DATA ANALYSIS

Average feed water $= V_{average} = \dot{V}_{water} \times time$

$$\dot{V}_{water} = \frac{V_{average}}{time}$$

For $\dot{V}_{water} = 21207 \times 10^{-4}\ m^3/s$

$\dot{m}_{water} = \dot{V}_{water} \times \rho_{water} = (21207 \times 10^{-4}) \times (1000)$ kg

$\dot{m}_{water} = 2120.7\ Kg/s$

$m_{ass\ water} = \dot{m}_{water} \times t = (2120.7 \times 10 \times 60)\ Kg$

$m_{water} = 1.272 \times 10^6\ Kg$

Average fuel flow rate $= (11.5 + 11 + 10.8 + 10.5 + 10.4 + 10.2 + 10)\frac{1}{7} \times 10^{-8}$

$\dot{V}_{fuel} = 10.63 \times 10^{-8}\ m^3/s$

$\dot{m}_{fuel} = \dot{V}_{fuel} \times \rho_{fuel} = (10.63 \times 10^{-8} \times 810)\ kg/s$

$\dot{m}_{fuel} = 8.6103 \times 10^{-5}\ Kg/s$

mass of fuel consumed

$m_{fuel} = \dot{m}_{fuel} \times t = (8.6103 \times 10^{-5} \times 10 \times 60)\ Kg$

$m_{fuel} = 0.05166\ Kg$ or $m_{fuel} = 51.66\ g$