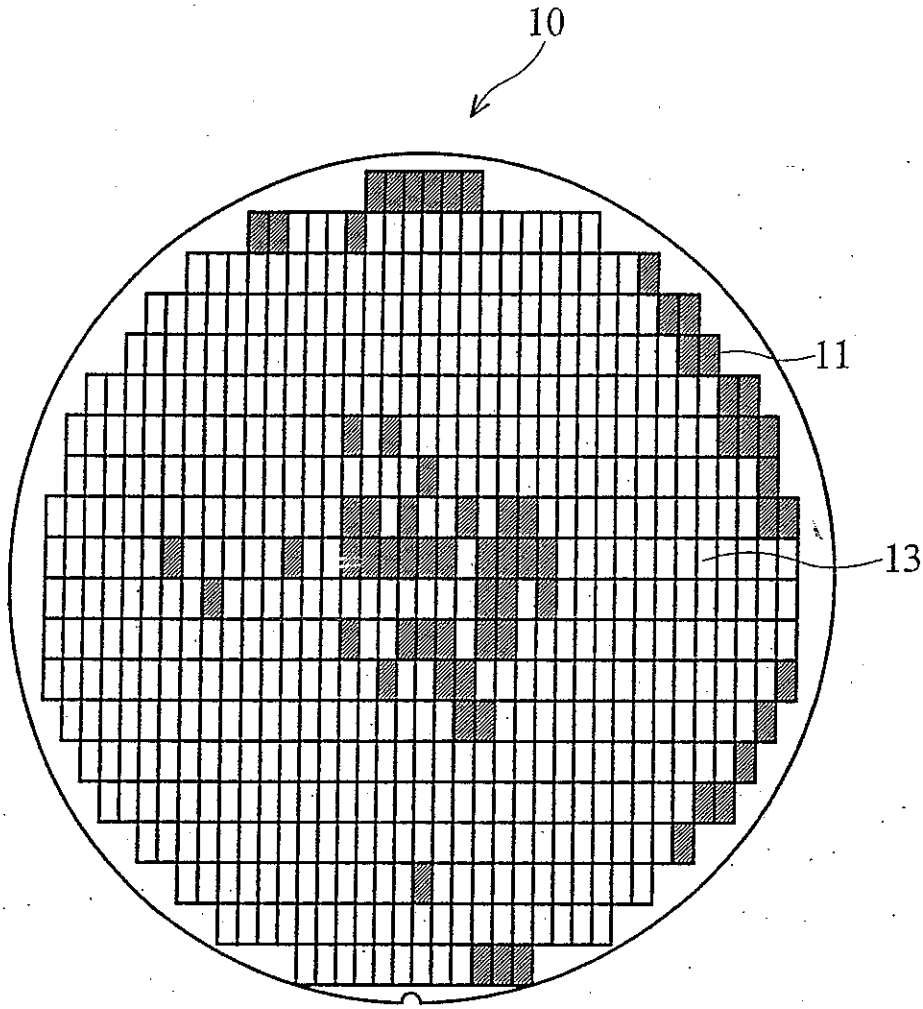


FIG. 1 (PRIOR ART)

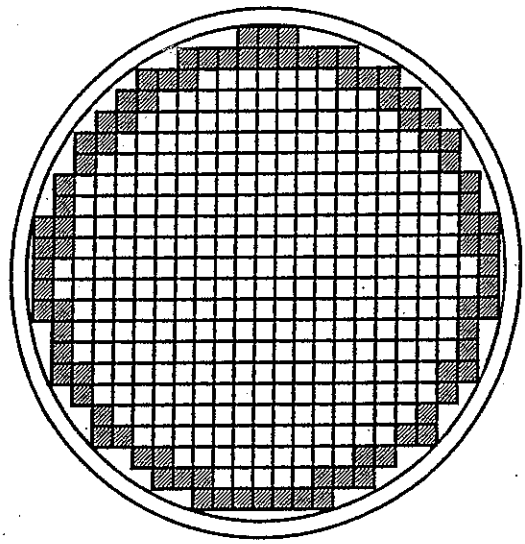


FIG. 2A (PRIOR ART)

