

7.D2 We are asked to determine whether or not it is possible to cold work brass so as to give a minimum Brinell hardness of 150 and at the same time have a ductility of at least 20%EL. According to Figure 6.19, a Brinell hardness of 150 corresponds to a tensile strength of 500 MPa (72,000 psi.) Furthermore, from Figure 7.19(b), in order to achieve a tensile strength of 500 MPa, deformation of at least 36%CW is necessary. Finally, if we are to achieve a ductility of at least 20%EL, then a maximum deformation of 23%CW is possible from Figure 7.19(c). Therefore, it is *not possible* to meet both of these criteria by plastically deforming brass.