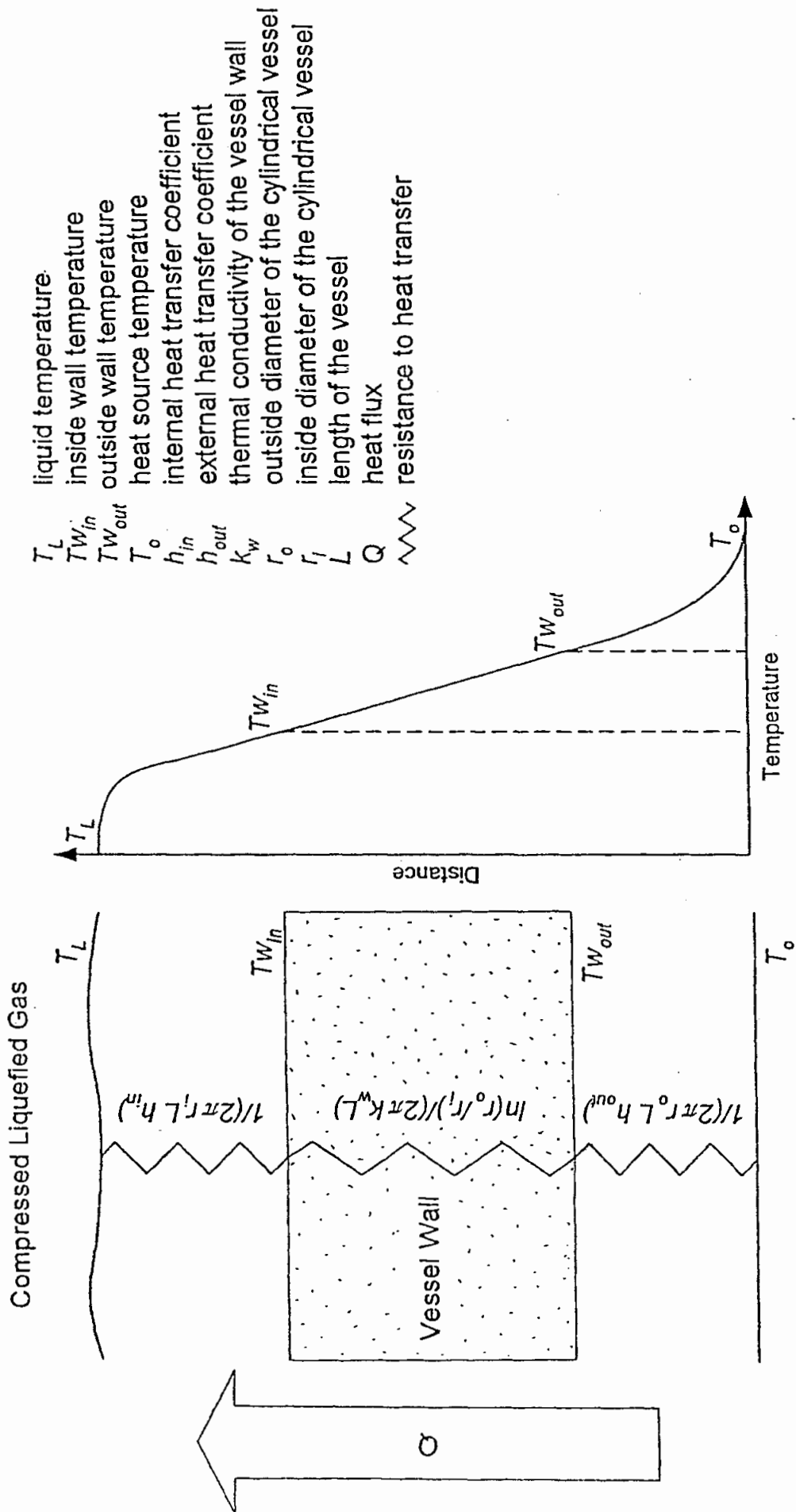




T_L liquid temperature.
 $T_{W_{in}}$ inside wall temperature
 $T_{W_{out}}$ outside wall temperature
 T_o heat source temperature
 h_{in} internal heat transfer coefficient
 h_{out} external heat transfer coefficient
 k_w thermal conductivity of the vessel wall
 r_o outside diameter of the cylindrical vessel
 r_i inside diameter of the cylindrical vessel
 L length of the vessel
 Q heat flux
 resistance to heat transfer

