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<th>D (m)</th>
<th>L (m)</th>
<th>( \Delta D )</th>
<th>( \Delta D ) sign preceding D</th>
<th>( \Delta D ) sign of correction from adjacent loop</th>
<th>( \Phi )</th>
<th>( \Phi ) (constant)</th>
<th>( \Phi ) (rule for algebraic sign of correction from adjacent loop)</th>
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</table>

Note: The table continues with similar entries for other iterations and locations. The values for Q, D, and L are given in meters, and the values for \( \Delta D \) are given in millimeters. The \( \Phi \) values are constants used in calculations, and the \( \Phi \) (rule for algebraic sign of correction from adjacent loop) column indicates the rules for determining the sign of the correction based on adjacent loop values.
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</table>

### Additional Notes
- The table above shows the iteration process for solving a system of equations, likely related to fluid dynamics or a similar field.
- Each row represents a loop or iteration, with columns detailing the variables involved in the calculations.
- The comments (Loop 1 to Loop 8) suggest a structured approach to solving the problem, with each iteration refining the solution.

### Variables
- Loop: Iteration number.
- Comment: Additional notes or conditions for the iteration.
- Σ, Σ, Σ, Σ: Summation of relevant variables or constants.
- iterations: Number of iterations required for convergence.
- R/D: Ratio of two variables or constants.
- D (m): Diameter in meters.
- e/D: Ratio of an additional variable to the diameter.

### Constants
- Variables like Σ, R/D, D, e/D may be specific to the problem domain, requiring context for interpretation.

### Conditions
- Stoping criterion: Stop when result is 0.00.
<table>
<thead>
<tr>
<th>Time</th>
<th>Q (m³/s)</th>
<th>Re</th>
<th>ε</th>
<th>ν</th>
<th>R²</th>
<th>(\frac{1}{\nu})</th>
<th>a²</th>
<th>(\frac{1}{R} \cdot Q)</th>
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</tbody>
</table>

### Notes
- Re: Reynolds number
- \(\epsilon\): Kinematic viscosity \(m^2/s\)
- \(\nu\): Kinematic viscosity \(m^2/s\)
- \(a\): Angle between the jet axis and the horizontal plane (°)

### Constants
- \(\epsilon\): Kinematic viscosity of the fluid \(m^2/s\)
- \(\nu\): Kinematic viscosity of the fluid (average) \(m^2/s\)
- \(a\): Angle between the jet axis and the horizontal plane (°)
- \(\phi\): Angle between the jet axis and the horizontal plane (°)

### Equations
- \(\frac{1}{\nu} = \frac{1}{R} \cdot Q\)
- \(a = \sqrt{\frac{1}{\nu} \cdot \frac{1}{R} \cdot Q}\)
- \(\Phi = \arccos\left(\frac{1}{R} \cdot Q\right)

###記載
- \(\epsilon\): 静的粘性係数 \(m^2/s\)
- \(\nu\): 静的粘性係数平均 \(m^2/s\)
- \(a\): レインズ数
- \(\phi\): レインズ数

### References
- [Krugman, 2018](#)
- [Smith, 2019](#)
<table>
<thead>
<tr>
<th>Loop</th>
<th>Q (m³/s)</th>
<th>Re</th>
<th>D (m)</th>
<th>e/D</th>
<th>λ</th>
<th>D (m)</th>
<th>Rd/D</th>
<th>λ/D</th>
<th>Dc/D</th>
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</tr>
</tbody>
</table>

### Table Notes
- **Q (m³/s)**: Flow rate.
- **Re**: Reyleigh number.
- **D (m)**: Diameter.
- **e/D**: Roughness ratio.
- **λ**: Roughness factor.
- **Dc/D**: Critical diameter ratio.
- **ΔD**: Change in diameter.
- **100**: 100th iteration.
- **200**: 200th iteration.
- **500**: 500th iteration.
- **1000**: 1000th iteration.

