

Capacitor  
~~Capacitor~~ Oxide

PROCESS EQUIPMENT FAILURE RESPONSE

ERROR	RESPONSE	ERROR	RESPONSE
MFS#1 communication failure	CONT	MFS#2 communication failure	CONT
MFS#1 in manual mode	CONT	MFS#2 in manual mode	CONT
MFS#1 temp/presr interlock	CONT	MFS#2 temp/presr interlock	CONT
MFS#1 ambient temp too high	CONT	MFS#2 ambient temp too high	CONT
MFS#1 activation error	CONT	MFS#2 activation error	CONT
MFS#1 leak error	CONT	MFS#2 leak error	CONT
MFS#1 fault	CONT	MFS#2 fault	CONT
FCU communication failure	CONT	BOATL communication failure	CONT
FCU in manual mode	CONT	BOATL in manual mode	CONT
FCU fault	CONT	BOATL fault	CONT

If powerfail duration is less than 3 sec, then CONT; else CONT.

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TOLERANCE/FAULT RESPONSE  
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SNAL    LO-TOL    HI-TOL    DELAY    DURATION    GOTO(if out-of-tolerance)

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default tolerance/fault items

CONDITION

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STEP: IDLE          COMMENT: IDLE STATE
  TEMPL = 550.0 DEGC
  TEMPC = 550.0 DEGC
  TEMPS = 550.0 DEGC
  BOATSPD = 5.0 IPM
    N2 = 1250. SCCM
  BOATIN = ON
  N2CARR = 250.0 SCCM
    
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PROCESS RUN SEQUENCE

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STEP: STRT          COMMENT: RUN: 1ST STEP      TIME: 00.00.05
  TEMPL = 550.0 DEGC
  TEMPC = 550.0 DEGC
  TEMPS = 550.0 DEGC
    N2 = 5000. SCCM
STEP: 0005          COMMENT: PULL BOATS OUT     TIME: 00.08.00
  TEMPL = 400.0 DEGC
  TEMPC = 500.0 DEGC
  TEMPS = 450.0 DEGC
  BOATSPD = 10.0 IPM
    N2 = 5000. SCCM
  BOATOUT = ON
  If OUTLMT = ON then goto 0006
  If EVENT = ON then goto 0006
STEP: 0006          COMMENT: LOAD WAFERS        TIME: 00.15.00
  TEMPL = 400.0 DEGC
  TEMPC = 500.0 DEGC
  TEMPS = 450.0 DEGC
  BOATSPD = N/C IPM
    N2 = 5000. SCCM
  BOATOUT = ON
  If EVENT = ON then goto BTIN
  SONIC = ON
STEP: BTIN          COMMENT: PUSH BOATS IN      TIME: 00.09.00
  TEMPL = 550.0 DEGC
  TEMPC = 550.0 DEGC
  TEMPS = 550.0 DEGC
  BOATSPD = N/C IPM
  TCUID = 18
  BOATIN = ON
    N2 = 5000. SCCM
  If EVENT = ON then goto 0008
STEP: 0008          COMMENT: STABLIZE           TIME: 00.15.00
  TEMPL = 550.0 DEGC
    
