

# 水位流量曲線計算書 (その2)

西暦 2008 年 (平成20年)

曲線 ( I )

$$n [H\sqrt{Q}] = 37 \times 167.8697 = 6211.1789$$

$$[H][\sqrt{Q}] = 36.89 \times 135.02 = 4980.8878$$

$$n [H^2] = 37 \times 47.4323 = 1754.9951$$

$$[H]^2 = 36.89^2 = 1360.8721$$

$$[H^2][\sqrt{Q}] = 47.4323 \times 135.02 = 6404.3091$$

$$[H][H\sqrt{Q}] = 36.89 \times 167.8697 = 6192.7132$$

$$a = \frac{n[H\sqrt{Q}] - [H][\sqrt{Q}]}{n[H^2] - [H]^2} = \frac{6211.1789 - 4980.8878}{1754.9951 - 1360.8721} = \frac{1230.2911}{394.1230} = 3.1216$$

$$b = \frac{[H^2][\sqrt{Q}] - [H][H\sqrt{Q}]}{n[H^2] - [H]^2} = \frac{6404.3091 - 6192.7132}{1754.9951 - 1360.8721} = \frac{211.5959}{394.1230} = 0.5369$$

$$a^2 = 3.1216^2 = 9.74$$

$$b/a = 0.5369 / 3.1216 = 0.17$$

$$Q = a^2 (H \pm b/a)^2 = 9.74 (H + 0.17)^2$$

$$R = 0.9966$$