

Electrical Safety: Shock, Arc Flash and Lock-out/Tag-out Picture This



This image shows a maintenance worker opening an electrical panel inside a mechanical room. The upstream breaker has been switched off, the work order says the circuit is dead, and the task is supposed to take five minutes. There is no lock on the disconnect. There is no tag. The worker did not test for voltage with a meter – the indicator light on the panel was already off, and that felt like enough. They are wearing safety glasses and leather gloves, but no arc-rated coat, no face shield, no voltage-rated gloves. The screwdriver slips against an exposed bus and contacts the enclosure. A short circuit ignites. A fireball at 35,000°F erupts from the panel.

Electricity does not announce itself. The panel does not warn you it is still live, the meter does not test itself, and the circuit does not stop being dangerous just because the switch is off. One worker assuming, one missing lock, one second of contact – and a routine repair becomes a fatality investigation. Lock and tag

every energy source. Test for voltage with a known-good meter, then test the meter again on a live source. Wear the arc-rated PPE the task requires, every time. Treat every conductor as live until you have proven otherwise – because that proof is the only thing between you and an arc flash. The panel does not forgive complacency.