

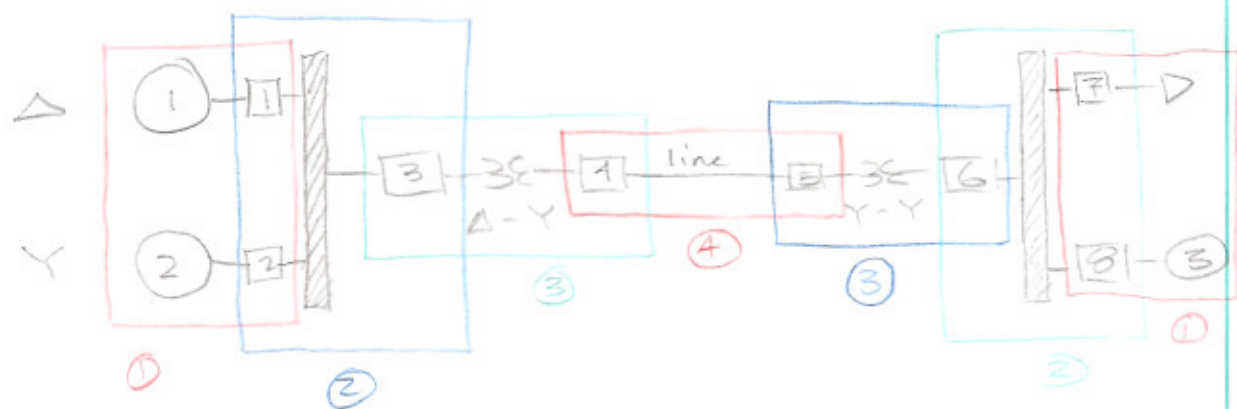
Protection System

- ① Primary protection
- ② Back up protection

Primary protection is used for immediate protection of components of a power system by means of instantaneous relay elements

Back up protection is used to protect against malfunctions in primary devices and systems themselves

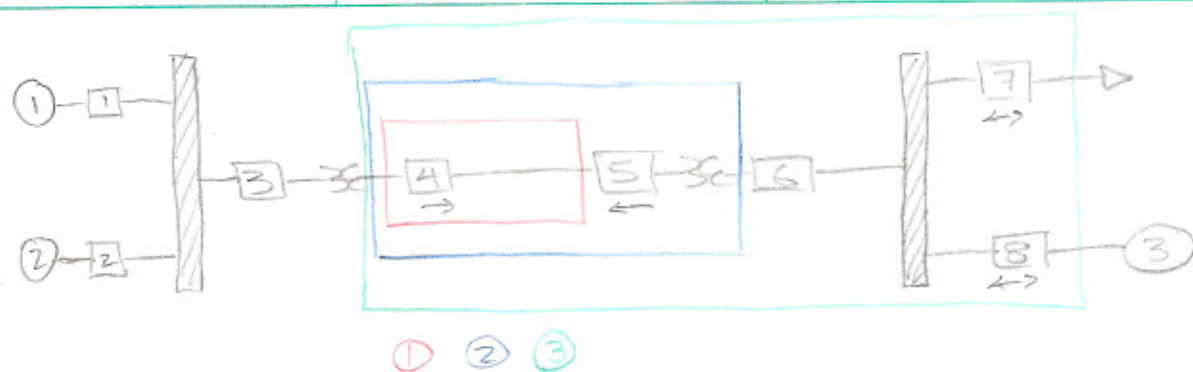
Figure ① below shows the primary zone of protection for different system components



The primary zones shown above, numbers 1 through 4 are used to protect

- (A) Machines and loads (CB 1, 2, 7, 8)
- (B) Buses (CB. 1, 2, 3, 6, 7, 8)
- (C) Transformers (CB. 3, 4, 5, 6)
- (D) Transmission Lines (CB. 4, 5)

Figure 2 below shows the back up protection zones of CB. 4 of the same system. protection for different system components.



The arrow under CB4 indicates the directional impedance (distance) relay* sends the controlling signal to CB4. The operating characteristics of such a multidirectional relay is shown below.

