



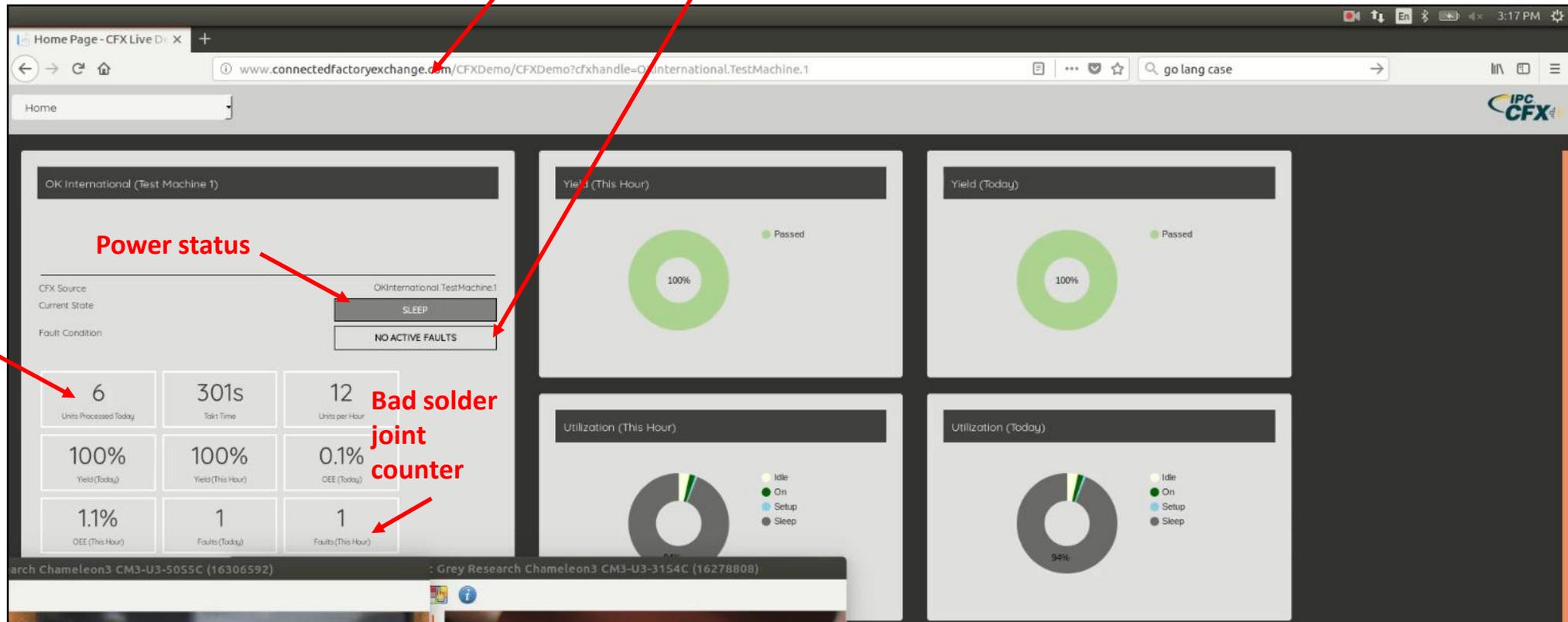
METCAL™

IPC CFX Process Control and Traceability

Metcal Real Time Risk Mitigation in Hand Soldering Application

www.connectedfactoryexchange.com/CFXDemo/.. Metcal demo page

Traceability: Error status



Good solder joint counter

Bad solder joint counter

Arch Chameleon3 CM3-U3-5055C (16306592) : Grey Research Chameleon3 CM3-U3-3154C (16278808)