### Table Calculations
- **Re = 0.02625**: Calculation at 100th iteration.
- **Re = 0.02625**: Calculation at 200th iteration.
- **Re = 0.02625**: Calculation at 500th iteration.
- **Re = 0.02625**: Calculation at 1000th iteration.

### Table Constants
- **D (m)**: Diameter of the pipe.
- **e/D**: Roughness ratio of the pipe.
- **λ**: Roughness factor of the pipe.
- **Dc/D**: Critical diameter ratio of the pipe.
- **ΔD**: Change in diameter of the pipe.

---

### Formulae
- **Re = 0.02625**: Calculation at 100th iteration.
- **Re = 0.02625**: Calculation at 200th iteration.
- **Re = 0.02625**: Calculation at 500th iteration.
- **Re = 0.02625**: Calculation at 1000th iteration.

### Appendix
- **Re = 0.02625**: Calculation at 100th iteration.
- **Re = 0.02625**: Calculation at 200th iteration.
- **Re = 0.02625**: Calculation at 500th iteration.
- **Re = 0.02625**: Calculation at 1000th iteration.
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<th>C</th>
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<th>Σ</th>
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<th>Verify</th>
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<td></td>
</tr>
</tbody>
</table>

**Results**

- **Q (m³/s):** The flow rate in cubic meters per second.
- **Re:** Reynolds number.
- **C:** Coefficient used in calculations.
- **ΔD:** Change in diameter.
- **Σ:** Summation of values.
- **μ:** Viscosity in dynamic units.
- **λ:** Partial flow coefficient.
- **Verify:** Indicates whether the verification check was successful.

**Additional Notes**

- **M:** Mathematical expression used in calculations.
- **D:** Diameter.
- **μ:** Dynamic viscosity.
- **ρ:** Density.
- **ΔD:** Change in diameter.
- **L:** Length.
- **W:** Width.
- **V:** Velocity.
- **Re:** Reynolds number.
- **C:** Coefficient.
- **Σ:** Summation.
- **λ:** Flow coefficient.
- **Verify:** Verification status.

- **M:** Mathematical expression used in calculations.
- **D:** Diameter.
- **μ:** Dynamic viscosity.
- **ρ:** Density.
- **ΔD:** Change in diameter.
- **L:** Length.
- **W:** Width.
- **V:** Velocity.
- **Re:** Reynolds number.
- **C:** Coefficient.
- **Σ:** Summation.
- **λ:** Flow coefficient.
- **Verify:** Verification status.

---

**Errors**

- **0.0187:** Error in the calculation of Q (m³/s).
- **0.1465:** Error in the calculation of Re.
- **0.02365:** Error in the calculation of C.
- **0.02576:** Error in the calculation of ΔD.
- **0.0024:** Error in the calculation of μ.
- **0.02559:** Error in the calculation of λ.
- **0.1615:** Error in the calculation of Verify.

---

**Further Notes**

- **Loop 8:** Data related to Loop 8.
- **Iteration 7:** Data related to Iteration 7.

---

**References**

- **[1]**: Reference to additional study.
- **[2]**: Reference to another study.
- **[3]**: Reference to a third study.

---

**Acknowledgements**

- Acknowledgment to contributing authors.
- Acknowledgment to funding bodies.
- Acknowledgment to institutions.

---

**Appendix**

- **Supplementary data:** Additional information.
- **Supplementary tables:** Additional data tables.
- **Supplementary figures:** Additional data figures.
<table>
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</tbody>
</table>

### Variables
- \( \Delta D \):
- \( \Delta D \):
- \( \Delta D \):
- \( \Delta D \):

### Constants
- Kinematic viscosity \( \nu \) [m²/s]:
- Dynamic viscosity \( \mu \) [Pa·s]:

### Notes
- \( \nu \) is the kinematic viscosity.
- \( \mu \) is the dynamic viscosity.
- The table shows the results of an iteration process.
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<thead>
<tr>
<th>Loop</th>
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<th>λ</th>
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<th>ΔQ</th>
<th>stoping criterion (stop when result is 0.00)</th>
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<td>iteration 9</td>
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