

Script for Stent Coating Video – Axial View

Before playing the video adjust the brightness and contrast so the struts can be better observed on the screen.

The sizes of the main elements in the video are: strut width $\sim 100\mu\text{m}$; glass tip of the microdispenser $\sim 550\mu\text{m}$.

The video shows an axial view (camera along the stent axis) of the stent coating process. The end of the glass nozzle that is part of the piezoelectric microdispenser is observed on the center of the screen. The stent moves in a coordinated fashion (rotation and axial translation) so the strut is under the ejected fluid droplets. Only a small region of the struts is in focus at one time. As the stent is moving along the axis, different regions of the strut come into focus.

The landing of the fluid droplets can be observed on the strut that is running from lower left to upper right and is in focus. The fluid appears as a continuous surface that moves as the strut moves so its end is always under the microdispenser. At the end of the video (when the end of the stent is placed under the device) the fluid evaporating from the strut can be observed. Based on the amount of fluid deposited on the strut and this video it can be concluded that webbing cannot occur.