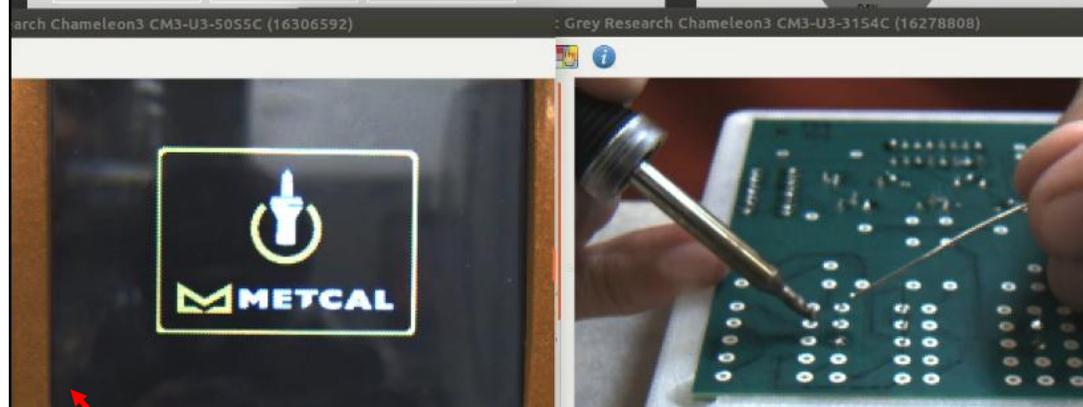
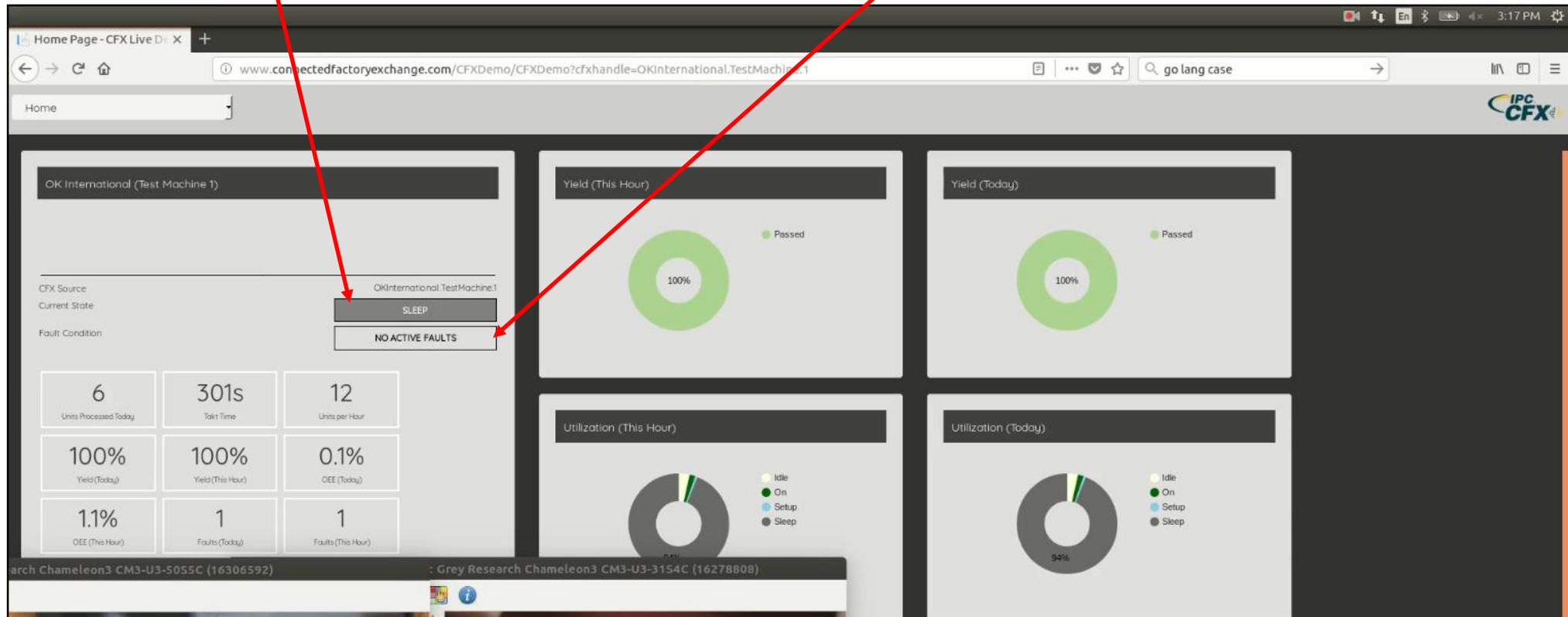
Process control: after applying solder, operator will wait until LED result indicated before starting the next joint.

