FIG.1

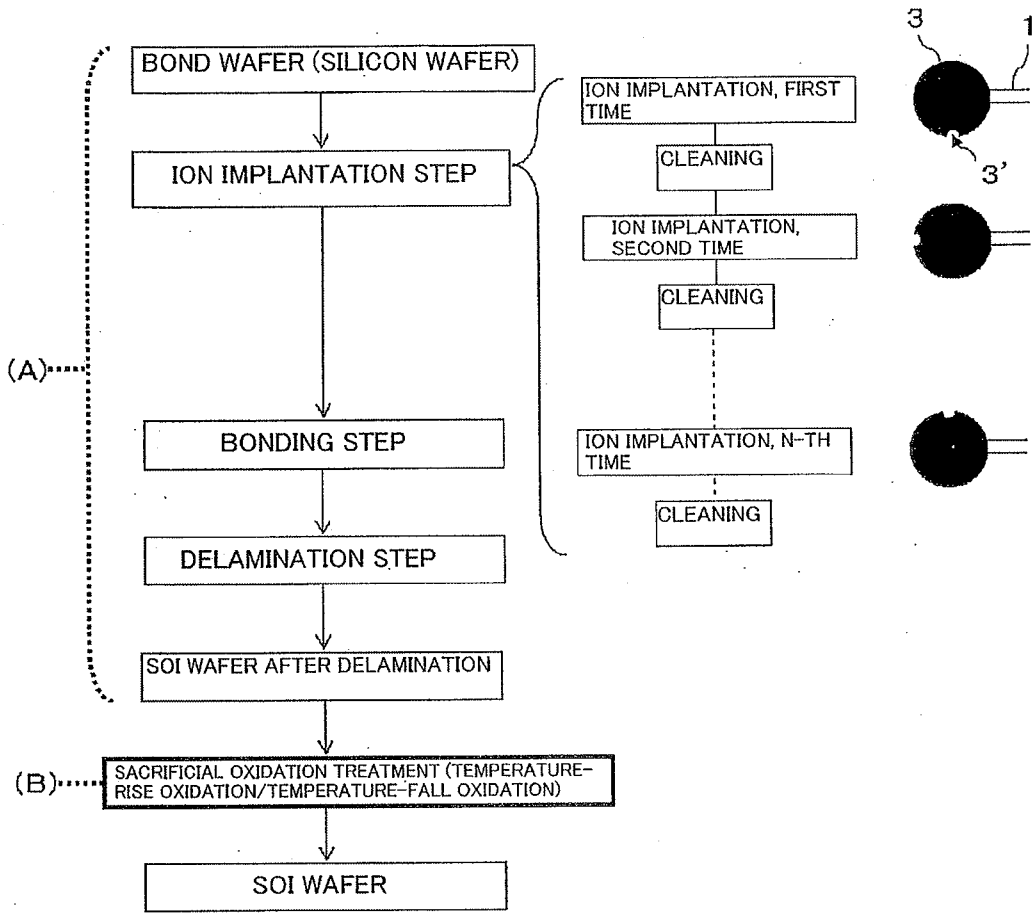

BOND WAFER (SILICON WAFER)
ION IMPLANTATION STEP
ION IMPLANTATION, FIRST TIME
CLEANING
ION IMPLANTATION, SECOND TIME
CLEANING
ION IMPLANTATION, N-TH TIME
CLEANING
(A)
BONDING STEP
DELAMINATION STEP
SOI WAFER AFTER DELAMINATION
(B)
SACRIFICIAL OXIDATION TREATMENT (TEMPERATURE-RISE OXIDATION/TEMPERATURE-FALL OXIDATION)
SOI WAFER
3
1
3'

