

Wrong Meter, Wrong Voltage

A 600-volt meter on a 14,400-volt circuit. He lived 18 days.

10 MIN

NFPA 70E Art. 110.6 — Qualification · Art. 130.5 — Arc Flash Risk Assessment

Colorado FACE 92CO039

WHAT HAPPENED

1992 · Colorado · Process equipment manufacturing · 38-year-old maintenance electrician

A co-worker asked the maintenance electrician to find out why an 85-horsepower motor would not run. He took a multimeter rated for 600 volts and went to check the motor's power supply. The motor was fed from inside a 14,400-volt, 600-amp metal switch box whose voltage rating was not clearly marked. When he attempted to check the fuse on that circuit, the air inside the cabinet ionized and a flash fire followed. He suffered burns over 50 percent of his body and died 18 days later.

WHY IT HAPPENED

The equipment was not labeled with its voltage, and he was not authorized to work above 440 volts — but nothing in the system stopped him from opening that door with the wrong instrument.

WHAT THE STANDARD REQUIRES

- Test instruments must be rated for the circuit — the right CAT rating AND the right voltage.
- Equipment must carry legible voltage and arc flash labeling before anyone opens it.
- Qualification is task-specific and equipment-specific. Know the limit of your authorization.
- Arc flash risk assessment happens BEFORE the door opens, not after.

TALK ABOUT IT — DO NOT SKIP THIS PART

1. What is the highest voltage you are authorized to work on here? Who told you that, and is it written down?
2. Pull out your meter. What is its CAT rating and voltage rating? Is it right for our gear?
3. Which enclosures on this site have no voltage or arc flash label?

WHAT WE WILL DO DIFFERENTLY HERE

ATTENDANCE

PRINT NAME	SIGNATURE	PRINT NAME	SIGNATURE