

```

1: Q_in=q*m_dot_fluido
2: m_dot_fluido=0,1507
3: q=457,8
4:
5: PCI_propano=46367,088 "Kj/Kg"
6: m_dot_fuel_propano=Q_in/PCI_propano
7: m_dot_air_steq_prop=m_dot_fuel_propano*(AC_propano)
8: (AC_propano) = 15,6 "cálculos de Termoquímica"
9:
10: PCI_butano=45764,592 "Kj/Kg"
11: m_dot_fuel_butano=Q_in/PCI_butano
12: m_dot_air_steq_but=m_dot_fuel_butano*(AC_butano)
13: (AC_butano) = 15,4776 "cálculos de Termoquímica"

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$$Q_{in} = q \cdot \dot{m}_{fluido}$$

$$\dot{m}_{fluido} = 0,1507$$

$$q = 457,8$$

$$PCI_{propano} = 46367,088 \text{ Kj/Kg}$$

$$\dot{m}_{fuel;propano} = \frac{Q_{in}}{PCI_{propano}}$$

$$\dot{m}_{air;steq;prop} = \dot{m}_{fuel;propano} \cdot AC_{propano}$$

$$AC_{propano} = 15,6 \text{ cálculos de Termoquímica}$$

$$PCI_{butano} = 45764,592 \text{ Kj/Kg}$$

$$\dot{m}_{fuel;butano} = \frac{Q_{in}}{PCI_{butano}}$$

$$\dot{m}_{air;steq;but} = \dot{m}_{fuel;butano} \cdot AC_{butano}$$

$$AC_{butano} = 15,4776 \text{ cálculos de Termoquímica}$$

SOLUTION

Unit Settings: SI C kPa kJ mass deg

$$AC_{butano} = 15,48$$

$$\dot{m}_{air,steq,but} = 0,02333$$

$$\dot{m}_{fluido} = 0,1507$$

$$\dot{m}_{fuel,propano} = 0,001488$$

$$PCI_{propano} = 46367$$

$$Q_{in} = 68,99$$

$$AC_{propano} = 15,6$$

$$\dot{m}_{air,steq,prop} = 0,02321$$

$$\dot{m}_{fuel,butano} = 0,001508$$

$$PCI_{butano} = 45765$$

$$q = 457,8$$

No unit problems were detected.

There are a total of 11 equations in the Main program.

Block	Rel. Res.	Abs. Res.	Units	Calls	Time(ms)	Equations
0	0.000E+00	0.000E+00	OK	1	0	$\dot{m}_{dot_fluido}=0,1507$
0	0.000E+00	0.000E+00	OK	1	0	$q=457,8$
0	0.000E+00	0.000E+00	OK	1	0	$PCI_{propano}=46367,088$
0	0.000E+00	0.000E+00	OK	1	0	$(AC_{propano})=15,6$
0	0.000E+00	0.000E+00	OK	1	0	$PCI_{butano}=45764,592$
0	0.000E+00	0.000E+00	OK	1	0	$(AC_{butano})=15,4776$
0	0.000E+00	0.000E+00	OK	4	0	$Q_{in}=q \cdot \dot{m}_{dot_fluido}$

0	0.000E+00	0.000E+00	OK	4	0	m_dot_fuel_propano =Q_in/PCI_propano
0	0.000E+00	0.000E+00	OK	4	0	m_dot_air_steq_prop =m_dot_fuel_propano*(AC_propano)
0	0.000E+00	0.000E+00	OK	4	0	m_dot_fuel_butano =Q_in/PCI_butano
0	0.000E+00	0.000E+00	OK	4	0	m_dot_air_steq_but =m_dot_fuel_butano*(AC_butano)