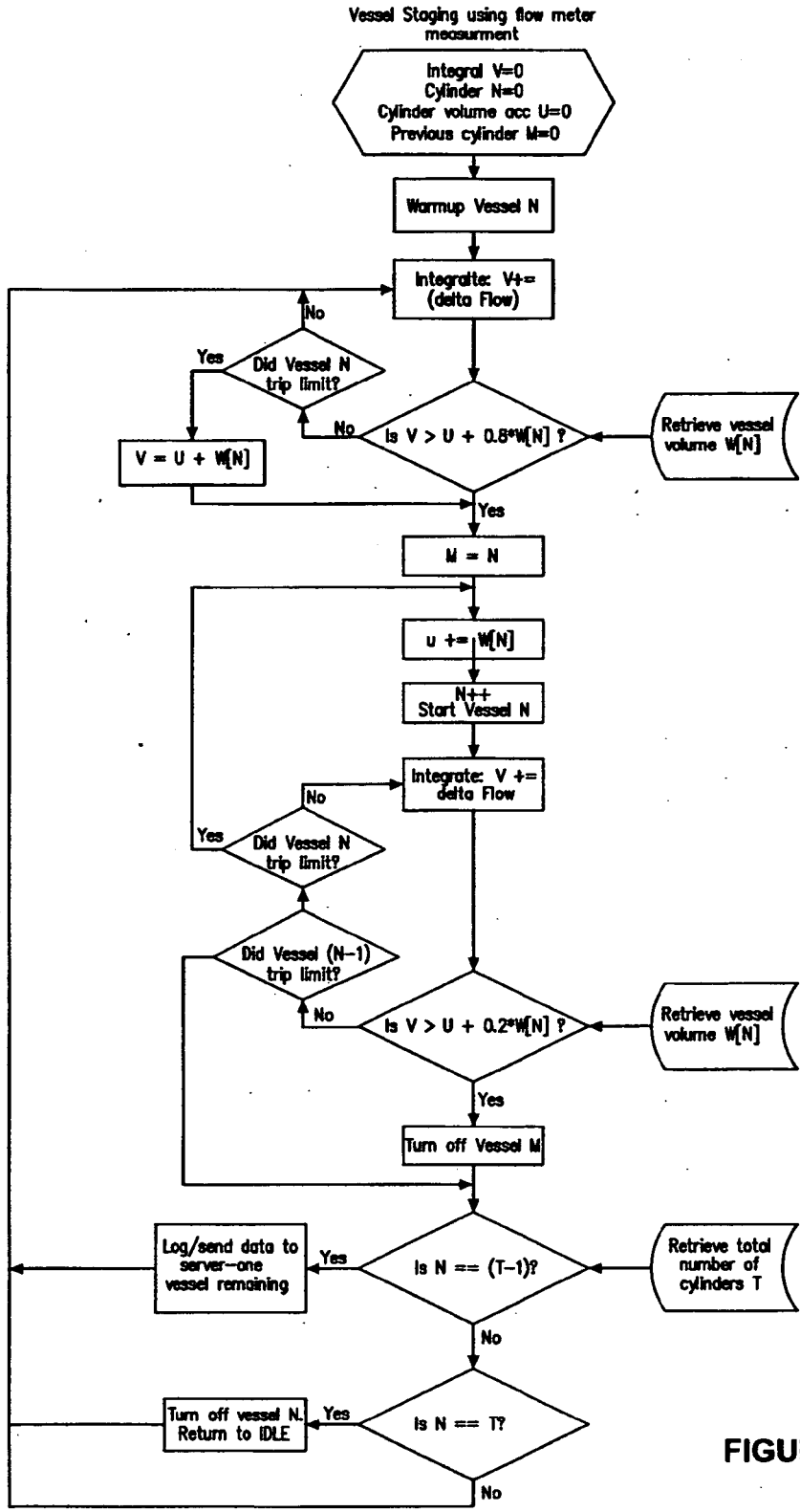
Vessel Staging using flow meter measurment
Integral V=0
Cylinder N=0
Cylinder volume acc U=0
Previous cylinder M=0
Warmup Vessel N
Integrate: V+= (delta Flow)
No
Yes
Did Vessel N trip limit?
No
Is V > U + 0.8*W[N] ?
Retrieve vessel volume W[N]
V = U + W[N]
Yes
M = N
u += W[N]
N++
Start Vessel N
Integrate: V += delta Flow
No
Yes
Did Vessel N trip limit?
Did Vessel (N-1) trip limit?
No
Is V > U + 0.2*W[N] ?
Retrieve vessel volume W[N]
Yes
Turn off Vessel M
Log/send data to server-one vessel remaining
Yes
Is N == (T-1)?
Retrieve total number of cylinders T
No
Turn off vessel N. Return to IDLE
Yes
Is N == T?
No

FIGURE 2