

DOCKETED
SHEET 1 of 10
USNRC

REQUEST FOR ENGINEERING REVIEW

RER NO.

880707

ORIGINAL

'95 SEP -8 P4:04

UNIT

1

PART 1: Problem Identification

(1) System No. 2403

Component No. SEE ATTACHED

(2) Detailed Description of Problem: THERE IS NOT INSTRUMENT TOLERANCES

AVAILABLE FOR ZALCON SWITCHES USED ON DIESEL GENERATORS.

(3) Proposed Solution and Justification:

☐ Personnel Safety ☐ Plant Safety ☐ Regulatory Requirement
☐ ALARA* ☒ Other

OBTAIN NECESSARY INFORMATION FROM VENDOR TO ALLOW CALIBRATION
OF ASSOCIATED INSTRUMENTS.

(4) Requested Completion Date: ASAP

Estimated Cost: _____

Point of Contact PHILIP LIEBERGER

Phone: 4075 / BEEPER 260

Phillip Lieberger 10/10/88
Initiator / Date

M. J. [Signature] 10/10/88
Department Superintendent / Date

Engr. Supv. Assigned Garrett

Target Completion Date 10/30/88

* Copy to Manager Health Physics and Chemistry

9509120319 950825
PDR ADOCK 05000424
G PDR

FIGURE 1

NUCLEAR REGULATORY COMMISSION

Docket No. 50-42425-OLR-3 EXHIBIT NO. 16-168

In the matter of Bo Panner / Wagner

☐ Staff ☒ Applicant ☐ Intervenor ☐ Other

☐ Identified ☒ Received ☐ Rejected Reporter WLV

Date 8/25/95 Witness ACWinda et al

50C II-168

SHEET 2 of 10

RER NO 88-0707

PART 2: Engineering Support Department Review

- (5) Disposition: SHEETS 5, 6, & 7 OF THIS RER PROVIDE THE REQUIRED DATA FOR THE SPECIFIED INSTRUMENTS. TEST METHOD RECOMMENDATIONS ARE ALSO PROVIDED FOR SOME INSTRUMENTS AS NOTED. SHEETS 8, 9, & 10 ARE DUPLICATES OF INFORMATION CONTAINED IN SHEETS 5, 6, & 7 AND ARE FOR RECORD PURPOSES.

Safety Related No [] Yes [✓]

Document
Generated

No [✓] Yes [] No.

NA

Eng. Manhours Required for Review 20

Approvals:

Design Engr. NA /
(if applicable) DateResponsible Engr. [Signature] 10/15/88
DateEngr. Supv. [Signature] 10/15/88
DateEngr. Support Supt. [Signature] 10/15/88
Date

SHEET 3 of 210

RER CONTINUATION SHEET

RER NO. 88-0707BLOCK
NO.

MANUFACTURER:

CALIFORNIA CONTROLS COMPANY (CALCON)

PUBLICATION(S)

A DRAWING 1791
B DRAWING 3281
C DRAWING 3282
D DRAWING 3283
E DRAWING 3286
F DRAWING 3434
G DRAWING 3460
H DRAWING 3461
I DRAWING A3500
J DRAWING B4400

K DRAWING B4417
L DRAWING B4446
M DRAWING B4449
N DRAWING J3406
O FORM 7173
P FORM 7673
Q FORM 100-2.5M-10/79
R FORM ENG-66
S FORM E4600
T FORM T3603
U DATA SHEET