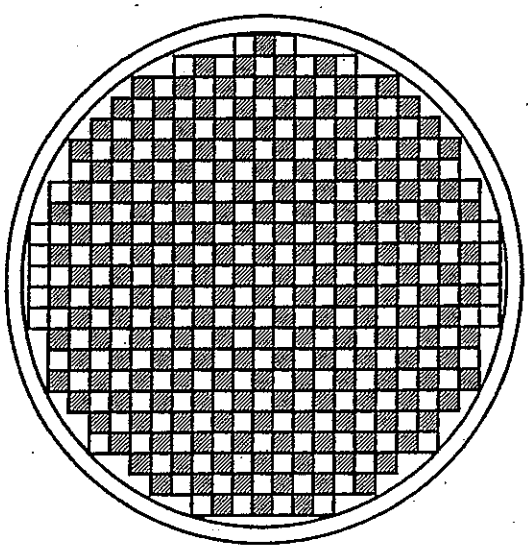


FIG. 2B (PRIOR ART)

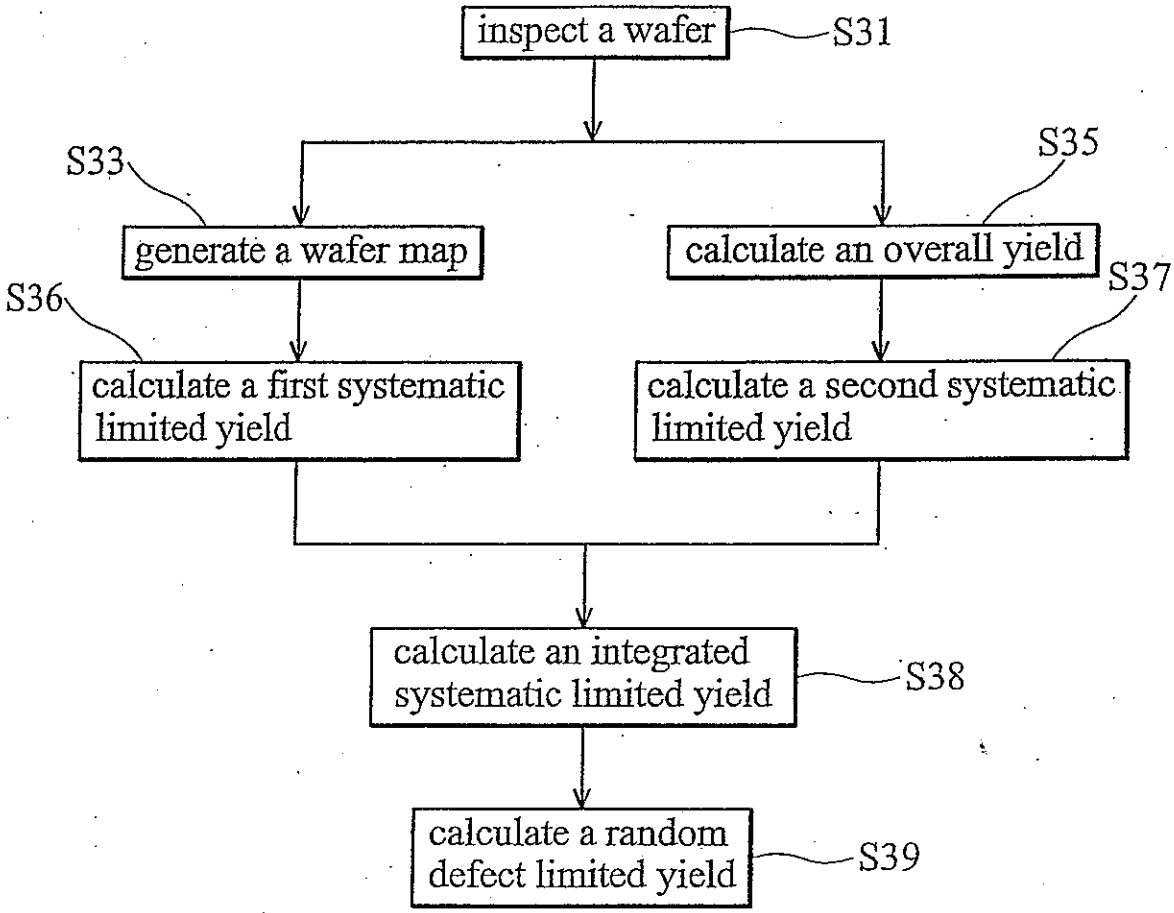

inspect a wafer
S31
S33
S35
generate a wafer map
calculate an overall yield
S36
S37
calculate a first systematic limited yield
calculate a second systematic limited yield
calculate an integrated systematic limited yield
S38
calculate a random defect limited yield
S39

