

as shown in Figure 6. The linear motion of the rod causes the wires in the bundle to squeeze together on the shaving and then relax repeatedly..

The wires are connected to the generator and the linear motion is started. The test continues until an electrical event occurs or all of the metal shavings have worked their way out of the bundle

Longitudinal Test

In this test set-up two identical wire bundles are made from three 20 gauge wires and one 18 gauge wire as shown in Figure 7. Each bundle was held together with lacing tape. One of the bundles is secured to a stationary platform with P-clamps and tape. The other bundle is secure to an oscillating bar. The two bundles are parallel at this point and are kept together with nylon ties with several metal shavings placed between the two bundles (Figure 8).

The three 20 gauge wires in both bundles are each connected to one of three phases of the generator as shown in Figure 8. The 18 gauge wire is also connected to one of the phases.

The oscillator is then turned on. The test continues until an electrical event occurs or all of the metal shavings have work their way out of the bundle.

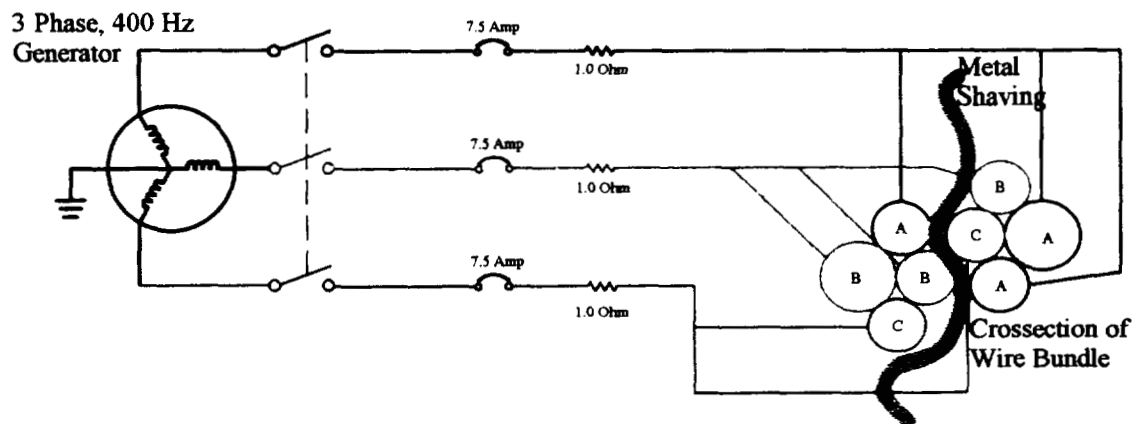


Figure 7. Circuit used for metal shaving abrasion tests (longitudinal).