Expt 4:

Conclusions

- Experiments show that visible height of laminar jet diffusion flame increases with fuel flow rate.
- Phenomenological considerations show that visible flame height of laminar jet diffusion flame increases linearly with fuel flow rate.
- Experimental verification of this relationship shows that it reasonably predicts the trend shown by experimental data.
- Predictions of visible flame height from Roper's relationship are generally smaller than the experimental data due to the assumed flame temperature T_f.
- Roper's formula is however likely to give more accurate predictions of flame height in accordance with the phenomenological analysis, especially at lower fuel flow rates.