FIG. 3

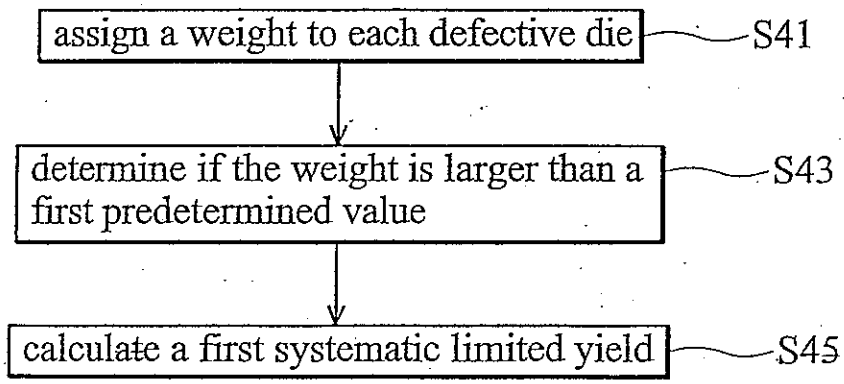

assign a weight to each defective die
S41
determine if the weight is larger than a first predetermined value
S43
calculate a first systematic limited yield
S45

FIG. 4

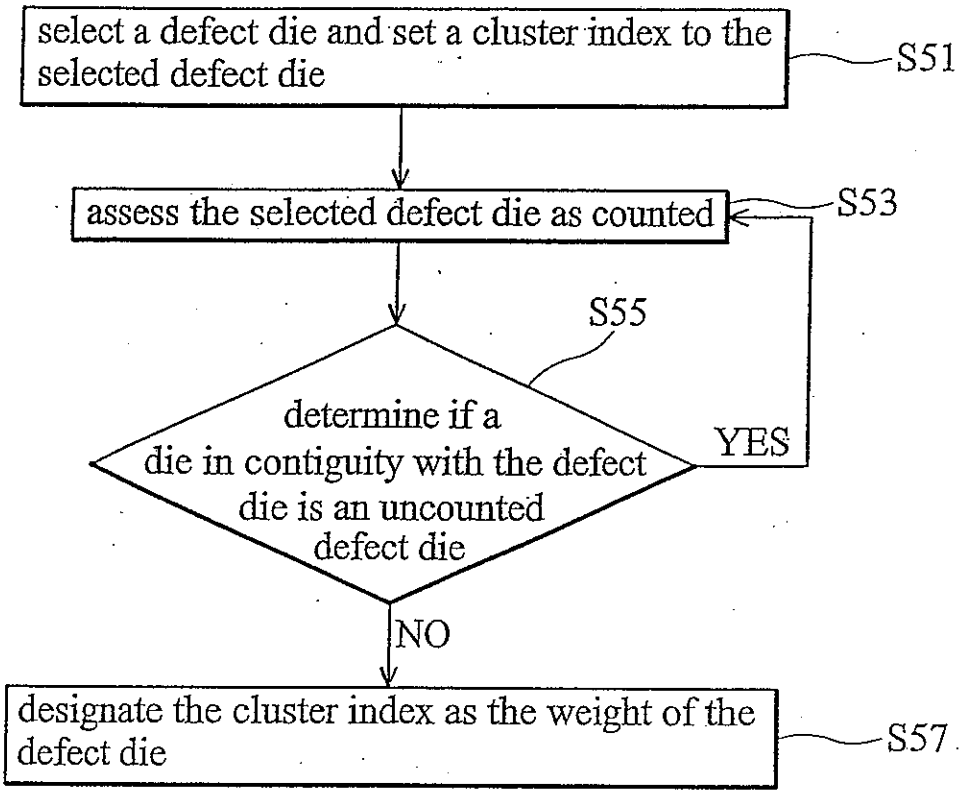

select a defect die and set a cluster index to the selected defect die
S51
assess the selected defect die as counted
S53
S55
determine if a die in contiguity with the defect die is an uncounted defect die
YES
NO
designate the cluster index as the weight of the defect die
S57

