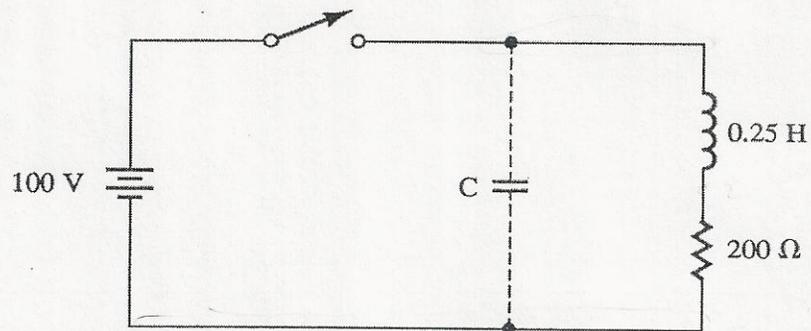


Problem:

In the R-L circuit shown, the switch is closed long enough to establish a steady state and then is suddenly opened. To reduce the voltage that appears across the switch, it is proposed to connect a capacitor as shown in the following figure:



Choose a capacitor that will limit the voltage appearing across the open switch contacts to 150 V. Specify the capacitor completely by stating not only its value but also its voltage rating.

Acknowledgment: This problem is Problem 7.35 in Electrical Engineering Design Compendium.