FIG.2

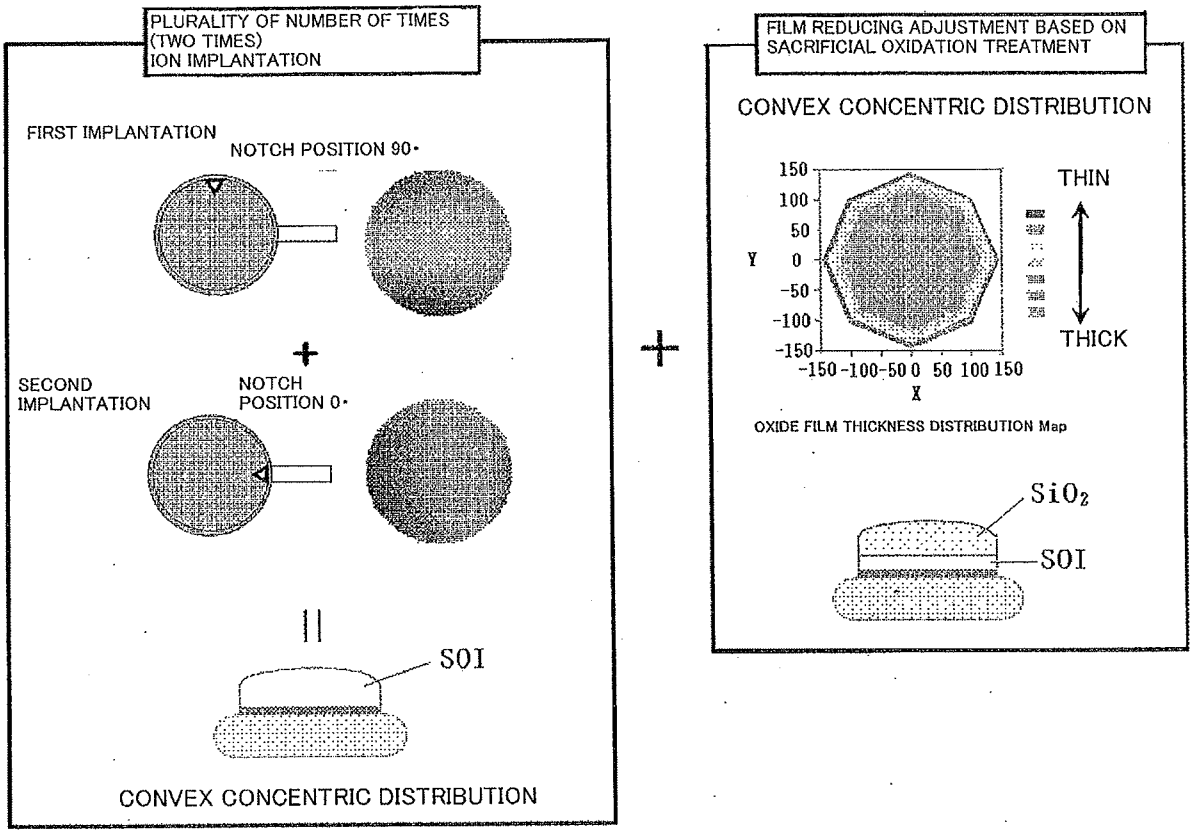
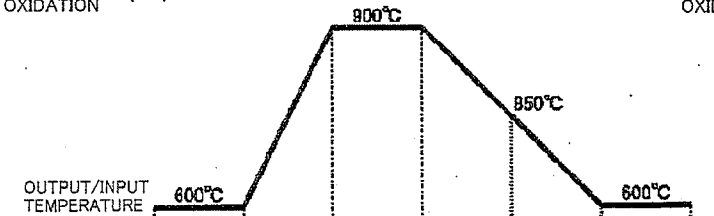

PLURALITY OF NUMBER OF TIMES (TWO TIMES) ION IMPLANTATION
FIRST IMPLANTATION
NOTCH POSITION 90°
SECOND IMPLANTATION
NOTCH POSITION 0°
SOI
CONVEX CONCENTRIC DISTRIBUTION
FILM REDUCING ADJUSTMENT BASED ON SACRIFICIAL OXIDATION TREATMENT
CONVEX CONCENTRIC DISTRIBUTION
150
100
50
Y 0
-50
-100
-150
-150 -100 -50 0 50 100 150
X
THIN
THICK
OXIDE FILM THICKNESS DISTRIBUTION Map
SiO2
SOI