FIG. 5A

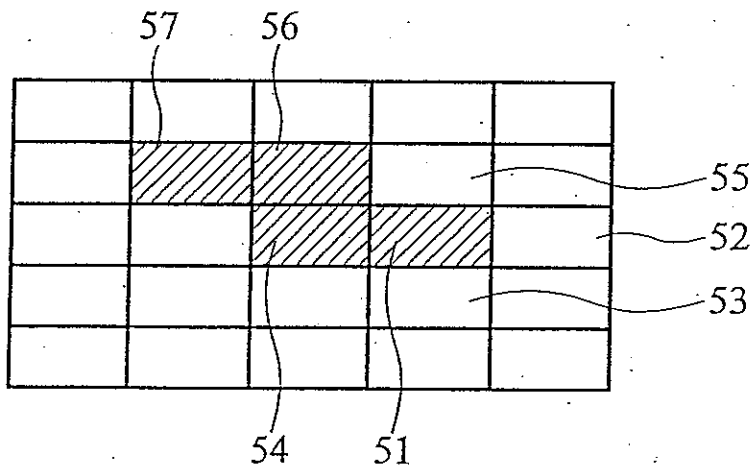

57
56
55
52
53
54
51

FIG. 5B

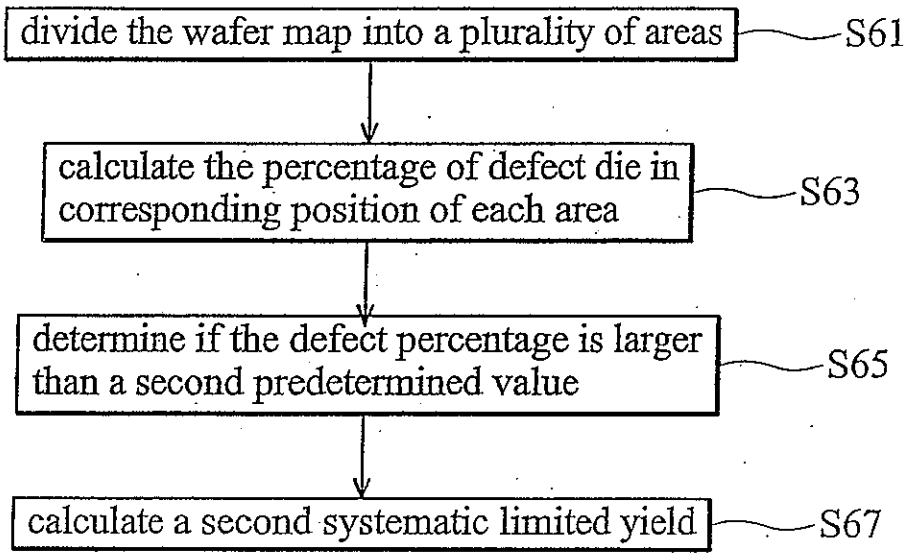

divide the wafer map into a plurality of areas
S61
calculate the percentage of defect die in corresponding position of each area
S63
determine if the defect percentage is larger than a second predetermined value
S65
calculate a second systematic limited yield
S67

