with an orifice diameter one half of the branch diameter. The experimental results definitely show more dissipation than the authors predict.

**Authors’ Closure**

The authors wish to thank Dr. Healey for his discussion of the paper. The authors agree that a more exact model of a junction is necessary and do not wish to mislead the reader into believing that the simplified model will work under all conditions. On the other hand, the authors believe it is useful to illustrate conditions where the simplified model can be used.

With regard to the orifice resistance with mean flow in the line, it is appropriate to use the incremental or linearized a-c value of the orifice resistance in these small-signal dynamic calculations. Assuming incompressible flow and that the orifice area and flow coefficient are constant, the incremental or linearized a-c value of the orifice resistance $Z_{ac}$ is twice the d-c resistance of the orifice $Z_{dc}$. For the conditions of Fig. 9, however, the theoretical curves are approximately the same whether the a-c or d-c value of the orifice resistance is used. For the conditions of Fig. 10, the theoretical curves are affected somewhat by the difference between the a-c and d-c values. Fig. 11 has been included to illustrate this difference. The experimental results of Fig. 10 are also included to again illustrate the larger dissipation than predicted by the laminar theory.