Schematic Representation of Heat Transfer Across Vessel Walls

FIG. 1

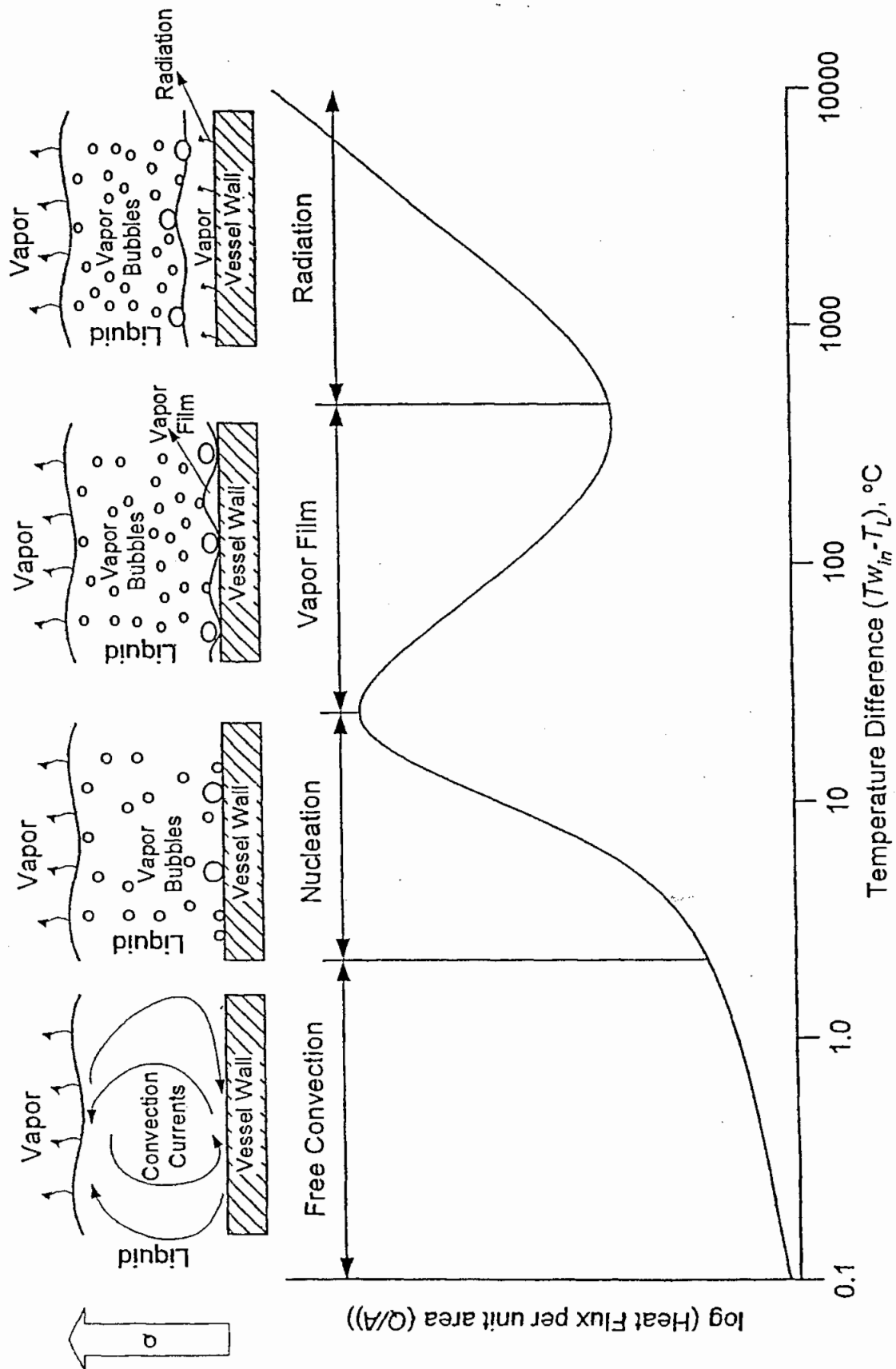
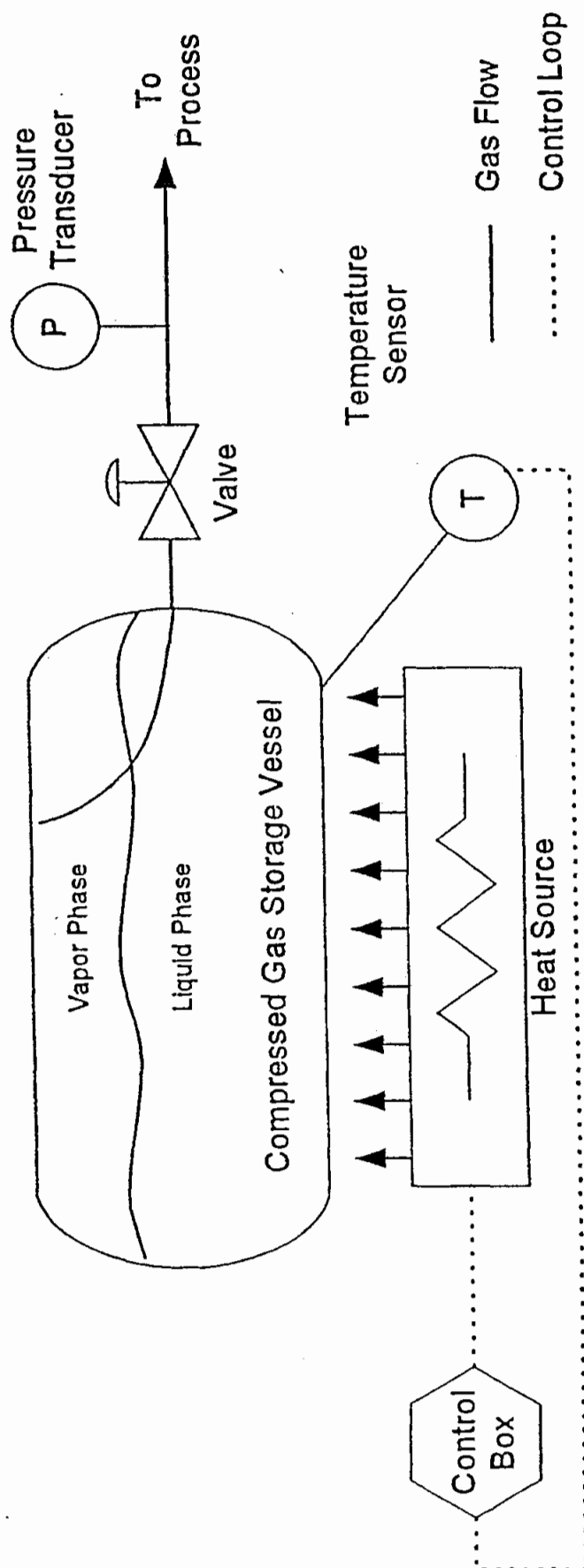


FIG. 2
 Typical Boiling Curve for a Liquid (not necessarily for ammonia)
 (Schematics on the top represent the characteristics of each boiling regime.)

