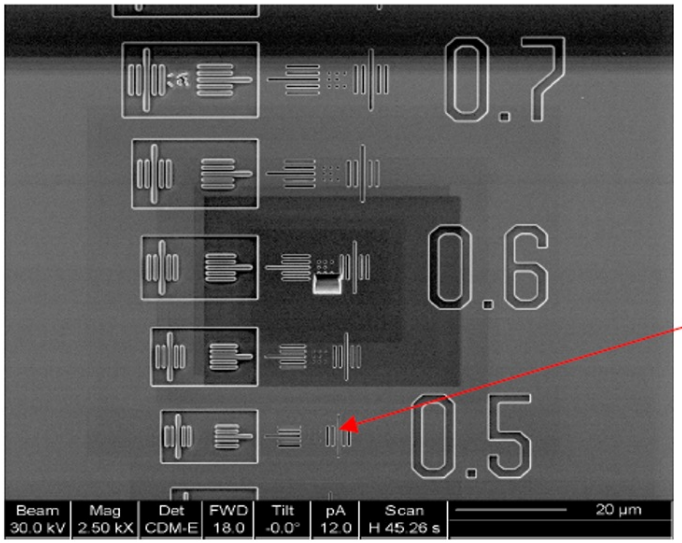
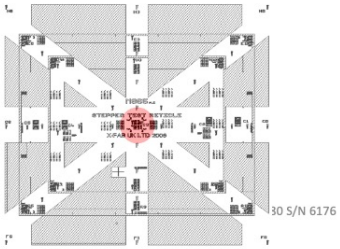
■ *Reticle Layout data and measurement Points*





30 S/N 6176

Resist – P61 (1100nm)

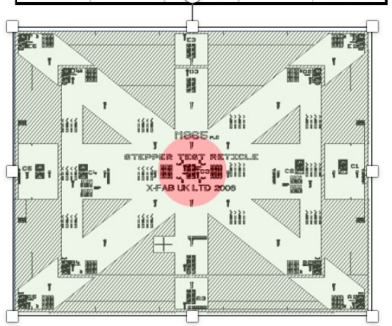
Exposure – 205mJ

Develop – P80

0.5 Measurement Feature Data

Mean	Range	Sigma
0.503um	0.021um	0.0063um

E5		E3		E1
0.502		0.5		0.489
	D4	D3	D2	
	0.496	0.502	0.506	
C5	C4	C3	C2	C1
0.49	0.497	0.5	0.508	0.498
	B4	B3	B2	
	0.51	0.495	0.502	
A5		A3		A1
0.501		512		0.504



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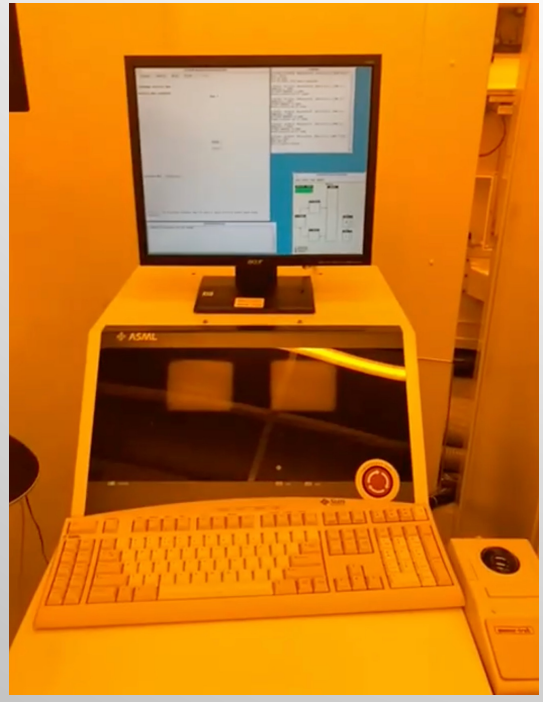

```
Operator:EQP    Machine:6176    Release:8.8.6    Date:10/05/2022  Time:16:03


Stray Light Measurement

Comment           : Uniformity stray light measurement

Image Field Size [mm]
  x               :    21.0   y :    21.0

Steps
  x               :    11     y :    11

Apply REMA Window : Yes

Load Reticle      : N

Stray Light Measurement
  Maximum Stray Light Number [%] :    2.62
  Stray Light Variation      [%] :    1.81
  Log Files                      : LI/LIUM/waf.4723, LI/LIUM/waf.4724
```

