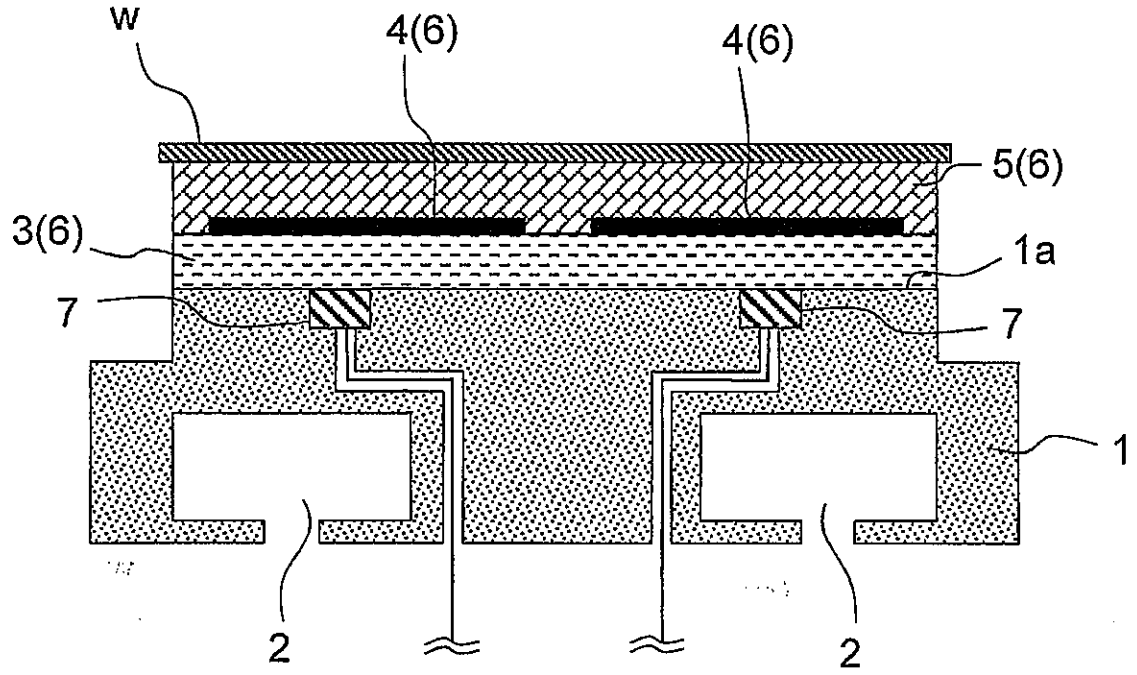


FIG.1

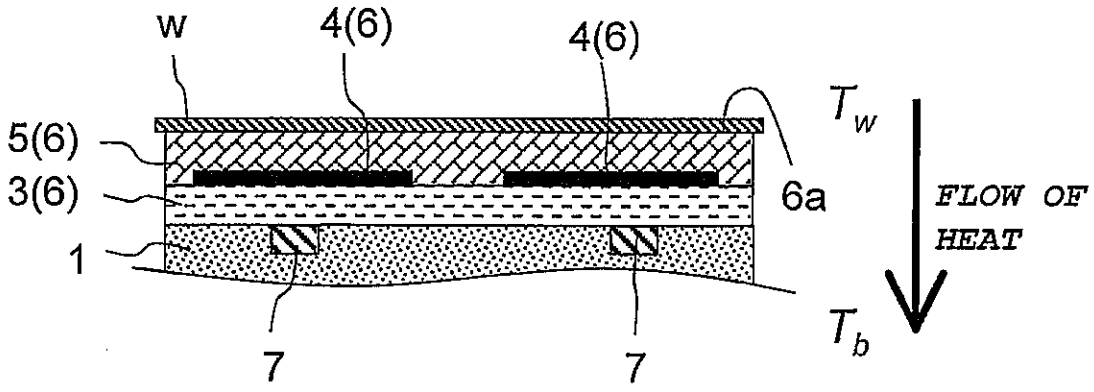


FIG.2A

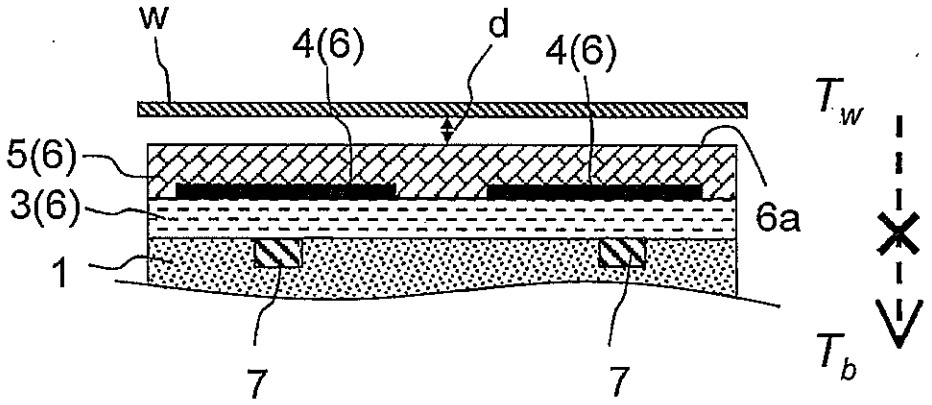


FIG.2B

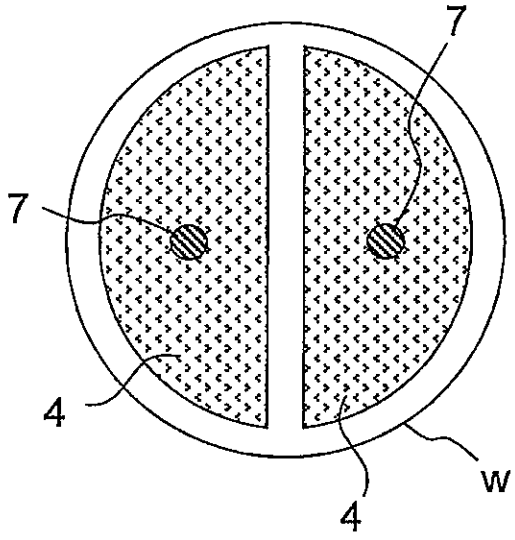


FIG.3A

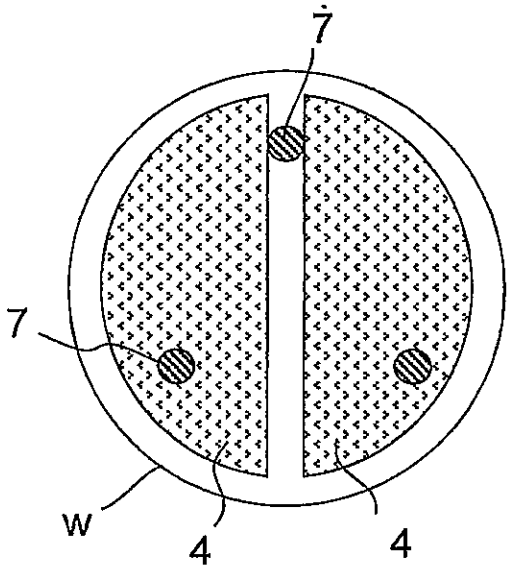


FIG.3B

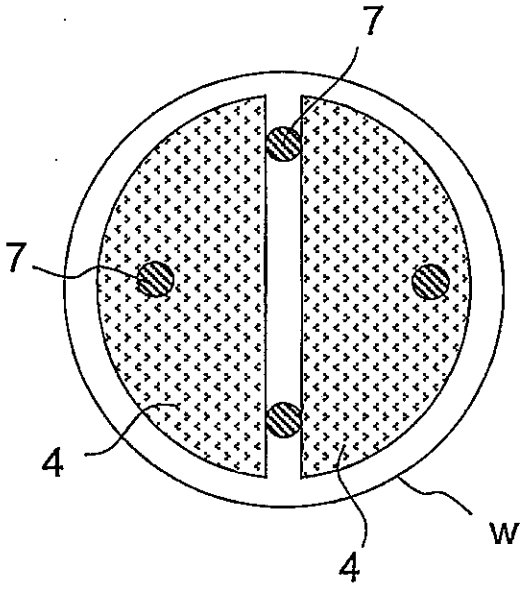


FIG.3C

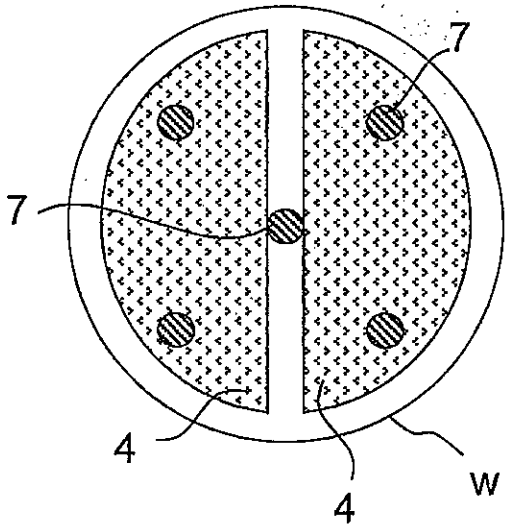


FIG.3D