FIG.3

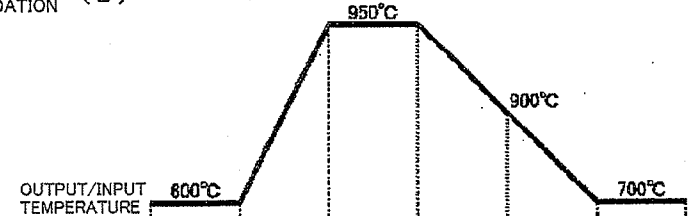
EXAMPLE 1

THERMAL OXIDATION (1)



ATMOSPHERIC GAS	Ar	Ar	H2/O2	H2/O2	Ar	Ar
RISING/FALLING TEMPERATURE	–	5℃/min	–	1℃/min	1℃/min	–

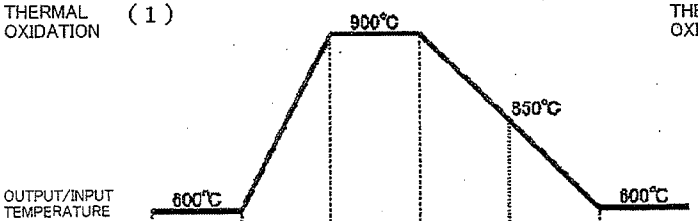
THERMAL OXIDATION (2)



ATMOSPHERIC GAS	Ar	Ar	H2/O2	Ar	Ar	Ar
RISING/FALLING TEMPERATURE	–	5℃/min	–	1℃/min	1℃/min	–

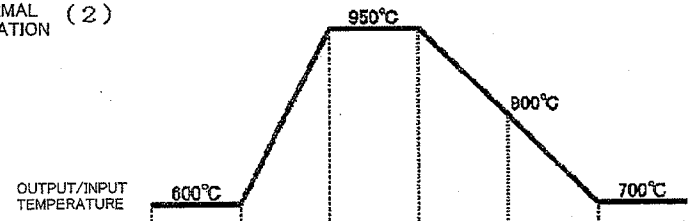
EXAMPLE 2

THERMAL OXIDATION (1)



ATMOSPHERIC GAS	Ar	Ar	H2/O2	Ar	Ar	Ar
RISING/FALLING TEMPERATURE	–	5℃/min	–	1℃/min	1℃/min	–

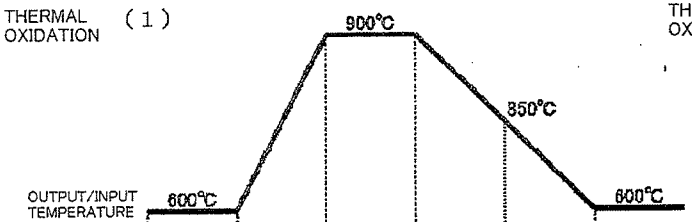
THERMAL OXIDATION (2)



ATMOSPHERIC GAS	Ar	Ar	H2/O2	H2/O2	Ar	Ar
RISING/FALLING TEMPERATURE	–	5℃/min	–	1℃/min	1℃/min	–

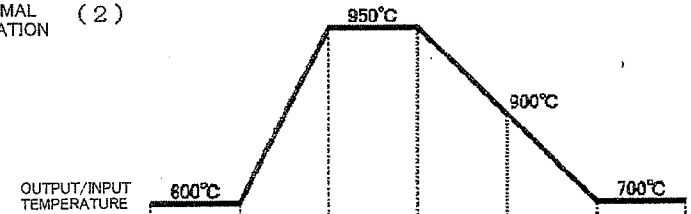
COMPARATIVE EXAMPLE

THERMAL OXIDATION (1)



ATMOSPHERIC GAS	Ar	Ar	H2/O2	Ar	Ar	Ar
RISING/FALLING TEMPERATURE	–	5℃/min	–	1℃/min	1℃/min	–

THERMAL OXIDATION (2)



ATMOSPHERIC GAS	Ar	Ar	H2/O2	Ar	Ar	Ar
RISING/FALLING TEMPERATURE	–	5℃/min	–	1℃/min	1℃/min	–