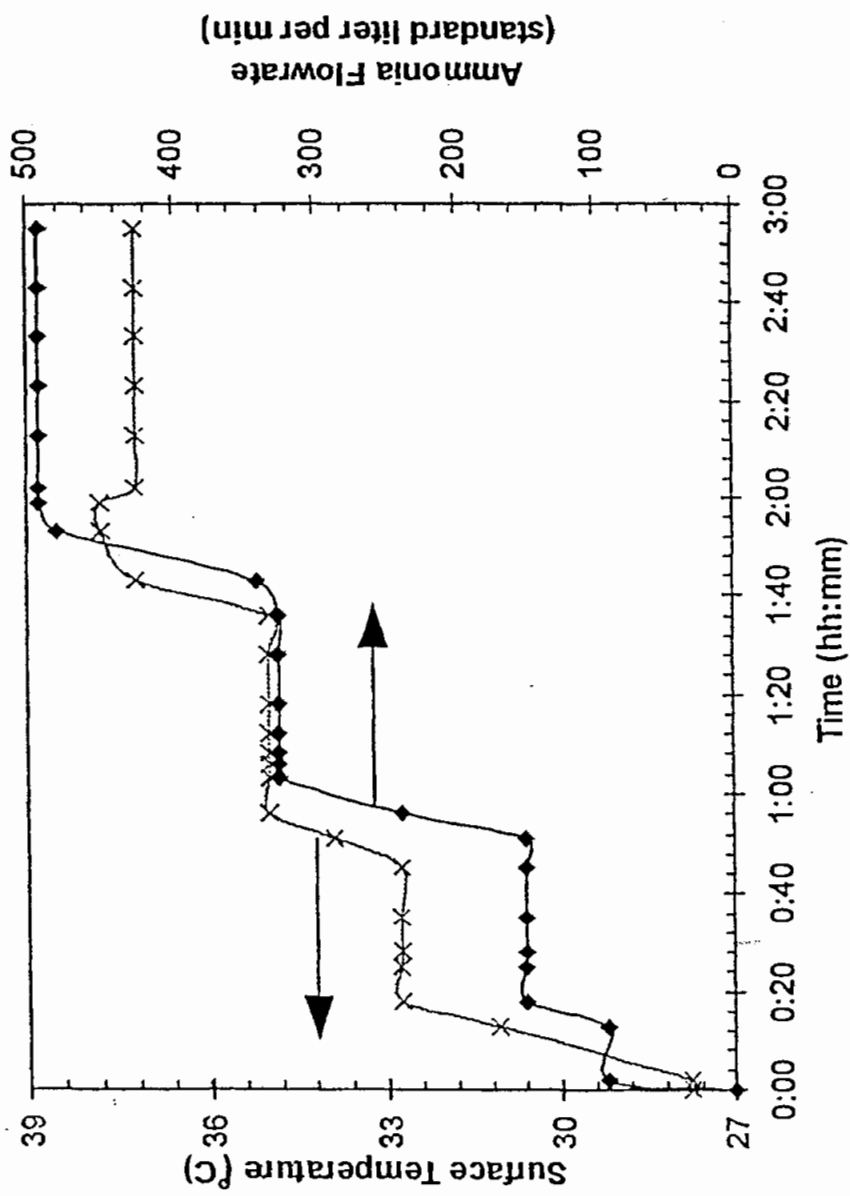
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Experimental Setup to Deliver High Vapor Flowrates

