

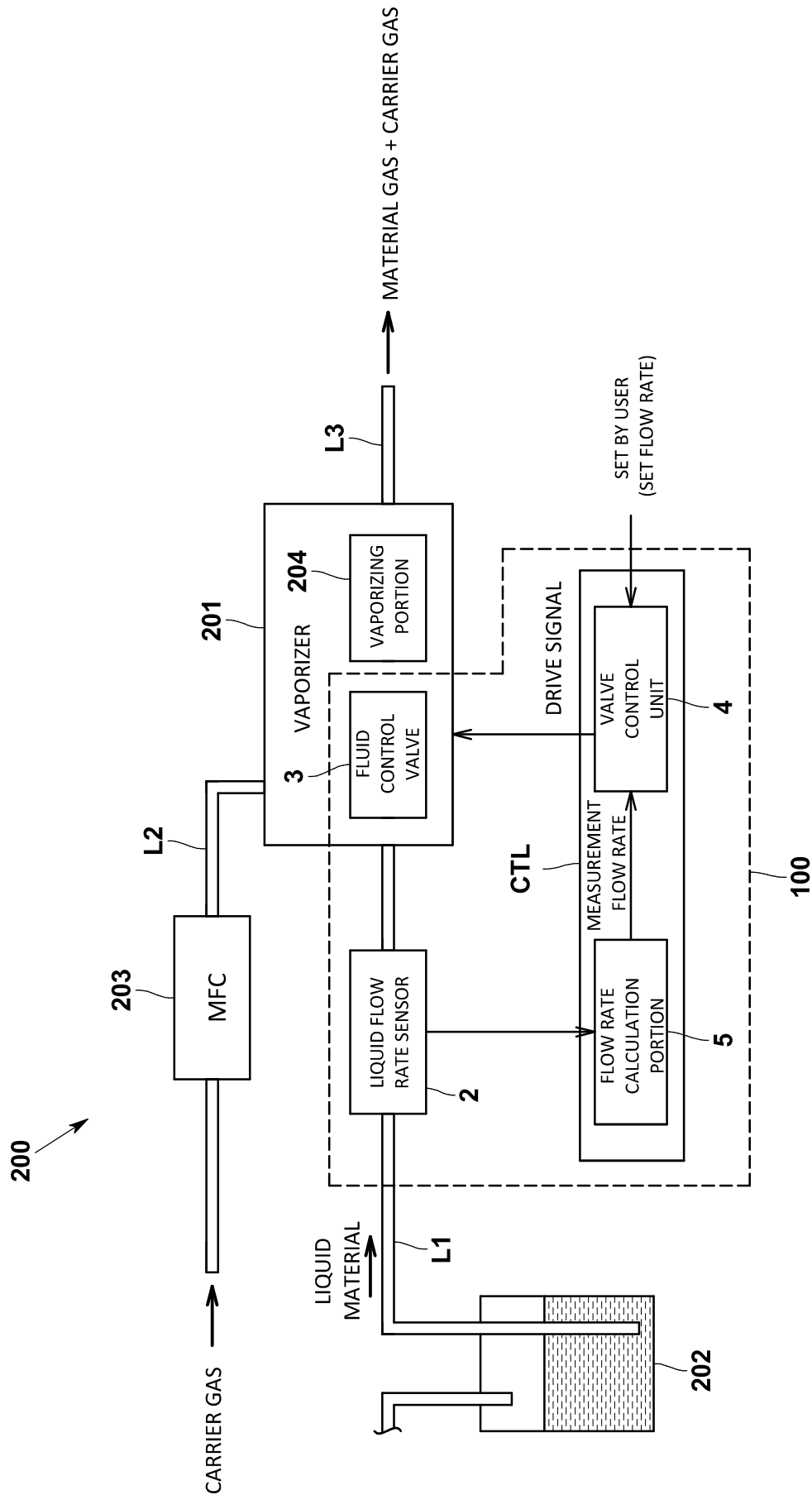


