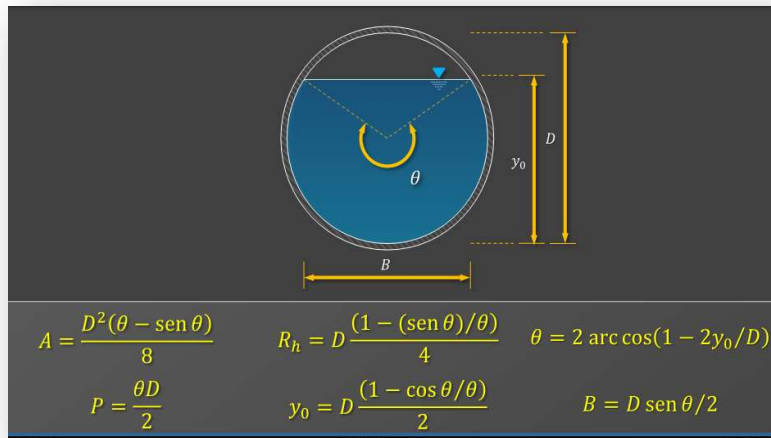


### Cálculo de vazão de condutos livres - circulares

|      |        |    |                         |
|------|--------|----|-------------------------|
| L    | 100 m  | Am | 0.42 m <sup>2</sup>     |
| Φ    | 1.2 m  | Rh | 0.257 m                 |
| I0   | 2.5 %  | V  | 3.995 m/s               |
| n    | 0.016  | Q  | 1.688 m <sup>3</sup> /s |
| Y0/D | 40.00% | Tc | 0.42 s                  |



$$Q = \left(\frac{1}{n}\right) \cdot A \cdot Rh^{\frac{2}{3}} \cdot I_0^{\frac{1}{2}}$$



|    |                        |
|----|------------------------|
| θ  | 156.9 °                |
| A  | 0.42 m <sup>2</sup>    |
| P  | 1.64 m                 |
| Rh | 0.26 m                 |
| Q  | 1.69 m <sup>3</sup> /s |

#### 02) Velocidade

|   |          |
|---|----------|
| V | 4.00 m/s |
|---|----------|

#### 03) Tempo de percurso

|    |          |
|----|----------|
| tc | 0.42 min |
|----|----------|