FIG. 3

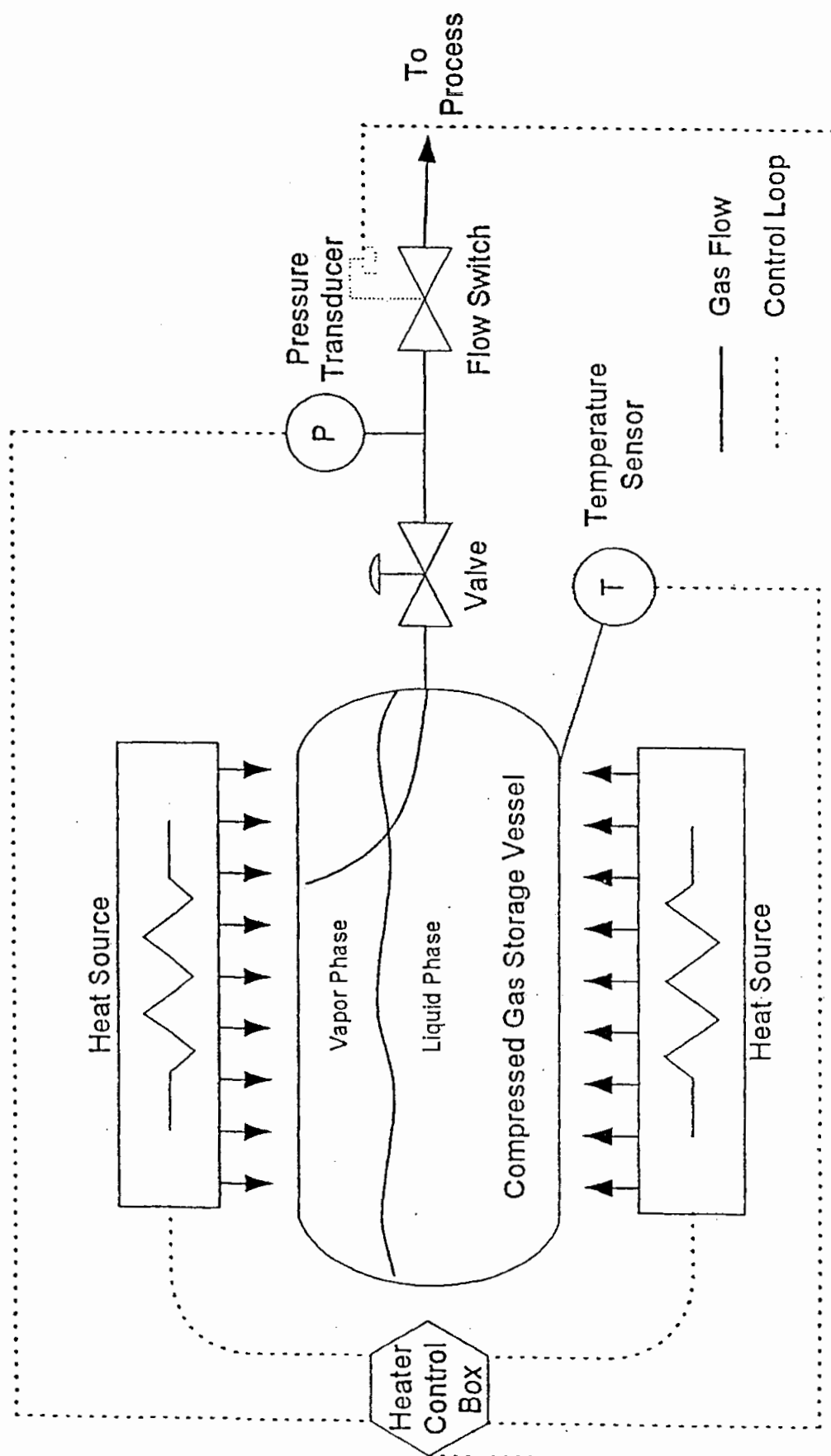
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Variation of Ammonia Flowrate and Surface Temperature with Time