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    TEMPC = 550.0 DEGC
    TEMPS = 550.0 DEGC
    BOATSPD = N/C    IPM
    N2 = 3000. SCCM
    BOATIN = ON
    If EVENT = ON then goto 0010
STEP: 0010      COMMENT: TEMP RAMP UP      TIME: 00.50.00
    TEMPL = 950.0 DEGC
    TEMPC = 950.0 DEGC
    TEMPS = 950.0 DEGC
    N2 = 3000. SCCM
    O2LO = 60. SCCM
    RMPRATE = 10.0 D/M
STEP: 0015      COMMENT: STABLIZE          TIME: 00.05.00
    TEMPL = N/C    DEGC
    TEMPC = N/C    DEGC
    TEMPS = N/C    DEGC
    N2 = 3000. SCCM
    O2LO = 60. SCCM
STEP: 0020      COMMENT: DRYOX            TIME: 01.30.00
    TEMPL = N/C    DEGC
    TEMPC = N/C    DEGC
    TEMPS = N/C    DEGC
    O2HI = 3000. SCCM
STEP: 0025      COMMENT: ANNEAL           TIME: 00.01.00
    TEMPL = N/C    DEGC
    TEMPC = N/C    DEGC
    TEMPS = N/C    DEGC
    N2 = 3000. SCCM
STEP: 0026      COMMENT: RAMP DOWN        TIME: 02.00.00
    TEMPL = 550.0 DEGC
    TEMPC = 550.0 DEGC
    TEMPS = 550.0 DEGC
    N2 = 3000. SCCM
    If TEMPC < 550.5 DEGC then goto BTOT
    If EVENT = ON then goto BTOT
STEP: BTOT      COMMENT: HOLD FOR EVENT   TIME: 00.00.00
    TEMPL = 550.0 DEGC
    TEMPC = 550.0 DEGC
    TEMPS = 550.0 DEGC
    SONIC = ON
    N2 = 1250. SCCM
    N2CARR = 250.0 SCCM
    If EVENT = ON then goto 0030
STEP: 0030      COMMENT: BOATOUT          TIME: 00.09.00
    TEMPL = 400.0 DEGC
    TEMPC = 550.0 DEGC

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      TEMPS = 450.0 DEGC  
      BOATOUT = ON  
      N2 = 5000. SCCM  
      BOATSPD = 10.0 IPM  
      If EVENT = ON then goto 0031  
      If OUTLMT = ON then goto 0031  
STEP: 0031          COMMENT: UNLOAD WAFERS          TIME: 00.15.00  
      TEMPL = 400.0 DEGC  
      TEMPC = 500.0 DEGC  
      TEMPS = 450.0 DEGC  
      SONIC = ON  
      N2 = 5000. SCCM  
      If EVENT = ON then goto 0035  
STEP: 0035          COMMENT: BOATIN              TIME: 00.09.00  
      TEMPL = 550.0 DEGC  
      TEMPC = 550.0 DEGC  
      TEMPS = 550.0 DEGC  
      BOATSPD = 10.0 IPM  
      N2 = 5000. SCCM  
      BOATIN = ON  
      If EVENT = ON then goto 0040  
STEP: 0040          COMMENT: DATA COL END      TIME: 00.00.09  
      TEMPL = 550.0 DEGC  
      TEMPC = 550.0 DEGC  
      TEMPS = 550.0 DEGC  
      BOATSPD = N/C IPM  
      N2 = 3000. SCCM  
      BOATIN = ON

SPECIAL HOLD STEP

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STEP: SHLD          COMMENT: SPECIAL HOLD  
      TEMPL = N/C DEGC  
      TEMPC = N/C DEGC  
      TEMPS = N/C DEGC  
      BOATIN = ON  
      N2 = 2750. SCCM  
      SONIC = ON  
      BOATSPD = 5.0 IPM  
      N2CARR = 250.0 SCCM

ABORT SEQUENCE

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STEP: ABRT          COMMENT: ABRT: 1ST STEP      TIME: 00.15.00  
      SONIC = ON  
      TEMPL = 550.0 DEGC  
      TEMPC = 550.0 DEGC

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      TEMPS = 550.0 DEGC
      BOATIN = ON
      BOATSPD = 5.0 IPM
      If EVENT = ON then goto ABR1
      N2 = 5000. SCCM
STEP: ABR1      COMMENT: ABORT 1      TIME: 00.00.05
      TEMPL = 550.0 DEGC
      TEMPC = 550.0 DEGC
      TEMPS = 550.0 DEGC
      N2 = 3000. SCCM
*** END OF FILE ***
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