HW for Lecture 10

The problem # is based on the 5th version of the textbook.

34.

Equiaxed MAR-M 247 alloy is to support a stress of 276 MPa (Fig. 7.31). Determine the time to stress rupture at 850°C.

Figure 7.31
DS MAR-M 247 alloy (Fig. 7.31) is used to support a stress of 207 MPa. At what temperature (°C) will the stress rupture lifetime be 210 h?

If DS CM 247 LC alloy (middle graph of Fig. 7.31) is subjected to a temperature of 950°C for 3 years, what is the maximum stress that it can support without rupturing?