FIG. 4

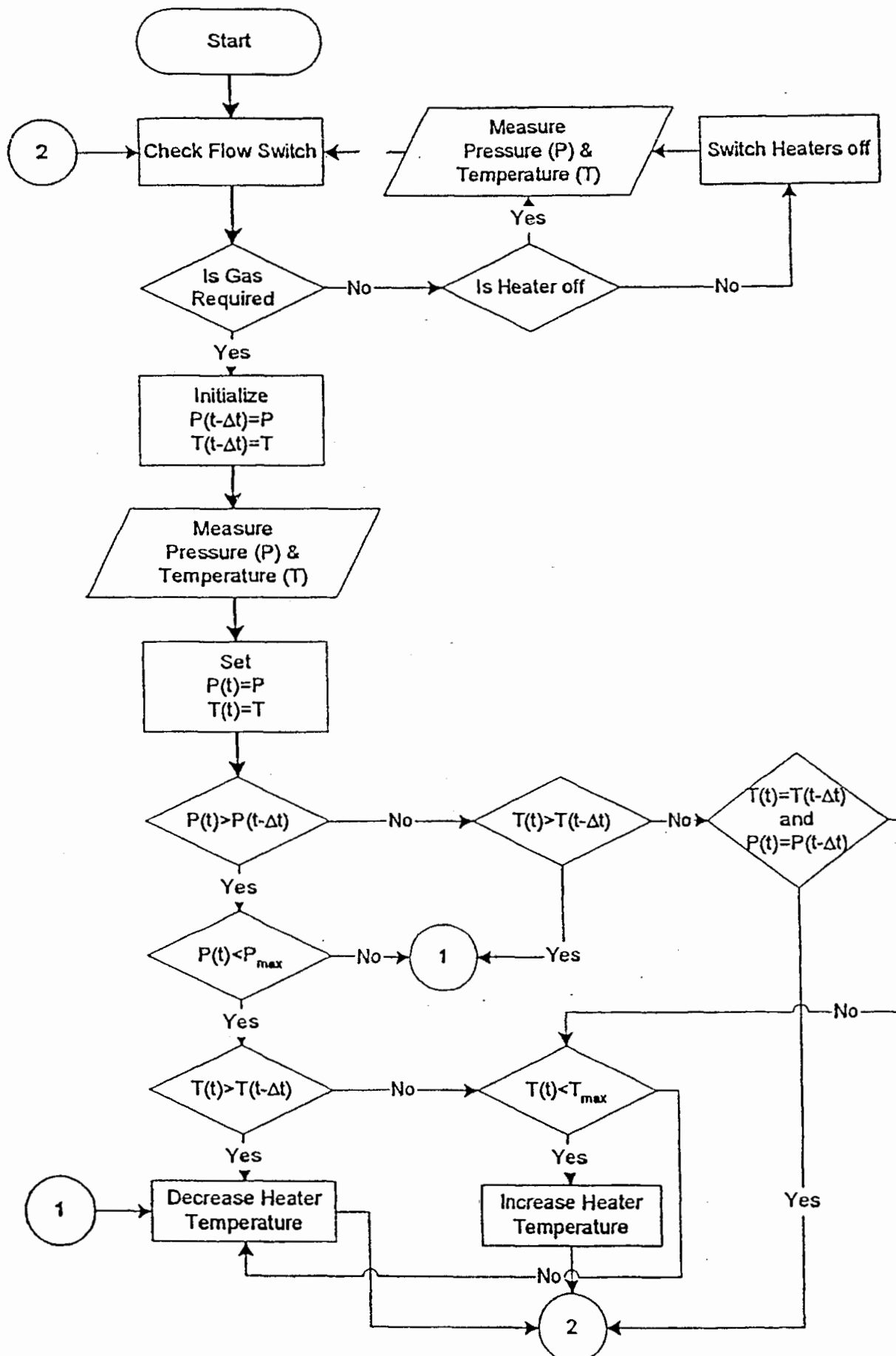
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Schematic of the Proposed Delivery System