FIG.1

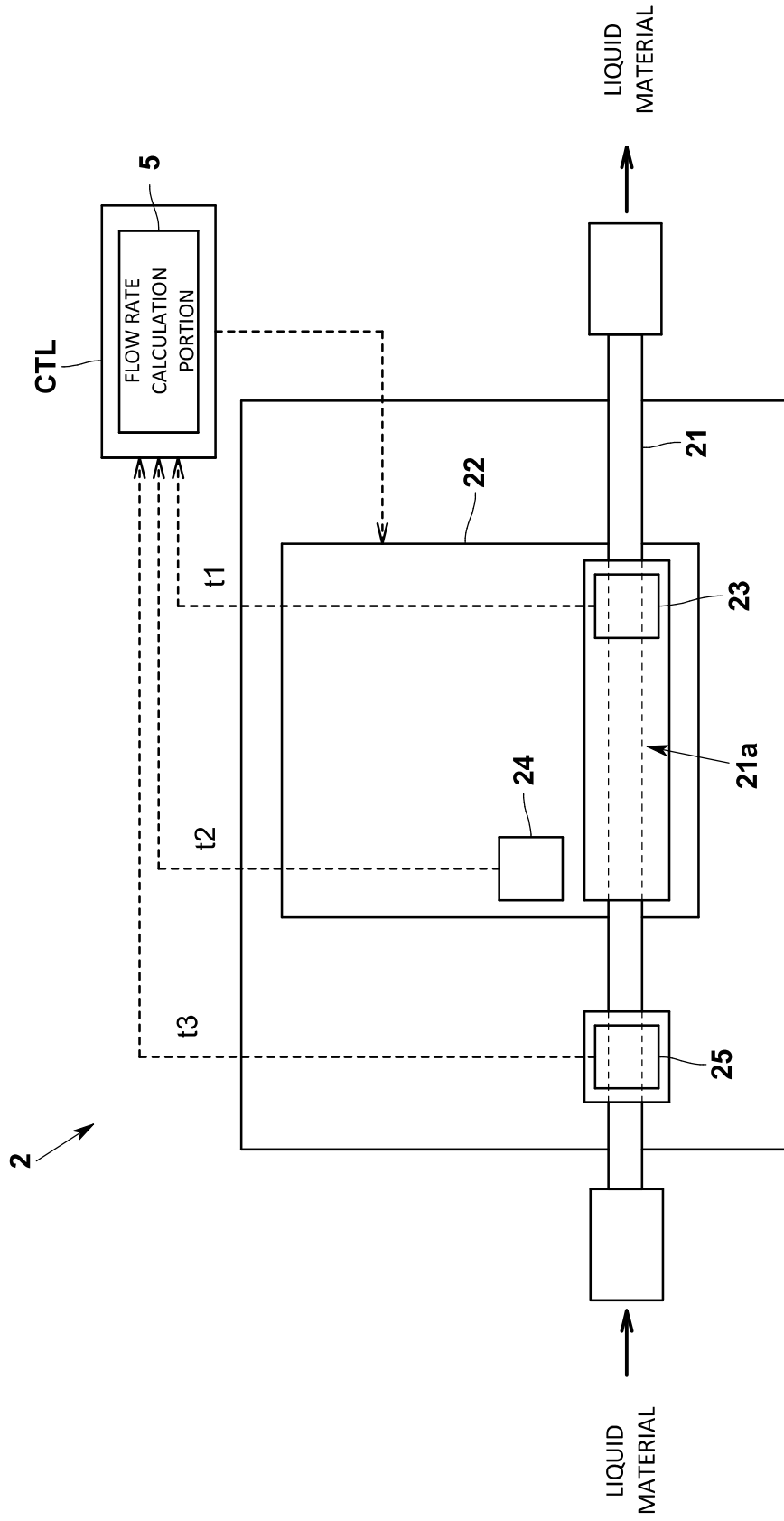


