

Initial sizing

Update variables

calculate new tanks state
 $(V_{pr}^{(i+1)}, T_{pr}^{(i+1)}, p_{pr}^{(i+1)})$
from $\dot{m}_p^{(i)}$

**volume
check**

$V_{fu}^{(i+1)} < 0$
or $V_{ox}^{(i+1)} < 0$

NO

Data elaboration

OK

c^* iteration

compute $p_c^{(i+1)(j)}$ guess from
 $p_c^{(i+1)(j-1)}$ ($p_c^{(i+1)(1)} = p_c^{(i)}$)

use $p_c^{(i+1)(j)}$ in pressure cascade to compute
 $\dot{m}_p^{(i+1)(j)}, O/F^{(i+1)(j)}, c^{*(i+1)(j)}$

compute $c_{cea}^{*(j)}$ using
CEAM software

$|c^{*(i+1)(j)} - c_{cea}^{*(j)}| < tol$

NO

OK

**pressure
check**

$p_c^{(i+1)} > p_{c,min}$

NO

Data elaboration

OK