FIG. 6A

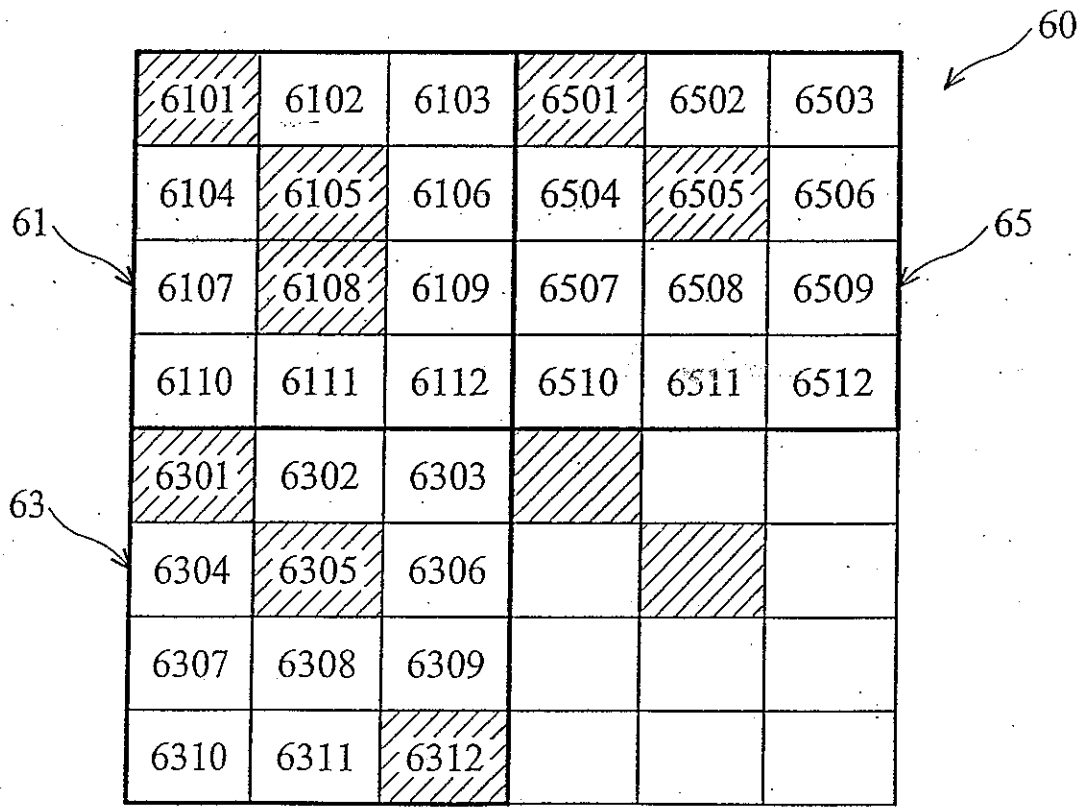

60
61
65
63
6101
6102
6103
6501
6502
6503
6104
6105
6106
6504
6505
6506
6107
6108
6109
6507
6508
6509
6110
6111
6112
6510
6511
6512
6301
6302
6303
6304
6305
6306
6307
6308
6309
6310
6311
6312

FIG. 6B

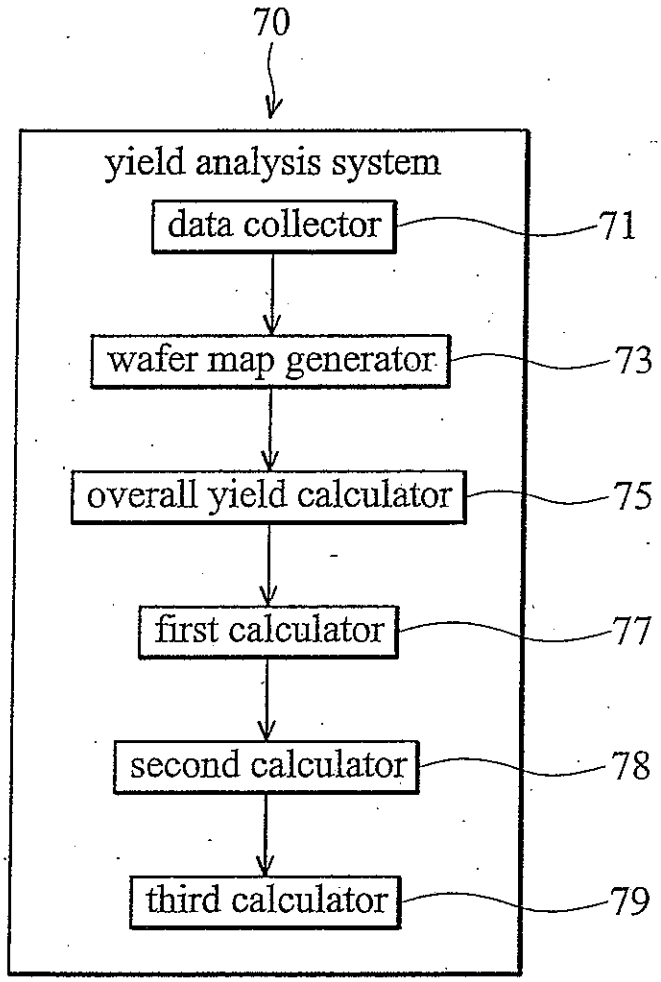

70
yield analysis system
data collector
71
wafer map generator
73
overall yield calculator
75
first calculator
77
second calculator
78
third calculator
79