FIG.2

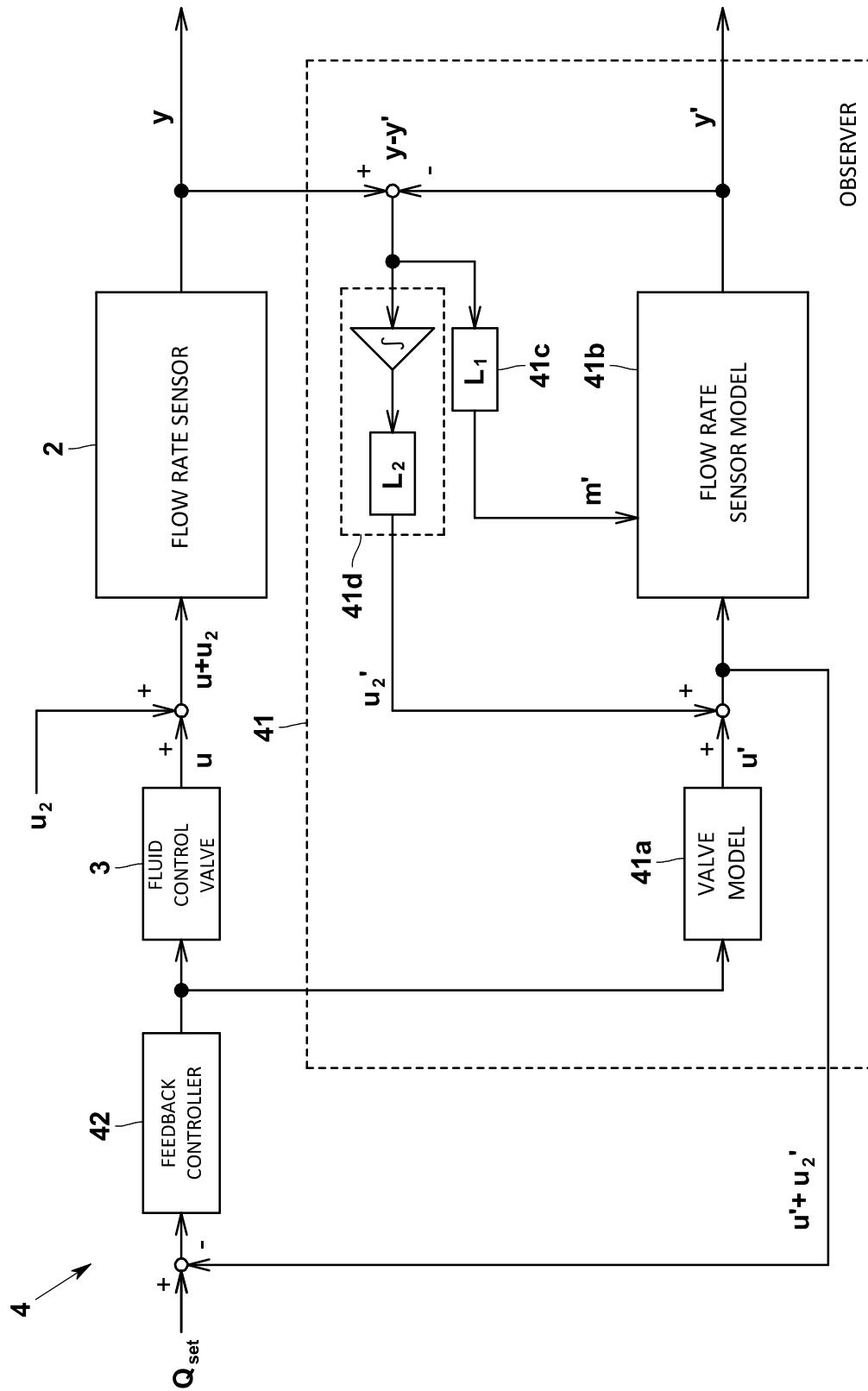