Traceability: Metcal Connection Validation CV-5200 Power Supply

Demo work station

**Power saving
SLEEP MODE**

NO ACTIVE FAULT

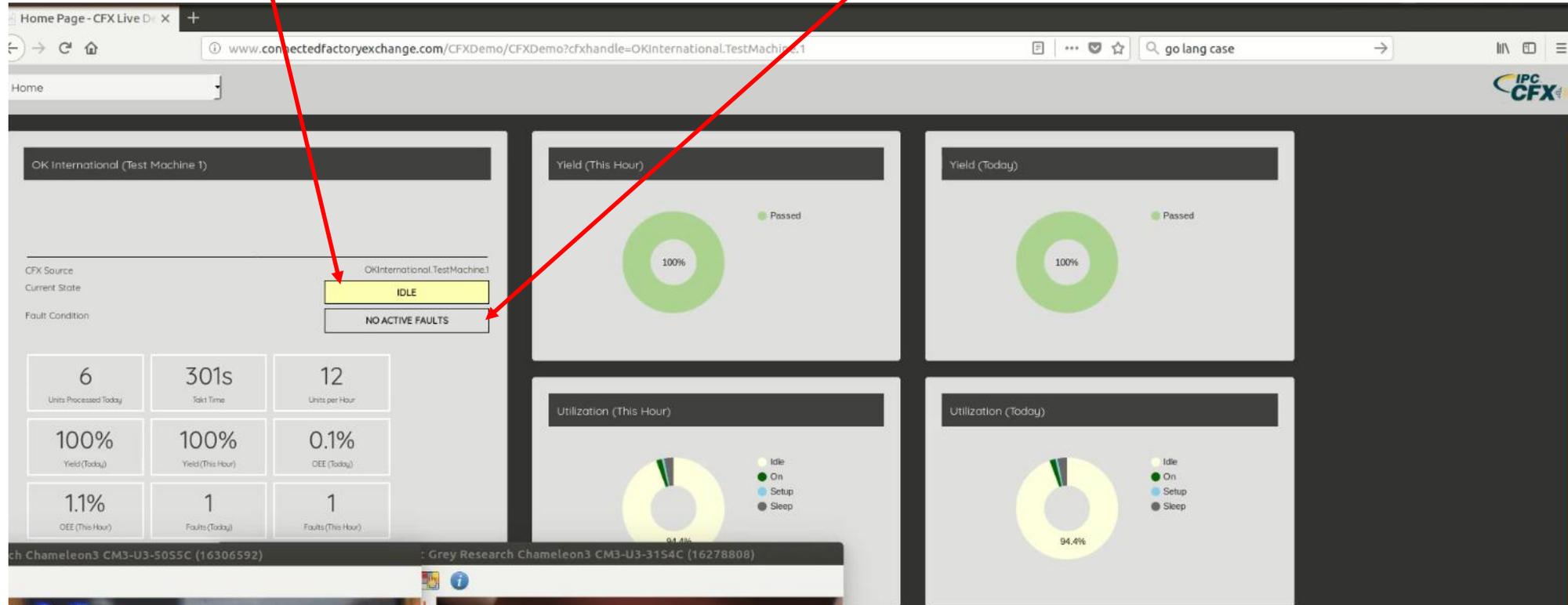


**After applying solder, operator will wait until LED result indicated before starting the next joint.
GREEN LED = good joint
RED LED = bad joint**

Power saving SLEEP MODE

IDLE MODE

NO ACTIVE FAULT



After applying solder, operator will wait until LED result indicated before starting the next joint.

