

Appendix D – Calculation of the flame temperature through Eq.(62)

This sections presents the data used for the calculation of the temperature of the flame when using Eq.(62). The data is presented in **Table 10** for data sets of **Table 3**.

Table 10. Calculation of flame temperature through Eq.(62).

Term	Rist [10]	Babich [18]
V_v (Nm ³ /t _{HM})	1729	903
T_v (°C)	700	1200
ω_{v,O_2} (-)	0.21	0.2678
η_{nat} (g/Nm ³)	0	0
η (g/Nm ³)	10	0
V_{NG} (Nm ³ /t _{HM})	0	0
m_{PC} (kg/t _{HM})	0	200
$\Omega_{PC,C}$ (-)	0	0.806
$\Omega_{PC,H}$ (-)	0	0.0435
ω_{NG,CH_4} (-)	0	0
$c_{p,v}$ (kcal/mol K)	0.00789	0.00839
c_{p,H_2O} (kcal/mol K)	0.00981	0
$c_{p,rg}$ (kcal/mol K)	0.00850	0.00829
T_{fl} (°C)	1898	2117