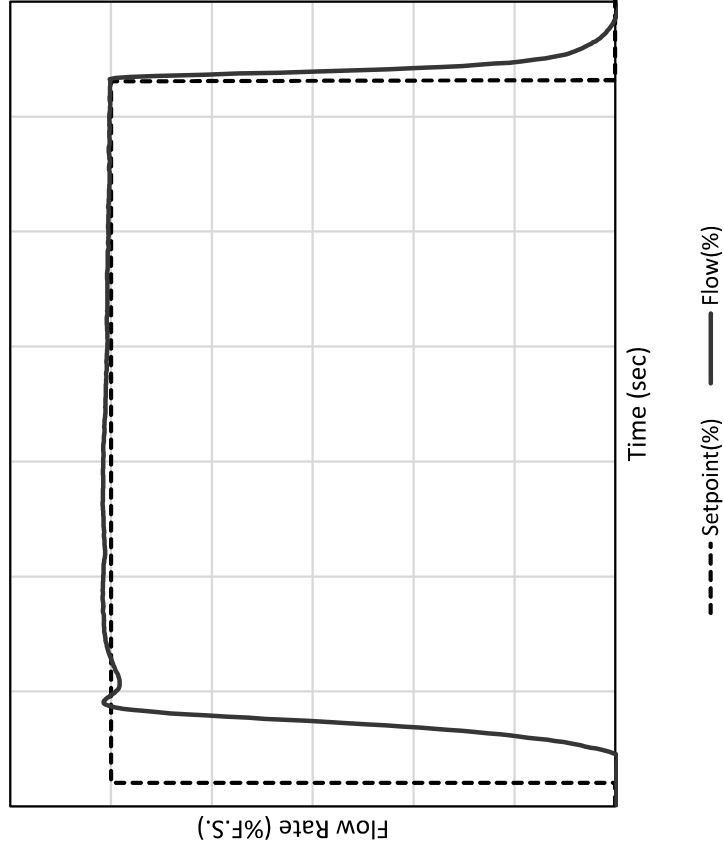