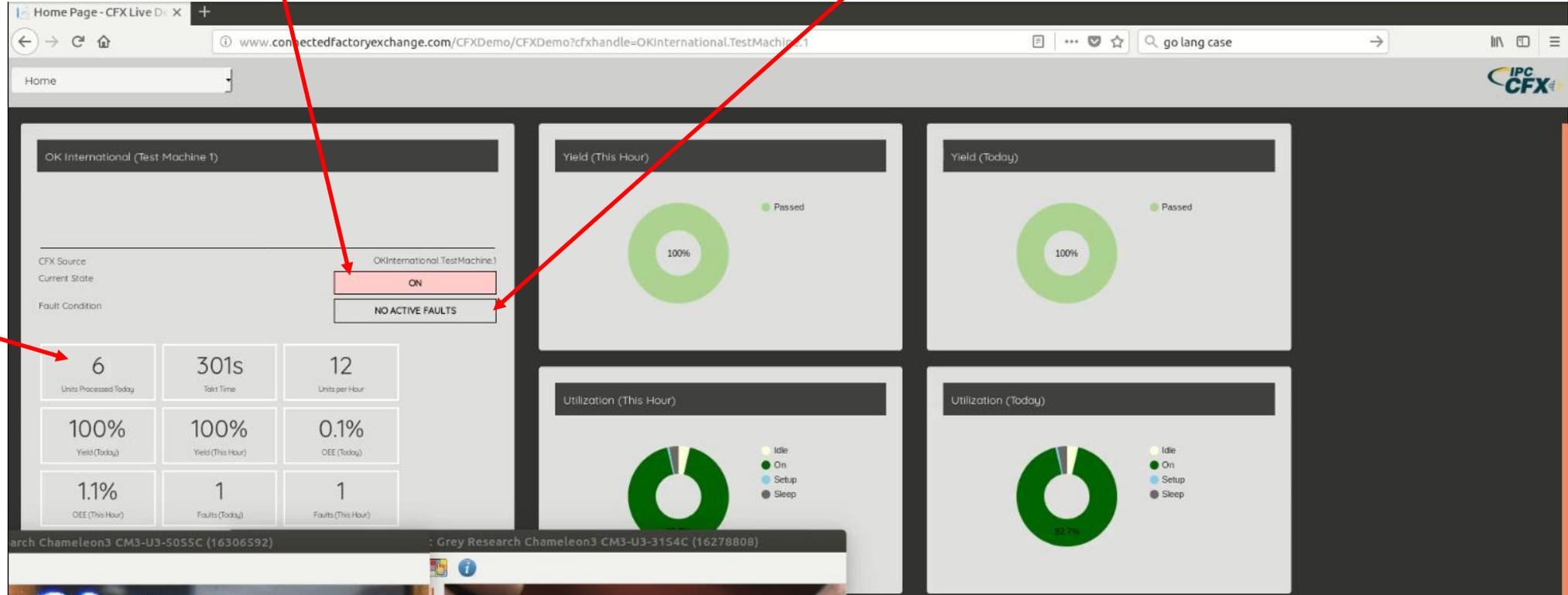
GREEN LED = good joint

RED LED = bad joint

IDLE MODE – Idle tip temperature: 745F – Idle power: 16W - Cartridge part number: CVC-7CH0025S

Solder event detected – Power is on

NO ACTIVE FAULT



Good solder joint

counter = 6



After applying solder, operator will wait until LED result indicated before starting the next joint.

