Universal Semi-Automated LPI System

The Universal Semi-Automated Fluorescent Penetrant Inspection System has a control system that utilizes a pre-programmed PLC to control the timing sequences, cycle times and conveyor automation. This design provides the user with a long lasting, reliable system that permits quick and easy timing sequence changes and extremely easy operation.

Sequence of Operation:

**Automated Penetrant Tank:** Start process cycle with a push of a button. Features: timer controlled dip and dwell, followed by the part(s) being automatically sent via gear driven rollers through the automatic doors of the Automated Wash Booth.

**Automated Wash Booth:** An Automated Wash Cycle begins after the doors have closed and since Touch-Up Wash is normally need, an Audio / Visual Alarm informs the operator to return to the booth to perform the touch-up wash. When completed a push button actuates the gear driven rollers to index the part(s) through the automatic doors into the Parts Dryer.

**Timer Controlled - Parts Dryer:** At the end of the adjustable drying timer, the automatic doors open and gear driven rollers index the part(s) through the automatic doors of the Timer Controlled Dry Developer Tunnel.

**Timer Controlled – Dry Developer Tunnel:** A timer controls the formation of the Dry Developer Cloud. Another timer controls the dwell time length. A final timer controls the evacuation of the excess Dry Developer Dust Cloud that may remain in the chamber of the tunnel via an industrial Dust Collector. After all this, the automatic doors open and the gear driven rollers index the part(s) into the Inspection Booth.
**Inspection Booth:** When the basket enters the Inspection Booth an Audible / Visual Alarm informs the operator to return and perform the high intensity blacklight lamp inspection on the part(s).