FIG.4

CONVENTIONAL EXAMPLE



PRESENT EXAMPLE

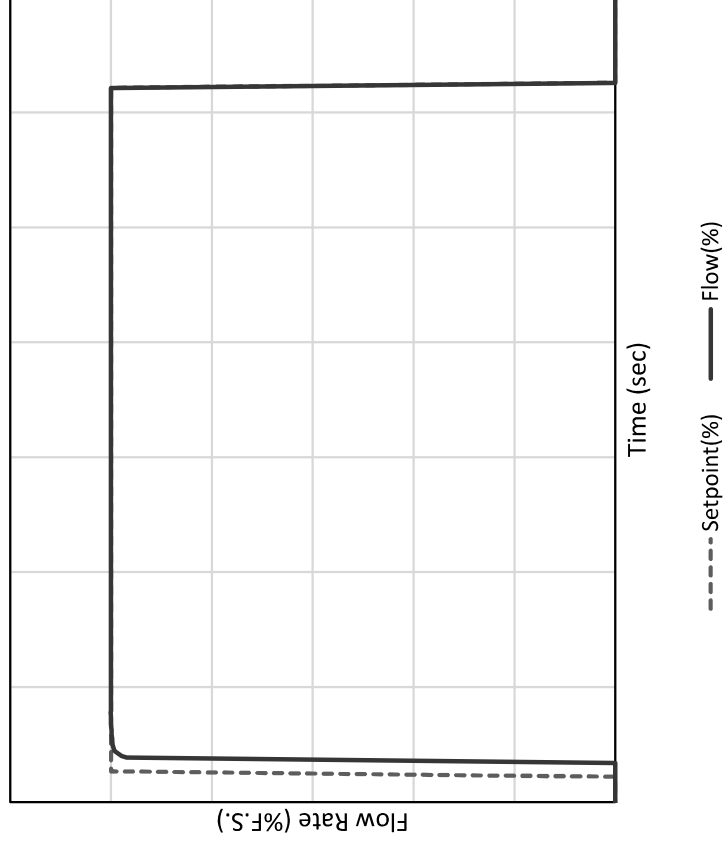


FIG.5