FIG.4

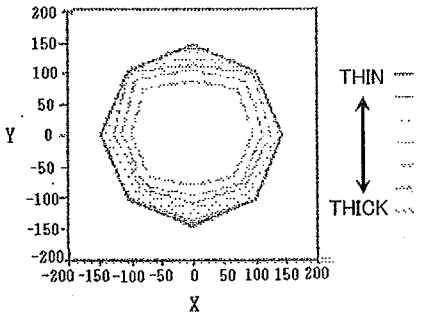
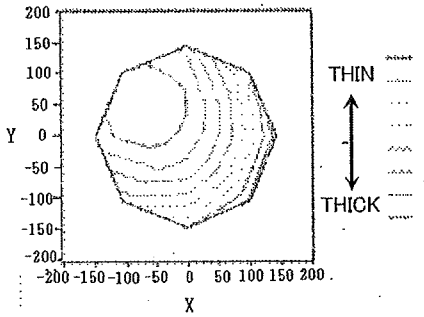
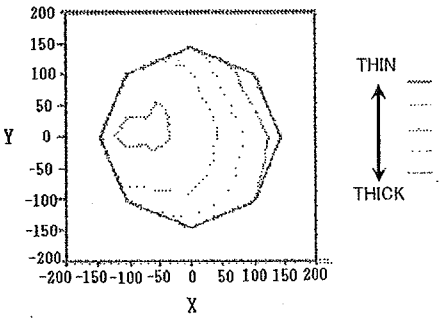
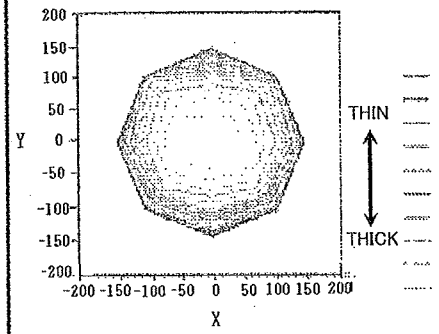
	THERMAL OXIDATION (1)	THERMAL OXIDATION (2)
EXAMPLE 1	 Range:1.1nm (TEMPERATURE-FALL OXIDATION)	 Range:0.9nm (PREDETERMINED TEMPERATURE OXIDATION)
EXAMPLE 2	 Range:0.4nm (PREDETERMINED TEMPERATURE OXIDATION)	 Range:1.4nm (TEMPERATURE-FALL OXIDATION)