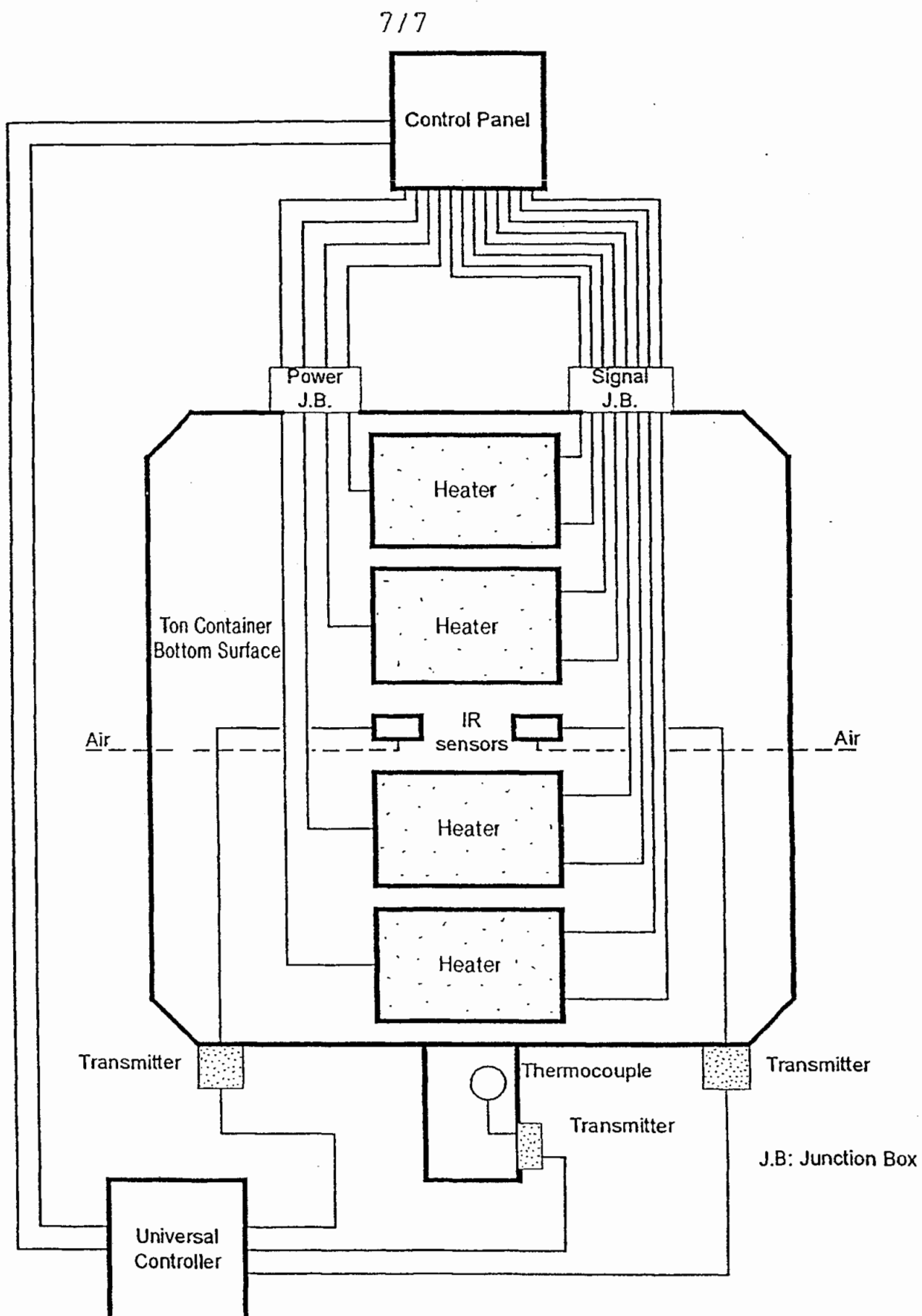
FIG. 5

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Control Strategy for the Delivery System

FIG. 6



Schematic of the Protoype Ammonia Delivery System

FIG. 7