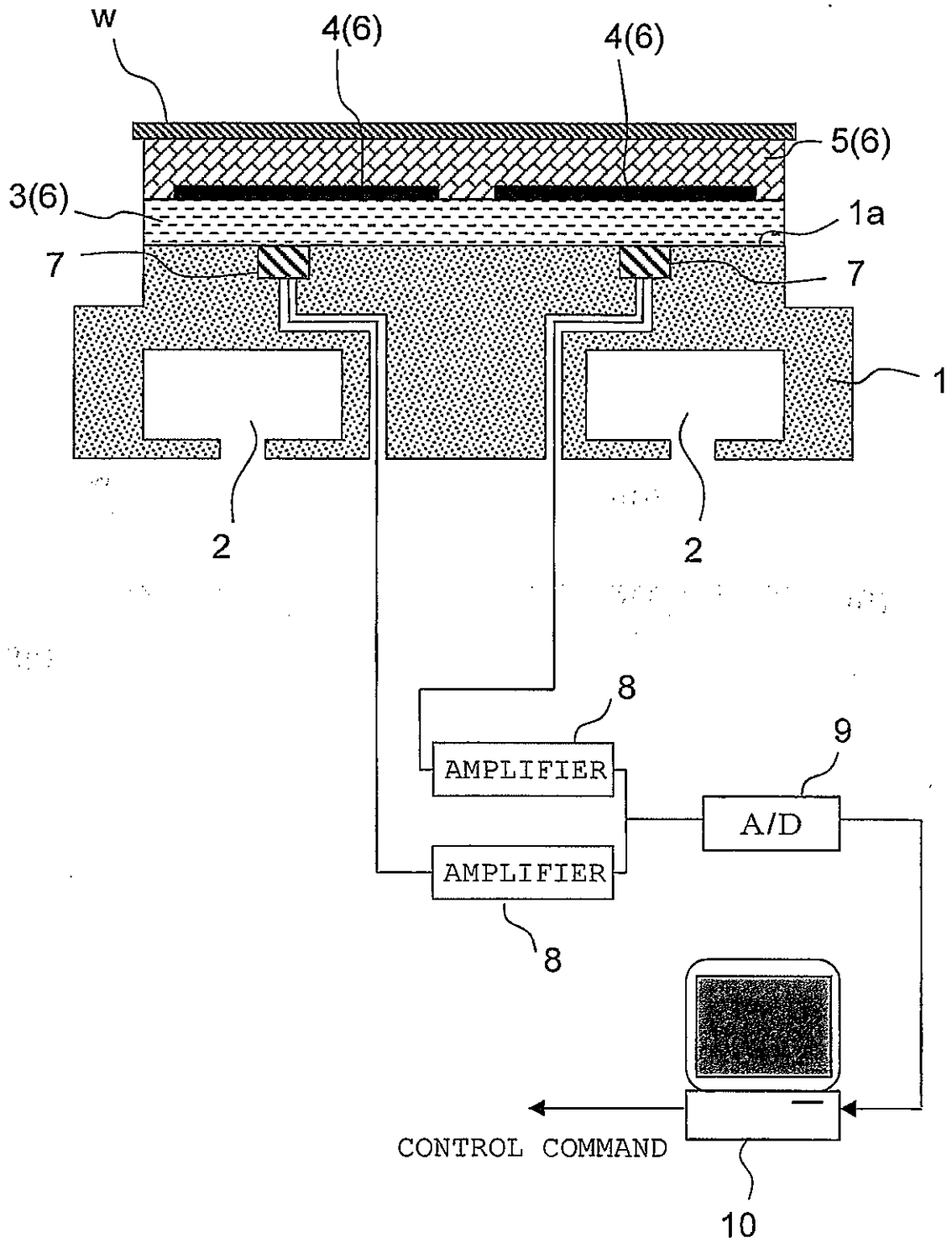

W
4(6)
4(6)
5(6)
3(6)
1a
7
7
1
2
2
8
AMPLIFIER
9
A/D
AMPLIFIER
8
CONTROL COMMAND
10

FIG.4

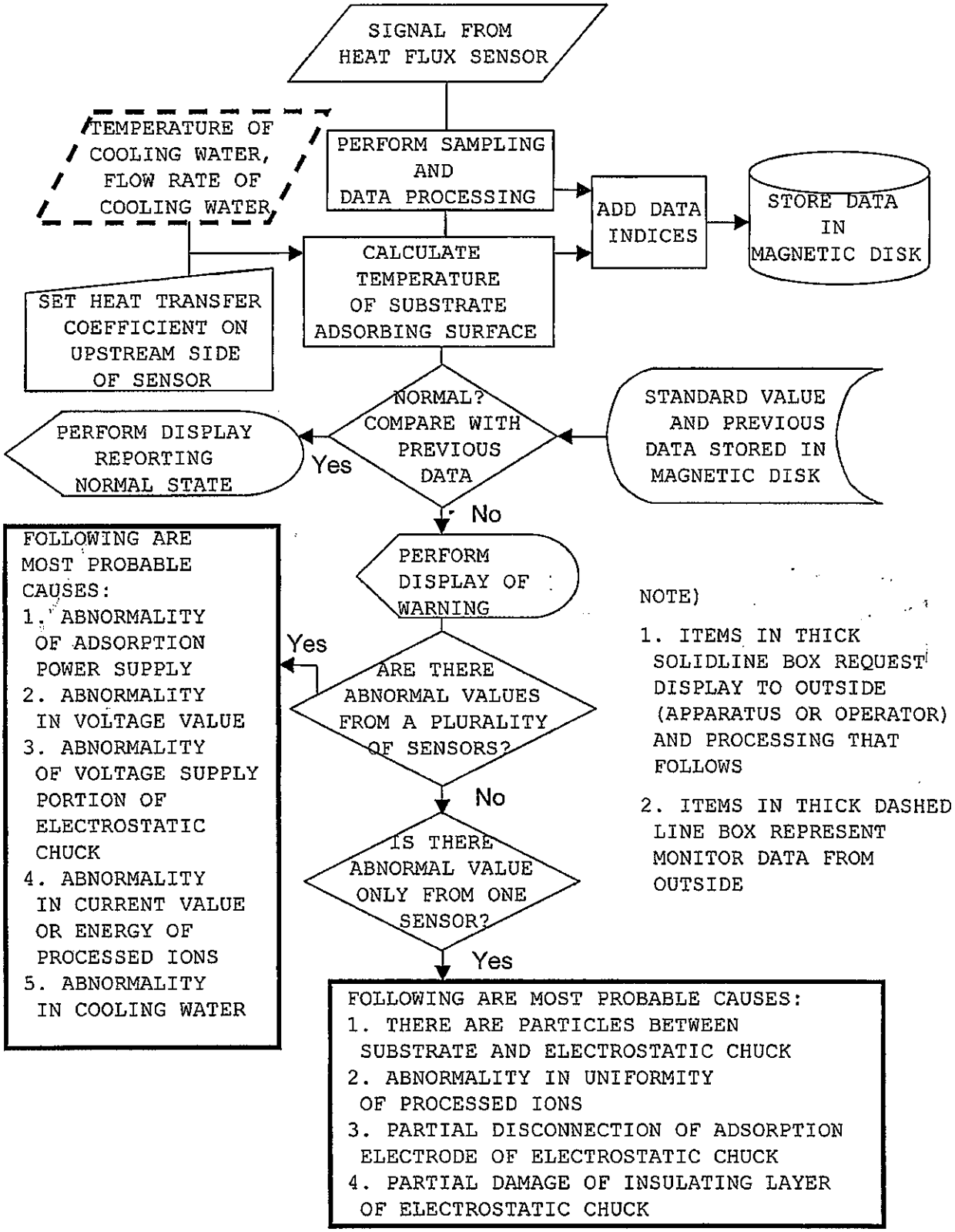

SIGNAL FROM HEAT FLUX SENSOR
TEMPERATURE OF COOLING WATER, FLOW RATE OF COOLING WATER
PERFORM SAMPLING AND DATA PROCESSING
ADD DATA INDICES
STORE DATA IN MAGNETIC DISK
SET HEAT TRANSFER COEFFICIENT ON UPSTREAM SIDE OF SENSOR