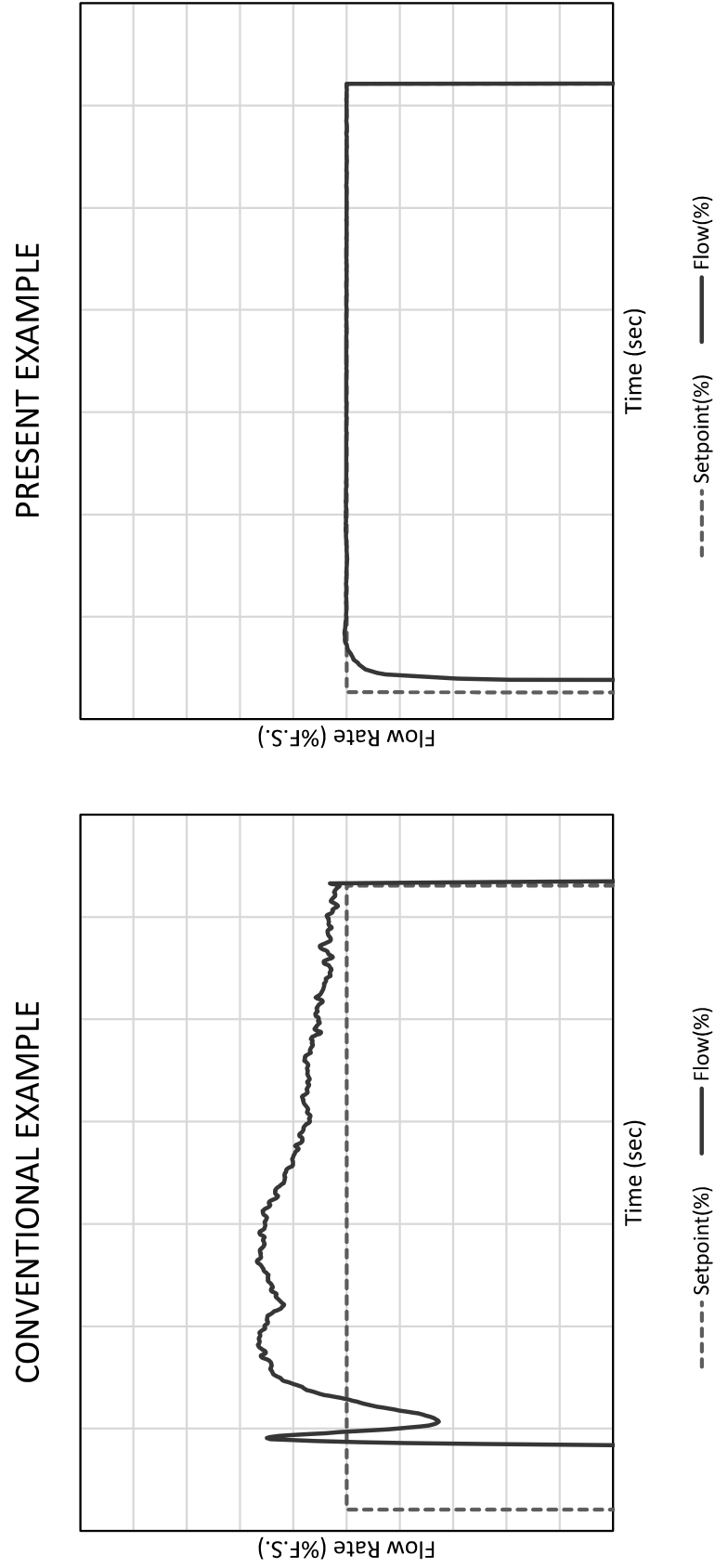
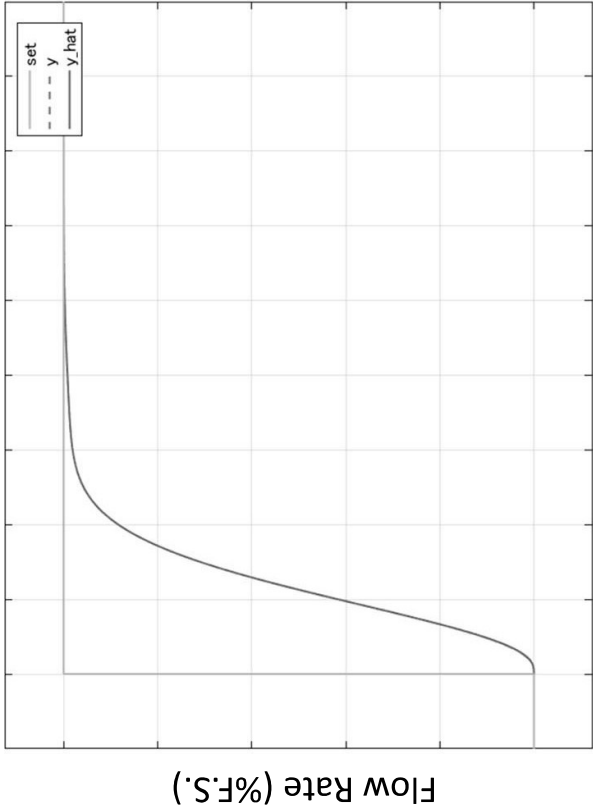
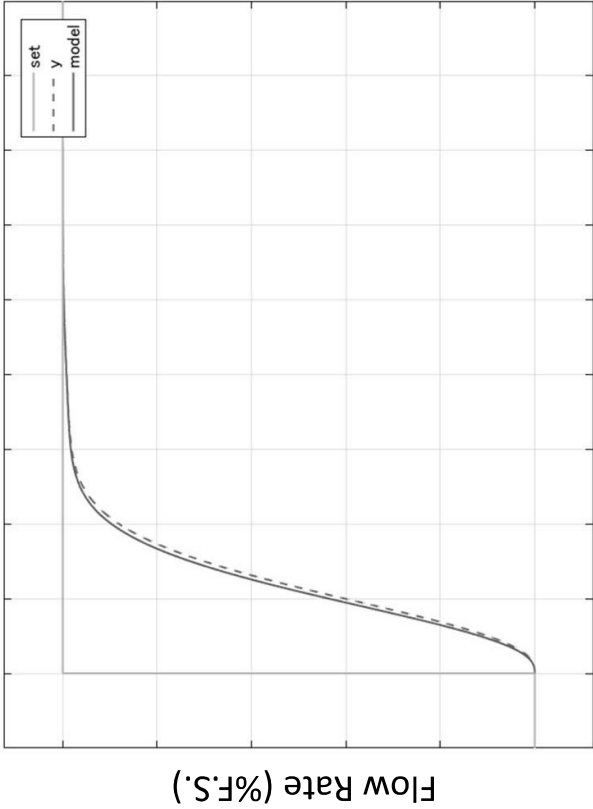


