

Description of Additional Supplementary Files

File name: Supplementary Movie 1

Description: This video visualizes the internal flow of water through Tesla's conduit in the forward and reverse directions at Reynolds number $Re = 200$. A fixed pressure difference is applied across the channel, and blue and green dyes are injected upstream of the conduit to reveal flow streaklines. In the forward direction, the flow is observed to be quite steady. Perturbing the inlet tubing helps to show the presence of flow, videos of which otherwise appear static. In the reverse direction, the flows are highly unsteady and lead to strong mixing.