Physics 151 Class Exercise: Elasticity

1. A steel wire 4.5 m long stretches 0.15 cm when it is given a tension of 370 N. (a) What is the diameter of the wire? (b) If it is desired that the stretch be less than 0.15 cm, should its diameter be increased or decreased? Explain.

Answer: 

Answer: 
2. The American naturalist Charles William Beebe (1877–1962) set a world record in 1934 when he made a dive to a depth of 923 m below the surface of the ocean. The dive was made in a device known as the bathysphere, which was basically a steel sphere 4.75 ft in diameter. How much did the volume of the sphere change as it was lowered to its record depth?

Answer: [Blank]