FIG.6

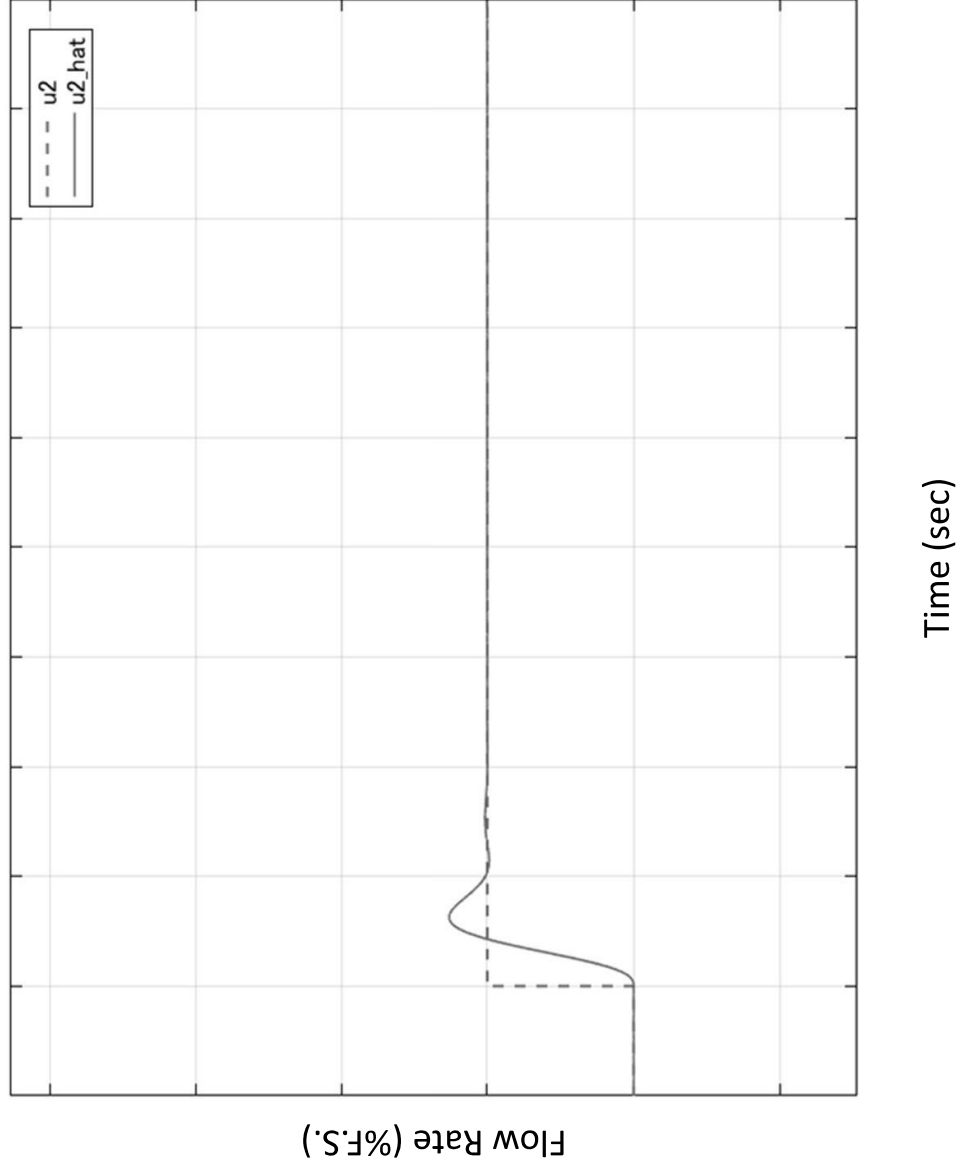


WHEN MODEL ERROR ESTIMATION VALUES ARE USED, THE FLOW RATE SENSOR MODEL IS COMPENSATED AND THE FLOW RATE ESTIMATION VALUES (y_{hat}) MATCH THE MEASUREMENT VALUES (y) FROM THE ACTUAL FLOW RATE SENSOR



WHEN MODEL ERROR ESTIMATION VALUES ARE NOT USED, THE FLOW RATE ESTIMATION VALUES (model) AND THE MEASUREMENT VALUES (y) FROM THE ACTUAL FLOW RATE SENSOR DO NOT MATCH

FIG.7



SIMULATION IN WHICH THE FLOW RATE ERRORS (u_2) ARE TAKEN AS 10% OF F.S.
 THE FLOW RATE ERROR ESTIMATION VALUES ($\hat{u}_2$) OBTAINED USING THE
 SECOND OBSERVER GAIN L_2 MATCH THE FLOW RATE ERROR (u_2)

