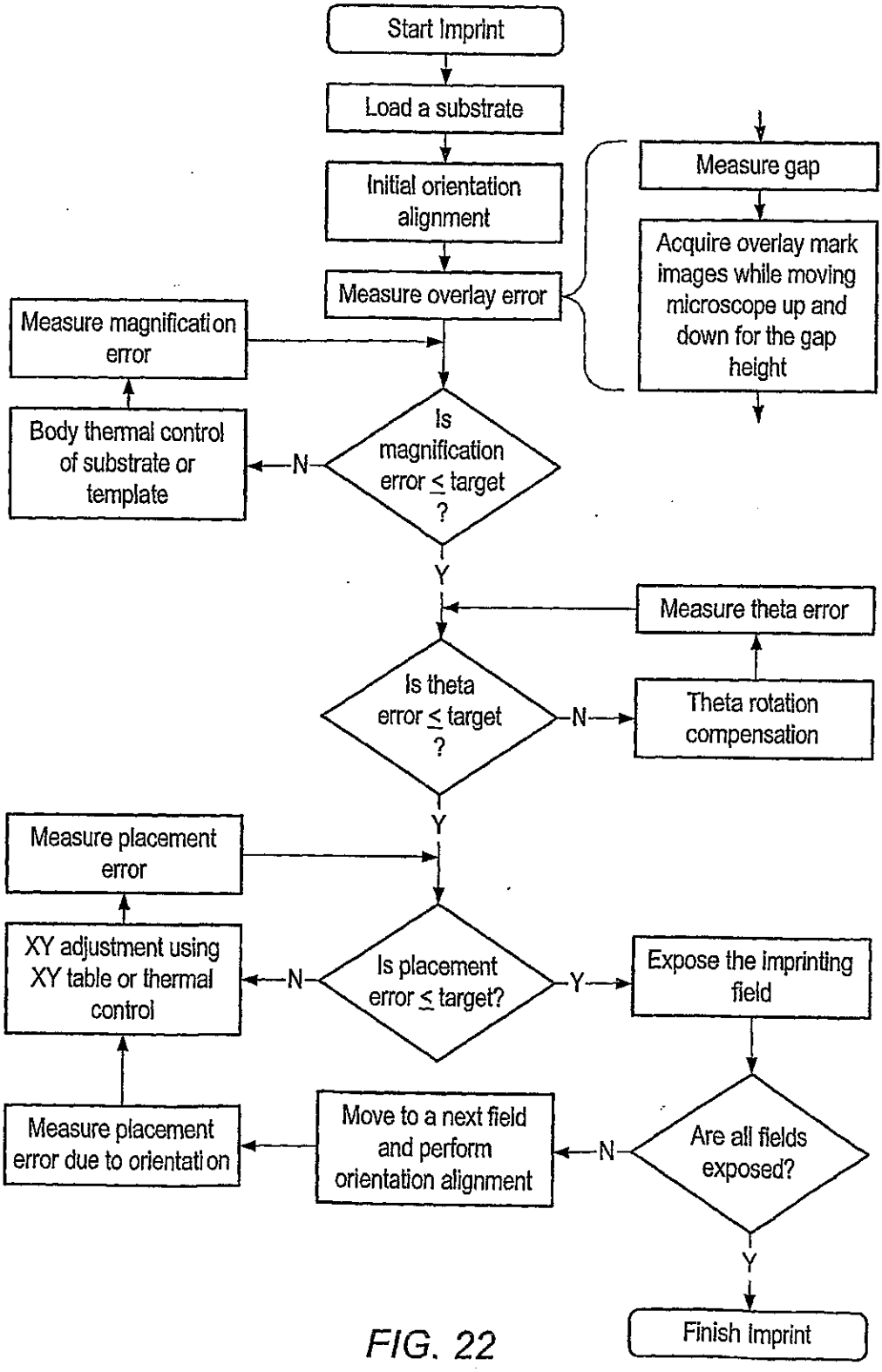

Start Imprint
Load a substrate
Initial orientation alignment
Measure overlay error
Measure gap
Acquire overlay mark images while moving microscope up and down for the gap height
Measure magnification error
Body thermal control of substrate or template
N
Is magnification error ≤ target ?
Y
Measure theta error
Is theta error ≤ target ?
N
Theta rotation compensation
Y
Measure placement error
XY adjustment using XY table or thermal control
N
Is placement error ≤ target?
Y
Expose the imprinting field
Measure placement error due to orientation
Move to a next field and perform orientation alignment
N
Are all fields exposed?
Y
Finish Imprint

