

transmitting the results to a central location.

20. The method according to claim 19 wherein the amount of current obtained by a section of pipe is compared to a predetermined baseline value.

21. An electrical disconnect device comprising:

a stationary portion having at least one conductive contact point positioned thereon;

a movable portion having at least one conductive contact point positioned thereon;

an actuator for moving the movable portion between the stationary and movable portions whereby when the movable portion is in a closed position, the contact points are in physical contact with each other, and when the movable portion is in an open position, the contact points are separated by a predetermined distance.

22. The device according to claim 21 wherein the movable and stationary portions are connected to an electrical circuit and the movable portion is in the open position when the electrical circuit is not active.

23. The device according to claim 22 wherein the movable portion is in the open position at least 50% of the time.

24. The device according to claim 22 wherein the movable portion is in the open position at least 80% of the time.

25. The device according to claim 22 wherein the electrical circuit includes a remote monitoring unit.

26. The device according to claim 25 wherein the remote monitoring unit monitors cathodic protection parameters on a pipeline.

27. The device according to claim 25 wherein the remote monitoring unit monitors the output of sensors on a pipeline.

28. The device according to claim 25 wherein the remote monitoring unit monitors the status of a cathodic protection rectifier on a pipeline.

29. The device according to claim 25 wherein the predetermined distance between the contact points are a predetermined distance apart in the open position to avoid arcing across the contact points.

30. The device according to claim 22 wherein said electrical circuit includes a battery.

31. The device according to claim 30 wherein the voltage of said battery is sensed while said device is in the open position and the movable portion of said device is moved into the closed position when said voltage drops below a predetermined level.

32. The device according to claim 30 wherein said battery is charged by a solar panel.

33. The device according to claim 21 further comprising a microprocessor and on-board clock for opening and closing the movable portions at predetermined times.

34. An electrical circuit comprising a disconnect device, wherein said disconnect device is in an open position a majority of the time, such that the electrical circuit is not active said majority of the time.

35. The electrical circuit according to claim 34 wherein said electrical circuit includes a battery.

36. The electrical circuit according to claim 35 wherein the voltage of said battery is sensed while said device is in the open position and the movable portion of said device is moved into the closed position when said voltage drops below a predetermined level.

37. The electrical circuit according to claim 35 wherein said battery is charged by a solar panel.

38. A current interruption assembly comprising:

a plurality of interrupters, each interrupter having an internal clock,

wherein the internal clocks are capable of being synchronized with each other and wherein the interrupters are programmed to repetitively switch multiple current sources on and off in a consecutive manner such that only one current source is switched off at any given time.

39. The assembly according to claim 38 wherein the interrupters are capable of switching multiple current sources on and off in unison at least once during each repetition of switching current sources off consecutively.

40. The assembly according to claim 39 wherein the interrupters are programmable whereby the times that each current source will be on or off during the cycle of switching on and off consecutively is predetermined.

41. The assembly according to claim 39 wherein the interrupters are programmable whereby the times that each current source will be on or off during the cycle of switching on and off in unison is predetermined.

42. The assembly according to claim 39 wherein the interrupters are programmable whereby a time delay between one interrupter switching back on and the next interrupter in the consecutive switching cycle switching off is predetermined.

43. The assembly according to claim 39 wherein the interrupters are programmable whereby the current sources are switched off in unison any number of times during one cycle of switching the current sources on and off consecutively.

44. The assembly according to claim 38 further comprising a logger with an internal clock synchronized with the interrupters.

45. The assembly according to claim 44 wherein the logger is programmable to read, display and store values automatically during predetermined time periods.

46. The assembly according to claim 38 further comprising a remote monitoring and control unit.

47. The assembly according to claim 46 wherein the remote monitoring and control unit is capable of activating and deactivating the interrupter remotely.

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