PART NUMBER

DESCRIPTION/REFERENCE

F-573-127

CHECK VALVE, MODEL 3460

F-573-133

MODEL J1791-.014, WITH 0.0145 INCH ORIFICE

F-573-141

ORIFICE/CHECK, PARALLEL, MODEL 3461, 0.028 INCH ORIFICE

F-573-144

ORIFICE/CHECK, PARALLEL, MODEL 3461, 0.006 INCH ORIFICE

(I) F-573-156

PRESSURE SENSOR, MODEL B4400, 2 WAY, NORMALLY OPEN, WITH MODEL 4499 BRACKET

(I) F-573-171

VIBRATION SENSOR, MODEL E4600, PNEUMATIC RESET TYPE

F-573-212

VALVE, 3-WAY, MODEL J1806 PK, DOUBLE PILOTED, MANUALLY OPERATED

F-573-217

CHECK VALVE PAC, MODEL 3283

F-573-222

ORIFICE PAC, MODEL 3281, WITH 0.028 INCH ORIFICE

F-573-228

ORIFICE/CHECK, PARALLEL, MODEL 3282, WITH 0.006 INCH ORIFICE

F-573-241

ORIFICE/CHECK, SERIES, MODEL 3286, WITH 0.028 INCH ORIFICE
(CONTINUED NEXT PAGE)

FIGURE 1 (CONT'D.)

ORIGINAL

SHEET 4 of 10

RER CONTINUATION SHEET

RER NO. 88-0707

BLOCK
NO.

(I) F-573-271

TEMPERATURE DETECTOR, MODEL 3434,

(I) F-573-330

TEMPERATURE SENSOR, MODEL A-3500-W3,
NORMALLY CLOSED

(I) F-573-359

PRESSURE SENSOR, MODEL B4417
WITH LATCH MECHANISM, WITH
MODEL 4499 MOUNTING BRACKET

(I) F-573-421

PRESSURE SENSOR, MODEL B4446,
50-200 PSI RANGE, NORMALLY OPEN

KR-001-000

VALVE, BLOCKING, MODEL T3603, 3 INCH,
3000 FLANGED

(I) F-594-043

SPEED INDICATOR # 6476K51065

ORIGINAL

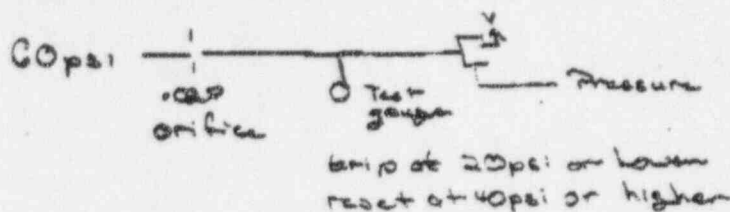
FIGURE 1 (CONT'D.)

SHEET 5 of 810
8/10

RER CONTINUATION SHEET

RER NO. 88-0707BLOCK
NO.Imco Delaval F-573-421
Calcon model B444C

Pressure Sensor

repeatable ± 5 psi of setpoint
reset up to 40 psi above setpoint.

trip 3 times and average is setpoint

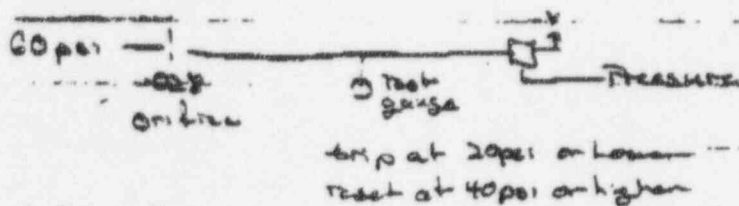
Imco Delaval F-573-156 Pressure sensor
Calcon model B4400repeatable ± 2 psi
reset up to 8 psi from setpointImco Delaval F-573-171
Calcon model E400Arepeatable ± 0.2 G

FIGURE 1 (CONT'D.)

ORIGINAL

RER CONTINUATION SHEET

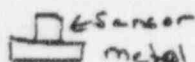
RER NO. 88-0707

BLOCK
NO.

Imo Delaval part F-573-271
Calcon 3434

Temperature
DETECTOR

repeatable $\pm 5\%$ of setpoint




metal block $\frac{1}{2}$ block heater

- Heat metal block until trips
- Hold manual reset and cool block
- trip 3 time and average is setpoint

Imo Delaval part F-573-359
Calcon B4417

repeatable $\pm 3"$ H₂O

Manual reset
(PNEUMATIC RESET SIGNAL REQ'D) 

- Set using a water column.
- trip 3 time and average is setpoint.

ORIGINAL

FIGURE 1 (CONT'D.)

SHEET 7 of 10

RER CONTINUATION SHEET

RER NO. 88-0707BLOCK
NO.