FIG. 7

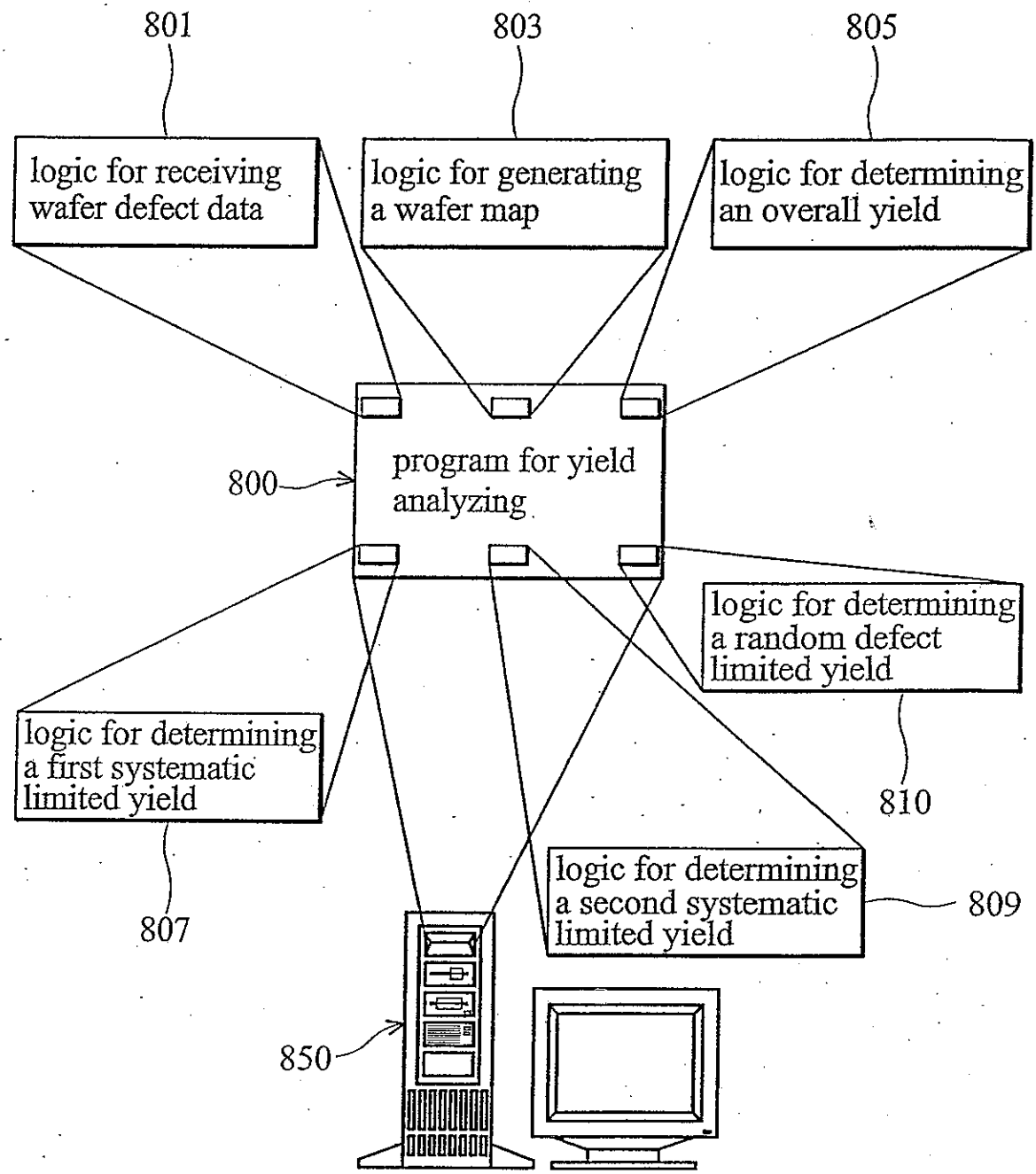

801
803
805
logic for receiving wafer defect data
logic for generating a wafer map
logic for determining an overall yield
program for yield analyzing
800
logic for determining a random defect limited yield
810
logic for determining a first systematic limited yield
807
logic for determining a second systematic limited yield
809
850

FIG. 8