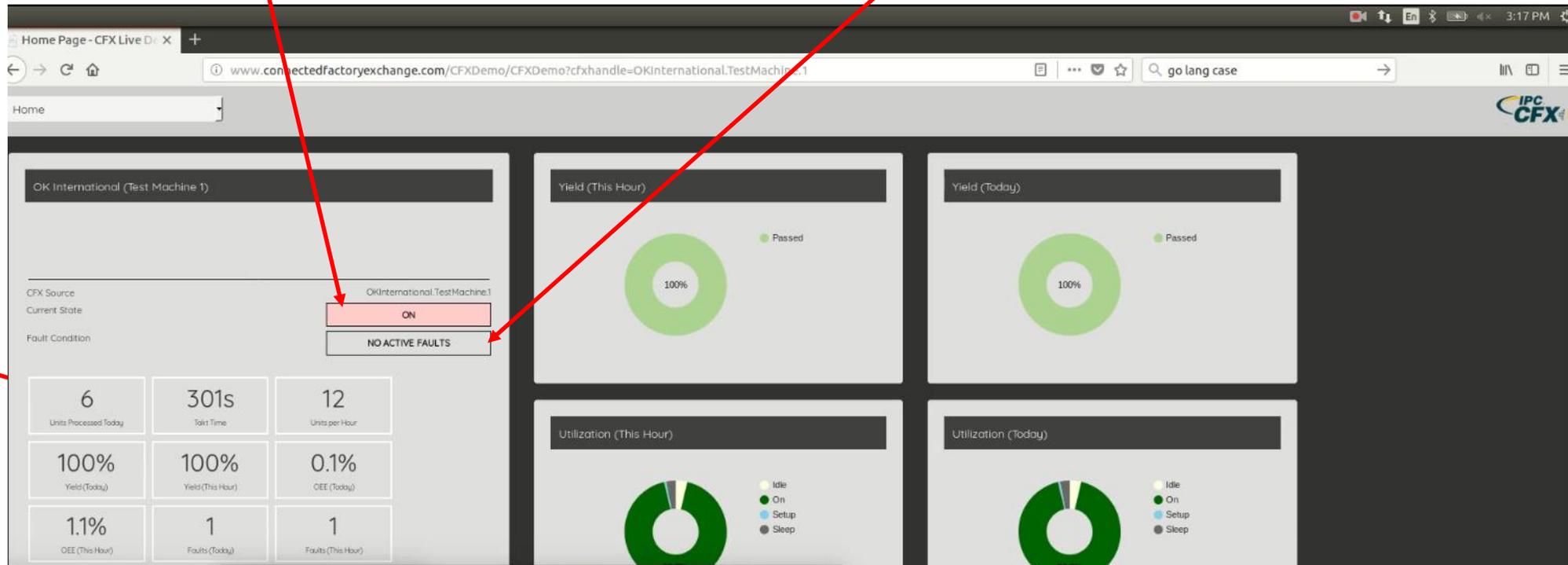
GREEN LED = good joint

RED LED = bad joint

Power is ON – Idle tip temperature: 709F – Idle power: 30W - Cartridge part number: CVC-7CH0025S

IMC calculation – Power is ON

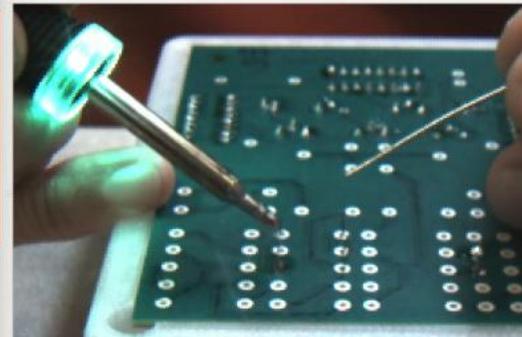
NO ACTIVE FAULT



Good solder joint

counter = 6

Chameleon3 CM3-U3-5055C (16306592) : Grey Research Chameleon3 CM3-U3-3154C (16278808)



GREEN LED

Power is ON – Idle tip temperature: 709F – Idle power: 30W - Cartridge part number: CVC-7CH0025S

Idle power – Ready for the next joint

NO ACTIVE FAULT

Good solder joint

counter = 7

The image shows a screenshot of the IPC CFX Live dashboard for 'OK International (Test Machine 1)'. The dashboard includes several key performance indicators (KPIs) and status indicators:

- Current State:** IDLE
- Fault Condition:** NO ACTIVE FAULTS
- Yield (This Hour):** 100% (Passed)
- Yield (Today):** 100% (Passed)
- Units Processed Today:** 7
- Task Time:** 300s
- Units per Hour:** 12
- Yield (Today):** 100%
- Yield (This Hour):** 100%
- OEE (Today):** 3.9%
- OEE (This Hour):** 31.2%
- Faults (Today):** 1
- Faults (This Hour):** 1
- Utilization (This Hour):** 94.3%
- Utilization (Today):** 94.3%

Below the dashboard, there is a close-up image of a soldering iron tip. The tip is labeled with '16' (power), 'CVC-7CH0025S' (cartridge part number), and '744°F' (tip temperature). The 'ESD' indicator is lit, and the 'LED' is off.

LED is off

Idle power – Idle tip temperature: 744F – Idle power: 16W - Cartridge part number: CVC-7CH0025S

IMC calculation – Power is on

NO ACTIVE FAULT

The screenshot shows a web dashboard for 'OK International (Test Machine 1)'. The dashboard includes several key performance indicators (KPIs) and status indicators:

- Current State:** ON
- Fault Condition:** NO ACTIVE FAULTS
- Yield (This Hour):** 100% (Passed)
- Yield (Today):** 100% (Passed)
- Utilization (This Hour):** 32.4%
- Utilization (Today):** 32.4%
- Units Processed Today:** 9
- Task Time:** 14s
- Units per Hour:** 257
- Yield (Today):** 100%
- Yield (This Hour):** 100%
- OEE (Today):** 4%
- OEE (This Hour):** 32.2%
- Faults (Today):** 1
- Faults (This Hour):** 1

Below the dashboard, there is a physical device with a red LED indicator. The device's display shows:

- Temperature:** 725°F
- Power:** 25W
- Cartridge part number:** CVC-7CH0025S
- ESD:** (Electrostatic Discharge protection indicator)
- CV:** (Control Voltage indicator)

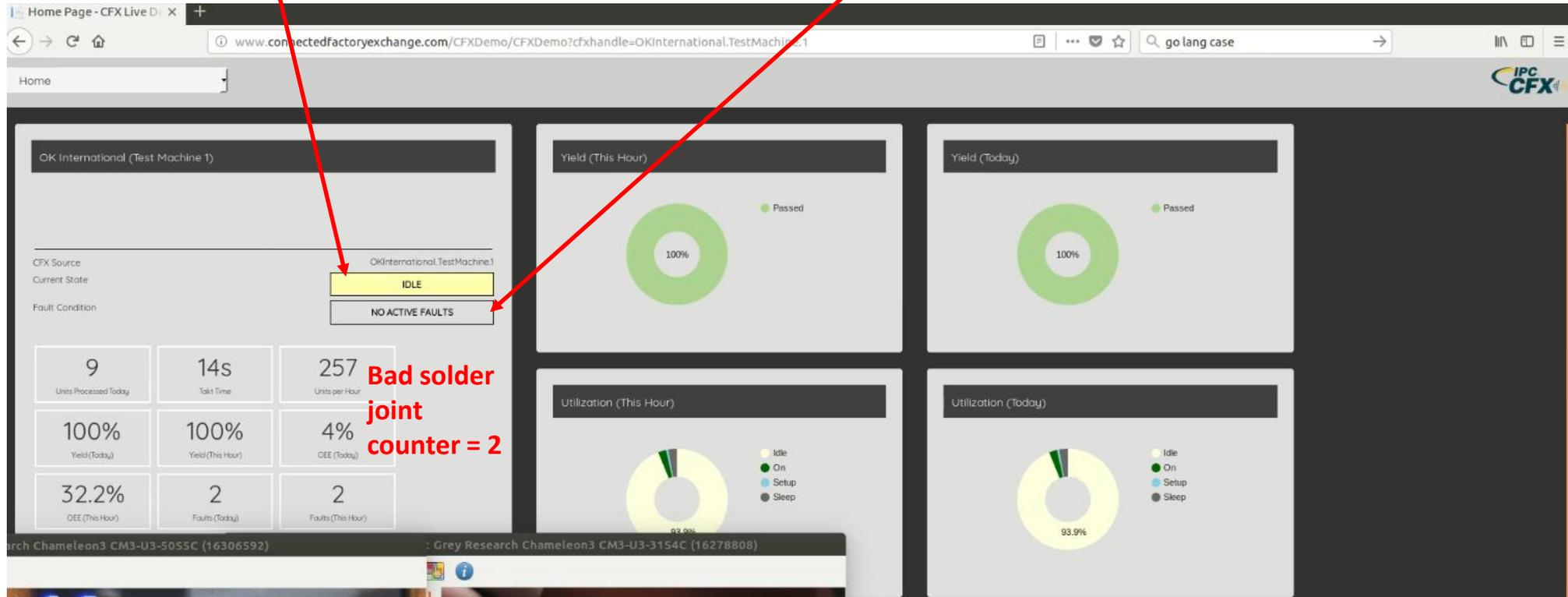
Bad solder joint counter = 1

RED LED

Power is on – Idle tip temperature: 725F – Idle power: 25W - Cartridge part number: CVC-7CH0025S

Idle power – Ready for the next joint

NO ACTIVE FAULT



Bad solder joint counter = 2



LED is off

Power is on – Idle tip temperature: 745F – Idle power: 16W - Cartridge part number: CVC-7CH0025S

ESD event detected

The dashboard displays the following data for 'OK International (Test Machine 1)':

CFX Source	OKInternational.TestMachine.1
Current State	ON
Fault Condition	ESD

12	13s	277
Units Processed Today	Takt Time	Units per Hour
100%	100%	0.2%
Yield (Today)	Yield (This Hour)	OEE (Today)
1.7%	5	5
OEE (This Hour)	Faults (Today)	Faults (This Hour)

Yield (This Hour)	Yield (Today)
100%	100%
Passed	Passed

Utilization (This Hour)	Utilization (Today)
32.4%	32.4%
Legend: Idle, On, Setup, Sleep	Legend: Idle, On, Setup, Sleep

Bad solder joint counter = 2

ESD event detected