FIG.5

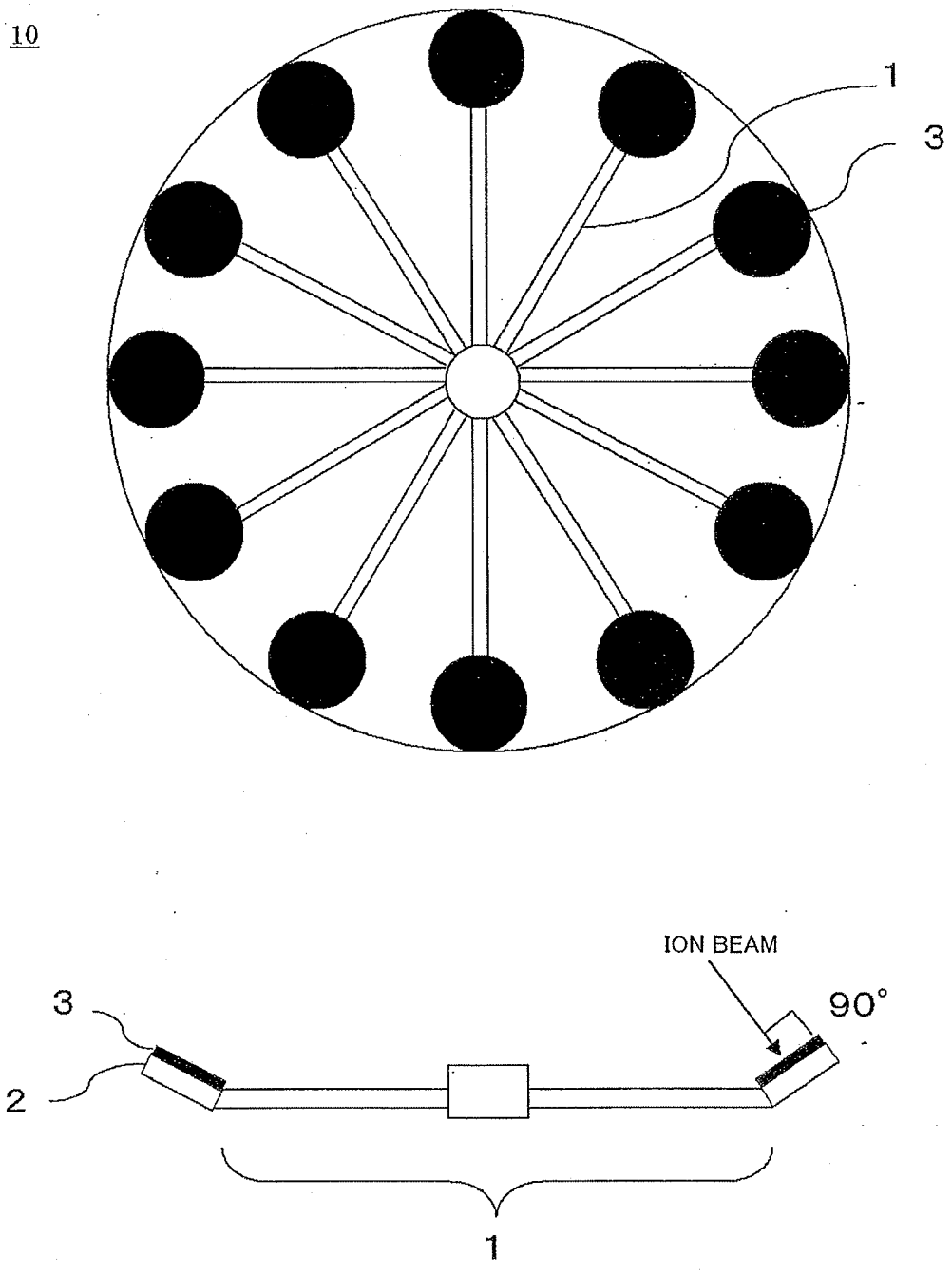
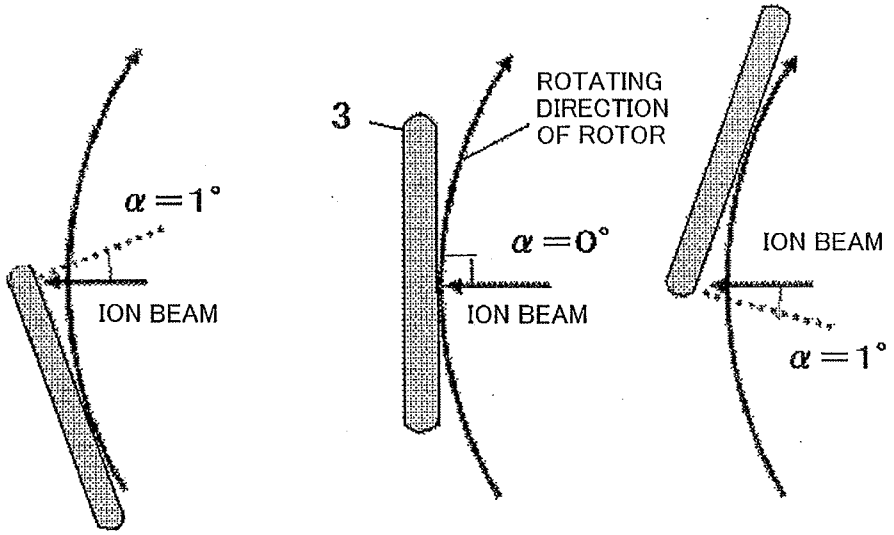


FIG.6


α = 1°
ION BEAM
3
ROTATING
DIRECTION
OF ROTOR
α = 0°
ION BEAM
ION BEAM
α = 1°