

# 水位流量曲線計算書（その2）

西暦 2005 年（平成17年）

曲線（ 3 ）

$$n [H\sqrt{Q}] = 23 \times 29.4340 = 676.9820$$

$$[H][\sqrt{Q}] = 7.85 \times 75.6674 = 593.9891$$

$$n [H^2] = 23 \times 3.2055 = 73.7265$$

$$[H]^2 = 7.85^2 = 61.6225$$

$$[H^2][\sqrt{Q}] = 3.2055 \times 75.6674 = 242.5519$$

$$[H][H\sqrt{Q}] = 7.85 \times 29.4340 = 231.0569$$

$$a = \frac{n[H\sqrt{Q}] - [H][\sqrt{Q}]}{n[H^2] - [H]^2} = \frac{676.9820 - 593.9891}{73.7265 - 61.6225} = \frac{82.9929}{12.1040} = 6.8567$$

$$b = \frac{[H^2][\sqrt{Q}] - [H][\sqrt{Q}]}{n[H^2] - [H]^2} = \frac{242.5519 - 231.0569}{73.7265 - 61.6225} = \frac{11.4950}{12.1040} = 0.9497$$

$$a^2 = 6.8567^2 = 47.01$$

$$b/a = 0.9497 / 6.8567 = 0.14$$

$$Q = a^2 (H \pm b/a)^2 = 47.01 (H + 0.14)^2$$

$$R = 0.9889$$