

Chapter 11, Problem 92.

As shown in Fig. 11.97, a 550-V feeder line supplies an industrial plant consisting of a motor drawing 60 kW at 0.75 pf (inductive), a capacitor with a rating of 20 kVAR, and lighting drawing 20 kW.

- (a) Calculate the total reactive power and apparent power absorbed by the plant.
- (b) Determine the overall pf.
- (c) Find the current in the feeder line.

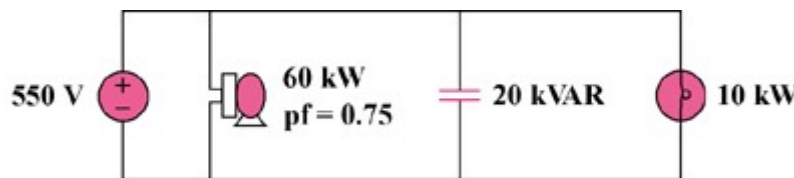


Figure 11.97
For Prob. 11.92.