Delaval part F-573-330

temperature sensor

Calcon model H-3500-W3

repeatable $\pm 2\%$ of setpoint temp.

requires same heat-up rate

• same cool-down rate

• same starting temperature

reset $\approx 10\%$ below setpoint

Test

60psi supply

.028
OrificeTest
Gauge

Oil bath (agitating)

starting temperature
 $\approx 20^\circ$ below

trip at 20psi or lower

reset at 40psi or higher

Operate switch 3 time and take average of the
3 for setpoint

Delaval Part F-594-043

SPEED INDICATOR
(TACHOMETER)

GC DB43

Repeatable $\pm 1\%$

FIGURE 1 (CONT'D.)

ORIGINAL

SHEET 8 of 10

RER CONTINUATION SHEET

RER NO. 88-0707BLOCK
NO.

OCT 13 '88 11:28 CALCON / INT-SEAL 885 650-9318

P.1

 **California
Controls
Company**FAX NO. 805-650-9318DATE: OCT 13, 1988TO: VOGTE ELECTRIC GENERATING PLANTATTN: PHILLIP REINDERFAX NO.: 404-554-7352SUBJECT: CALCON PRODUCTS -FROM: GARY HAZELTTCOVER AND 1 PAGES

NOTES:

THIS FAX IS TO VERIFY INFORMATION
GIVEN BY PHONE TO DAN HINES ON 10/12/88

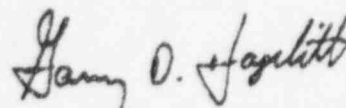


FIGURE I (CONT'D.)

ORIGINAL

SHEET 9 of 10

RER CONTINUATION SHEET

RER NO. 88-0707BLOCK
NO.

OCT 12 '88 11:29 CALCON / UNIT-SEAL 825 657-3318


**California
Controls
Company**

P.2

PAGE 1

1] CALCON BU406 PRESSURE SENSOR
(IMO F-573-421)

REPEATABLE \pm 5 PSI OF SETPOINT

RESET UP TO 40 PSI ABOVE SET POINT

2] CALCON BU402 PRESSURE SENSOR
(IMO F-573-156)

REPEATABLE \pm 2 PSI

RESET 8 PSI MAX

3] CALCON EV600A VIBRATION SENSOR
(IMO F-573-171)

REPEATABLE \pm 0.2 G

4] CALCON 3434 TEMP. DETECTOR (IMO F-573-271)

REPEATABLE \pm 5% OF SETPOINT

5] CALCON BU417 PRESSURE SENSOR
(IMO F-573-359)

REPEATABLE \pm 3" H₂O

PNEUMATIC RESET SIGNAL REQ'D

6] CALCON A3500W3 TEMP. SENSOR (IMO F-573-330)

REPEATABLE \pm 2% OF SETPOINT

RESET 10°F MAX. BELOW SETPOINT

1334 Callow Road, Ventura, California 93008 Telephone (805) 650-1597 A Tecon Company

ORIGINAL

FIGURE 1 (CONT'D.)

SHEET 10 of 10

RER CONTINUATION SHEET

RER NO. 88-0707BLOCK
NO.

Imo Delaval Inc.
Enterprise Engine Division
Enterprise Way and 80th A
P. O. Box 2161
Oakland, CA 94621-0061
415-877-7400

IMO TELCOPY PHONE NUMBER: (415) 577-7524
TO VERIFY, CALL: (415) 577-7531

Date: OCTOBER 14, 1988To: PHIL ALEXANDER, GEORGIA POWER S/N 76021Fax No. (408) 556-7332

The published accuracy of the GE speed
indicator, IMO P/W F-594-043, and of its current
replacement, IMO P/W F-594-070, is $\pm 1\%$ of Full scale.

It should be noted that this is meter accuracy, in
converting the 0-1 mA input signal to a meter needle
position, and does not include the accuracy of the components
providing the 0-1 mA input signal.

From: LANNY MCHUGHNumber Of Pages Attached To This Cover Sheet: ZERO

FIGURE 1 (CONT'D.)

ORIGINAL