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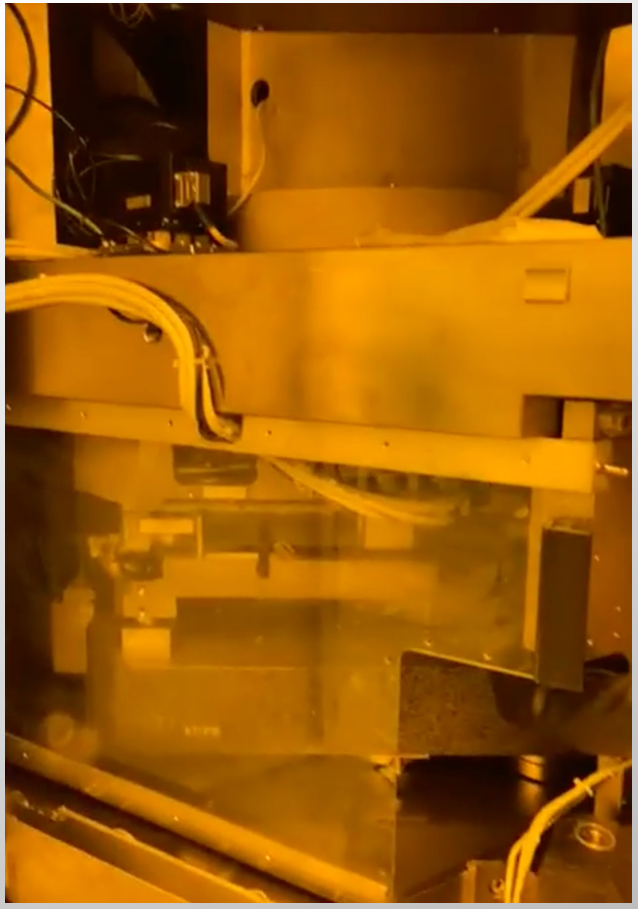
```
Uniformity Measurement

Comment              :

Image Field Size [mm]
  x                  :    21.0   y :   21.0  Diameter :   29.7

Steps
  x                  :    11     y :   11

Measurement Type     : Sample Mode

Lamp Power       [W] :  1000.0

Samples per Position :    50

Apply REMA Window    : Yes

Load Reticle         : N



Uniformity Measurement Result

Uniformity                      [%] :      1.30
Logfile                             : LI/LIUM/waf.4765
Number of valid measurements        :    121

Tilt  X                 [%/field] :      0.77  Y        [%/field] :      1.15

Overall Average of
  Ratio                         :      1.01  Standard Deviation :      0.01
  Intensities Spot Sensor   [mW/cm2] :    327.77  Standard Deviation :      1.78
  Intensities Energy Sensor [mW/cm2] :    324.83  Standard Deviation :      0.20

Lamp Time Lit  [hour]               : 221:24

Estimated Uniformity from measured data [%]
  If corrected for actual tilts                 :    1.04
  If corrected with gradient filter             :    1.12
  If corrected for tilts and with gradientfilter :    0.60

Symmetric Uniformity Value      [%] :   -0.74
```



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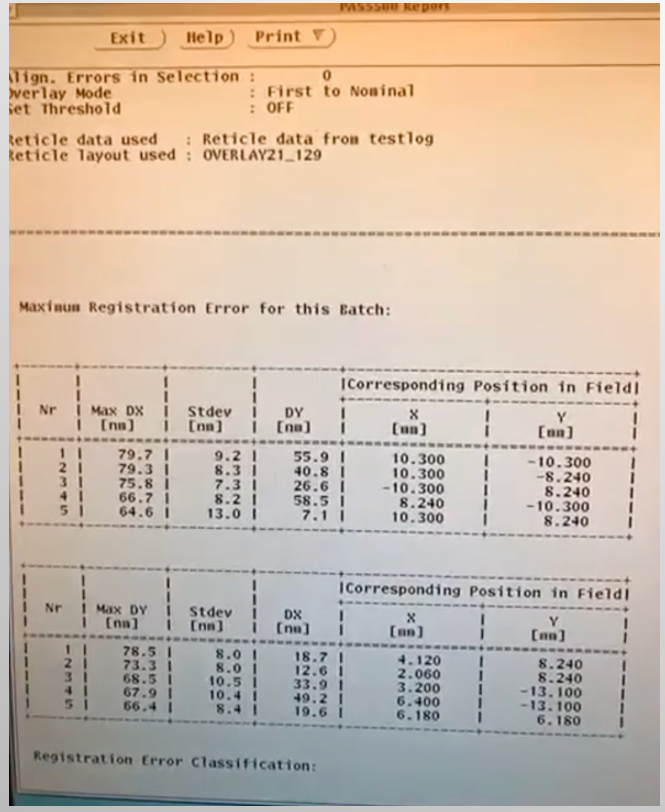
Overlay First to Nominal & machine to machine