FIG. 22

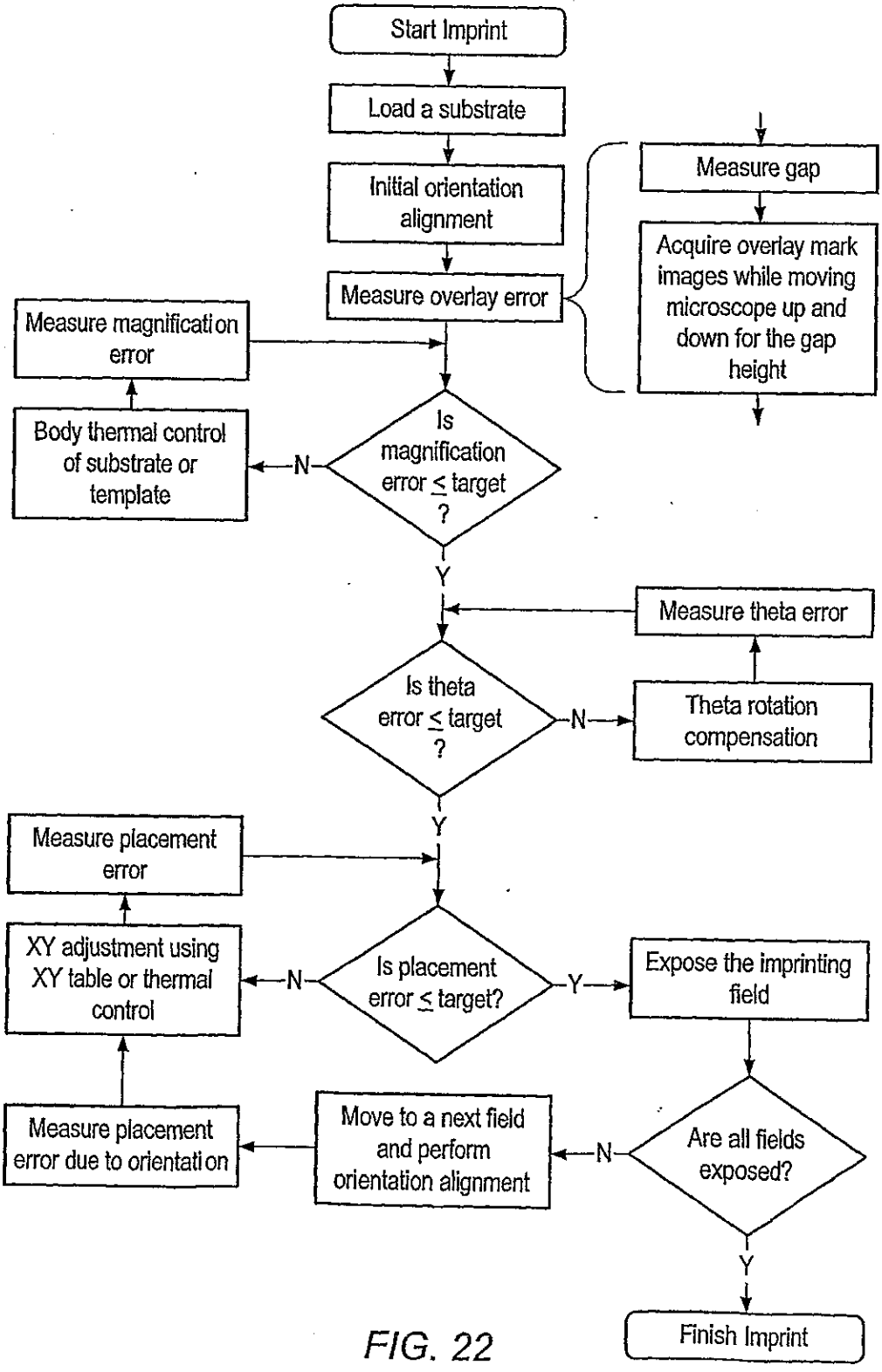

Start Imprint
Load a substrate
Initial orientation alignment
Measure overlay error
Measure gap
Acquire overlay mark images while moving microscope up and down for the gap height
Measure magnification error
Body thermal control of substrate or template
Is magnification error ≤ target ?
N
Y
Measure theta error
Is theta error ≤ target ?
N
Theta rotation compensation
Y
Measure placement error
XY adjustment using XY table or thermal control
Is placement error ≤ target?
N
Y
Expose the imprinting field
Measure placement error due to orientation
Move to a next field and perform orientation alignment
Are all fields exposed?
N
Y
Finish Imprint

FIG. 22