CALCULATE TEMPERATURE OF SUBSTRATE ADSORBING SURFACE
NORMAL? COMPARE WITH PREVIOUS DATA
STANDARD VALUE AND PREVIOUS DATA STORED IN MAGNETIC DISK
PERFORM DISPLAY REPORTING NORMAL STATE
Yes
No
PERFORM DISPLAY OF WARNING
ARE THERE ABNORMAL VALUES FROM A PLURALITY OF SENSORS?
Yes
No
IS THERE ABNORMAL VALUE ONLY FROM ONE SENSOR?
Yes
FOLLOWING ARE MOST PROBABLE CAUSES:
1. ABNORMALITY OF ADSORPTION POWER SUPPLY
2. ABNORMALITY IN VOLTAGE VALUE
3. ABNORMALITY OF VOLTAGE SUPPLY PORTION OF ELECTROSTATIC CHUCK
4. ABNORMALITY IN CURRENT VALUE OR ENERGY OF PROCESSED IONS
5. ABNORMALITY IN COOLING WATER
FOLLOWING ARE MOST PROBABLE CAUSES:
1. THERE ARE PARTICLES BETWEEN SUBSTRATE AND ELECTROSTATIC CHUCK
2. ABNORMALITY IN UNIFORMITY OF PROCESSED IONS
3. PARTIAL DISCONNECTION OF ADSORPTION ELECTRODE OF ELECTROSTATIC CHUCK
4. PARTIAL DAMAGE OF INSULATING LAYER OF ELECTROSTATIC CHUCK
NOTE)
1. ITEMS IN THICK SOLIDLINE BOX REQUEST DISPLAY TO OUTSIDE (APPARATUS OR OPERATOR) AND PROCESSING THAT FOLLOWS
2. ITEMS IN THICK DASHED LINE BOX REPRESENT MONITOR DATA FROM OUTSIDE

FIG.5