Notes to be held by Editor (~~24~~)

~~APPENDIX~~ "The effects of certain low-frequency phenomena on the calibration of hot wires", by A.E. Perry, A.J. Smits & M.S. Chong

Details of equations (21) and (22) are respectively

$$\overline{\theta}_1 = A\cosh\sqrt{\Pi_1}\,(\eta-\lambda) + B\sinh\sqrt{\Pi_1}\,(\eta-\lambda) + \frac{q}{Z\Pi_1} \qquad (21)$$

$$\overline{\theta}_2 = C\cosh\sqrt{\Pi_2}\,(\eta-\lambda) + D\sinh\sqrt{\Pi_2}\,(\eta-\lambda) + \frac{q}{Z\Pi_2} \qquad (22)$$

where

$$B = a\left\{\left(\frac{Y_8}{Y_7}\right)\Big/\cosh\sigma_2 - \left(\frac{b_2}{b_1}\right)\left(\frac{Y_9}{Y_7}\right)\Big/\cosh\sigma_1 - \left(\frac{1}{\Pi_1}-\frac{1}{\Pi_2}\right)\right\}$$

$$A = \left(\frac{b_2}{b_1}\cdot\frac{Y_9}{Y_7}\right) + B\tanh\sigma_1$$

$$C = A + \frac{q}{Z}\left(\frac{1}{\Pi_1}-\frac{1}{\Pi_2}\right)$$

$$D = B\sqrt{\frac{\Pi_1}{\Pi_2}}$$

Details of equation (23) are

$$\frac{q}{Z} = \frac{b_1 Y_7}{b_2 Y_2 Y_9 + b_1 Y_3 Y_8 + b_1 Y_7 Y_4} \qquad (23)$$

where

$$Y_1 = 1 - \frac{1}{\cosh\sigma_1} + \frac{\Pi_1}{\Pi_2}\left(\frac{1}{\cosh\sigma_2} - 1\right)$$

$$Y_2 = \frac{\tanh\sigma_1}{\sqrt{\Pi_1}} - \frac{aY_1}{\sqrt{\Pi_1}\cosh\sigma_1}$$

$$Y_3 = \frac{\tanh \sigma_2}{\sqrt{\Pi_2}} + \frac{a Y_1}{\sqrt{\Pi_1} \cosh \sigma_2}$$

$$Y_4 = \frac{\sigma_1}{\Pi_1 \sqrt{\Pi_1}} + \frac{\sigma_2}{\Pi_2 \sqrt{\Pi_2}} - \frac{a Y_1}{\sqrt{\Pi_1}} \left(\frac{1}{\Pi_1} - \frac{1}{\Pi_2} \right)$$

$$Y_5 = \frac{a}{\cosh \sigma_1} \left(\frac{1}{\Pi_1} - \frac{1}{\Pi_2} \right) + \frac{K}{\Pi_1 \sqrt{\Pi_1}}$$

$$Y_6 = \frac{a \sqrt{\frac{\Pi_1}{\Pi_2}}}{\cosh \sigma_1} \left(\frac{1}{\Pi_1} - \frac{1}{\Pi_2} \right) - \frac{K}{\Pi_2 \sqrt{\Pi_2}}$$

$$Y_7 = b_2 - \frac{a^2 \sqrt{\frac{\Pi_1}{\Pi_2}}}{b_1 \cosh^2 \sigma_1 \cosh^2 \sigma_2}$$

$$Y_8 = Y_6 - \frac{a Y_5 \sqrt{\frac{\Pi_1}{\Pi_2}}}{b_1 \cosh \sigma_1 \cosh \sigma_2}$$

$$Y_9 = \frac{a Y_6}{b_2 \cosh \sigma_1 \cosh \sigma_2} - Y_5$$

$$a = \frac{1}{\left(\tanh \sigma_1 + \sqrt{\frac{\Pi_1}{\Pi_2}} \tanh \sigma_2 \right)}$$

$$b_2 = \frac{K}{\sqrt{\Pi_2}} + \tanh \sigma_2 + \frac{a \sqrt{\frac{\Pi_1}{\Pi_2}}}{\cosh^2 \sigma_2}$$

$$b_1 = \frac{K}{\sqrt{\Pi_1}} + \tanh \sigma_1 + \frac{a}{\cosh^2 \sigma_1}$$

~~(26)~~

$$\Pi_1 = \bar{\xi}_1 - \bar{q}$$

$$\Pi_2 = n\bar{\xi}_1 - \bar{q}$$

$$\sigma_1 = \sqrt{\Pi_1}\left(\frac{1}{2} + \lambda\right)$$

$$\sigma_2 = \sqrt{\Pi_2}\left(\frac{1}{2} - \lambda\right)$$