Does it make sense that alphaPrime should decrease, and nonlinearly so, with increasing temperature?
The value of $\alpha'$ decreased with increasing temperature, reflecting an increase in particle size due to the flocculation of clay particles caused by increasing temperature.

$$\alpha = \alpha' p^S$$

Specific cake resistance

$$\log \alpha = S \log p + \log \alpha'.$$

A plot of $\log \alpha$ vs $\log p$ yields a straight line with a slope of $S$, and an intercept at $p = 1$ of $\alpha'$. Such a plot is shown in Fig. 7. According to the literature\(^2\) the value of $S$ should vary from zero for rigid incompressible cakes such as fine sand, to 1.0 for highly compressible cakes. In Fig. 7, the value $S = 1.03$ fits the data well at all temperatures indicating a highly compressible cake. The
Does it make sense that alphaPrime should decrease, and nonlinearly so, with increasing temperature?

**Argument OK?**

**Basic principles of sci/eng:**
- As particle size increases, resistance should decrease... OK (Non-linearly?)
- Why does particle size increase with increasing temperature? Flocculation argument OK? Reference(s) needed?

‘Targeted’ literature search:
- “specific cake resistance” and ‘flocculation’ -etc.