PAS5500 Report

Exit | Help | Print

lign. Errors in Selection : 0
verlay Mode : First to Nominal
et Threshold : OFF

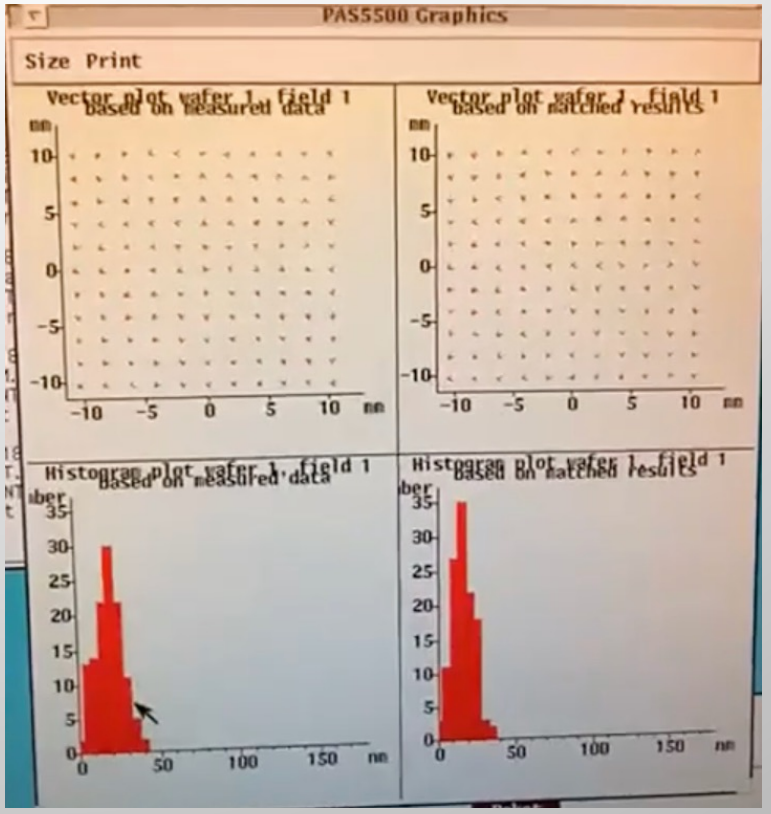
eticle data used : Reticle data from testlog
eticle layout used : OVERLAY21_129

Maximum Registration Error for this Batch:

Nr	Max DX [nm]	Stdev [nm]	DY [nm]	Corresponding Position in Field X [mm]	Y [mm]
1	79.7	9.2	55.9	10.300	-10.300
2	79.3	8.3	40.8	10.300	-8.240
3	75.8	7.3	26.6	-10.300	8.240
4	66.7	8.2	58.5	8.240	-10.300
5	64.6	13.0	7.1	10.300	8.240

Nr	Max DY [nm]	Stdev [nm]	DX [nm]	Corresponding Position in Field X [mm]	Y [mm]
1	78.5	8.0	18.7	4.120	8.240
2	73.3	8.0	12.6	2.060	8.240
3	68.5	10.5	33.9	3.200	-13.100
4	67.9	10.4	49.2	6.400	-13.100
5	66.4	8.4	19.6	6.180	6.180

Registration Error Classification:



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- **Prior to de-install**
  - Full inspection including performance checks while system still in manufacturing
  - Production wafers cycled prior to de-install, including reticle exchanges.

- **De-install**
  - Original ASML locking material used
  - Packed according to ASML conditions

- **Transport**
  - Shock recorders were installed and packing was done according to ASML transport condition

- **Storage**
  - Storage at warehouse in Singapore, according to ASML storage conditions
  - Lens under continuos lens purge

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Your service partner for LAM Research Equipment

- **Equipment Support**
  PM, CM, Trouble shooting, Upgrading, Training and Onsite Service Contracts

- **Process Support**
  Process design, Improvement,
  Fab-to-Fab Transfer and Integration

- **Refurbishment**
  From custom to complete refurbishment

- **Relocation**
  Auditing, Fingerprinting, Decommissioning, Installation, Acceptance

- **Materials**
  Supplier of first class second source materials

- **Contact**
  Ronald Melief
  ron.melief@nextlevel4u.nl

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