FIG.8

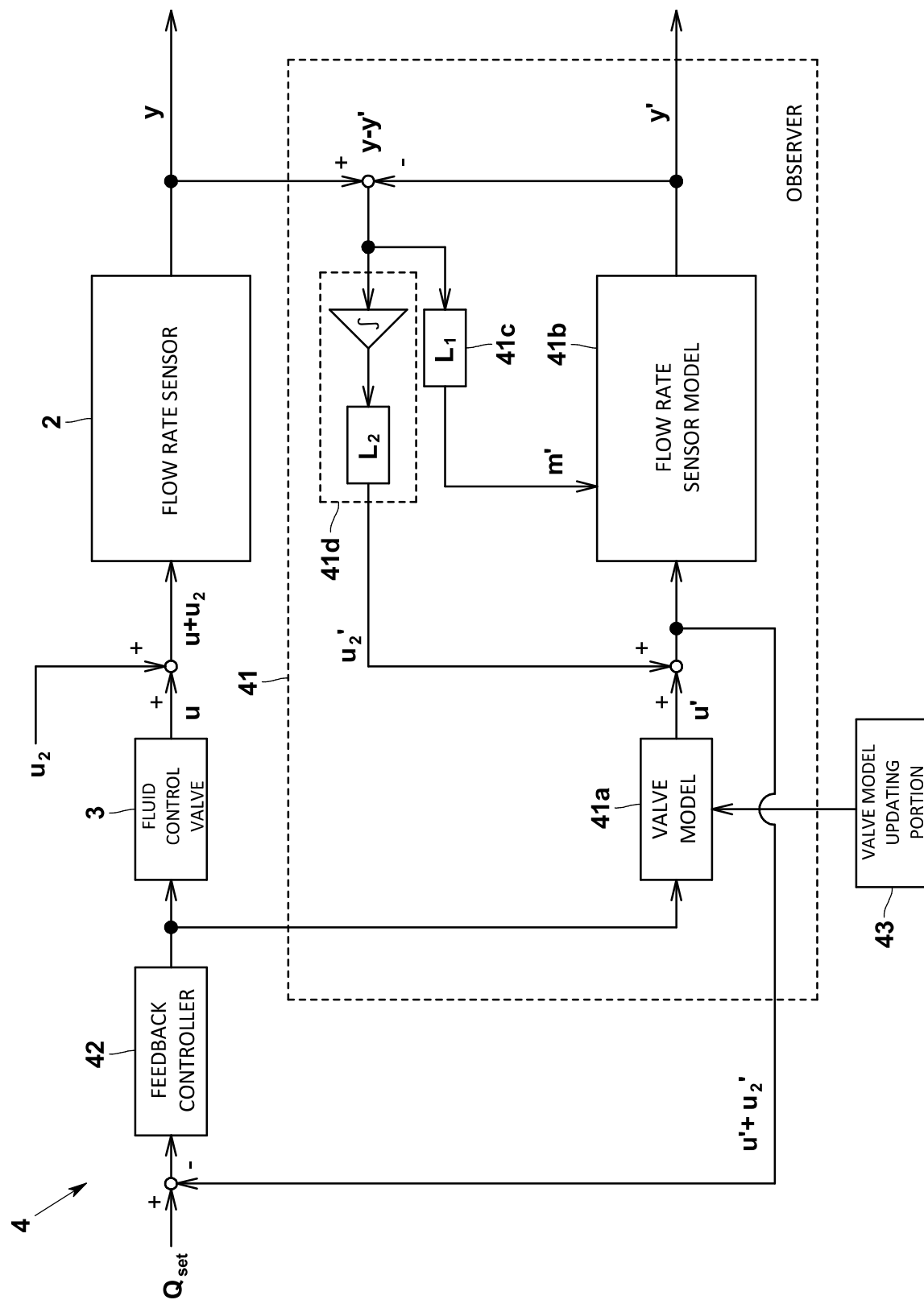


FIG.9

