CERTIFY FOR SAFETY®

PROFESSIONAL EVALUATION OF ELECTRICAL SYSTEMS AND EQUIPMENT

Report of Conformance Assessment

Report No. 5-70815-1
Date of Report: March 28, 2014

For

Description:
MV Pad-Mount Distribution Switchgear
Vista Model 624, S/N 14V0209
As manufactured by S&C Electric Company, Chicago, IL

Installation Location:
Minnesota Correctional Facility
Stillwater, MN

Submitted to

Mr. Marcus R. Sampson
Electrical Code Representative
Minnesota Department of Labor and Industry
443 Lafayette Road North
St. Paul, MN 55155

Date First Examined

March 25, 2014

Consultant's Report

MINNTECH ENGINEERING CONSULTING ENGINEERS
18564 KRISTIE LANE EDEN PRAIRIE, MN 55346
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Report No. 5-70815-1

Installation Location: Minnesota Correctional Facility
Stillwater, Minnesota

Date of Report: March 28, 2014

1. Equipment Evaluated

1.1. Description: MV Pad-Mount Distribution Switchgear, 15 KV class
1.2. Supplier: S&C Electric Co., 6601 N. Ridge Blvd., Chicago, IL 60626
1.3. Identification: Drawing No. 936242R1
1.4. Model No.: Vista 624
1.5. Serial No.: 14V0209
1.6. Function: Outdoor pad-mount 3-phase 6-way 15KV class SF_6 distribution switchgear, with 2 load-interrupter ways, 4 fault-interrupter ways, and 200-ampere bushing wells.
1.7. Date First Examined: March 25, 2014

2. Scope of Evaluation

2.1. This evaluation is intended solely to determine the degree to which the evaluated equipment conforms to the design, construction and marking requirements of applicable industry standards, including:
2.1.1. NFPA-70 *National Electrical Code*, Article 490
2.1.2. ANSI C37.73 *IEEE Standard Requirements for Pad-mounted Fused Switchgear*

2.2. The evaluation procedure consisted of visual examination of the equipment, witness of production tests conducted at the manufacturing facility, examination of relevant documentation provided with the equipment and otherwise by the supplier, and independent research.

2.3. The evaluation applies only to the subject equipment, intended for installation where indicated.

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2.4. The evaluation is with respect to conformance to industry standards for equipment, not necessarily for compliance with technical contract or installation requirements for a particular project.

2.5. This evaluation does not purport to address, nor does it represent, any evaluation as to the safety of the equipment outside the scope of the referenced standards, nor to its performance or suitability for a particular purpose.

2.6. This report may properly be used by the electrical authority having jurisdiction over the pertinent project for the purpose of determining the acceptability of the assessed equipment for the project pursuant to Minnesota Rules Part 3801.3620, subpart 2.

3. User's Responsibilities

3.1. The user assumes full responsibility for the proper installation and use of this equipment for its intended purpose, in its intended environment, and within the limits of its electrical ratings, and for compliance with all other safety standards.

4. Conformance with Standards

4.1. The assessment has determined that the subject equipment is in substantial conformance with applicable requirements of the referenced standards.

5. Manufacturer Data

5.1. One or more manufacturer drawings of the subject equipment are provided for reference in Appendix A.

6. Images

6.1. One or more images of the subject equipment are provided for reference in Appendix B.

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Certifications

"I hereby certify that I am a professional electrical engineer licensed in the State of Minnesota, that I have no financial or other interest in the sale or manufacture of the subject equipment, and that the foregoing evaluation was performed by me personally and is to the best of my knowledge complete and accurate."

"I hereby certify that this plan, specification or report was prepared by me or under my direct supervision, and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota."

3-28-14

William T. Sutherland, P.E. License No. 13106 Date

End of Report 5-70815-1

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CERTIFY FOR SAFETY®

PROFESSIONAL EVALUATION OF
ELECTRICAL SYSTEMS AND EQUIPMENT

Appendix A

MINNTECH ENGINEERING CONSULTING ENGINEERS
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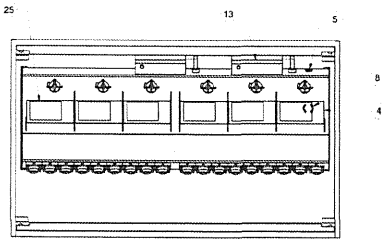
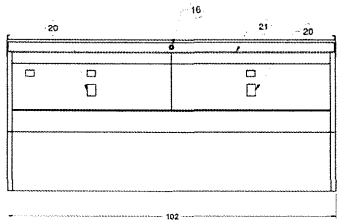
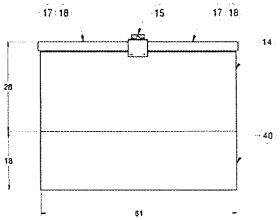
THIS VISTA UDS IS EQUIPPED WITH FAULT-INTERRUPTERS THAT ARE THREE-POLE GROUP OPERATED FOR MANUAL SWITCHING.



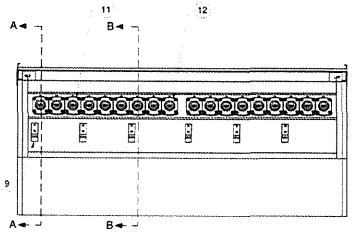
OPEN TOP VIEW



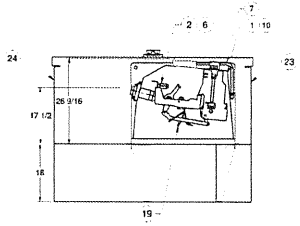
ENCLOSURE FRONT TERMINATION VIEW



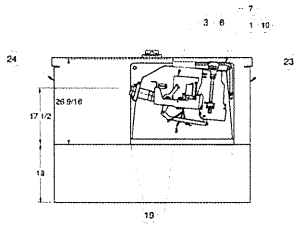
ENCLOSURE LEFTHAND VIEW



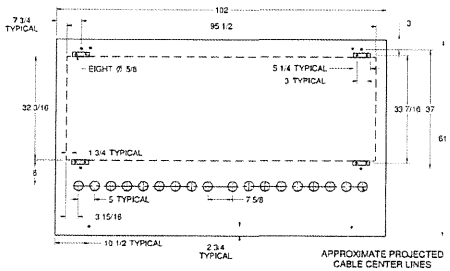
OPEN FRONT TERMINATION VIEW



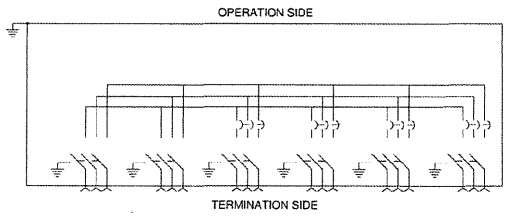
SECTION A-A: LOAD SWITCH



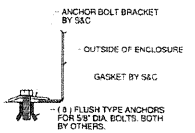
SECTION B-B:
FAULT-INTERRUPTER



ANCHOR BOLT PLAN



CONNECTION DIAGRAM



METHOD USED TO ANCHOR BAY

FEATURES IN THIS ASSEMBLY

1. NAMEPLATE
2. 200-AMPERE THREE-POLE LOAD-INTERRUPTER SWITCH WITH GROUND POSITION
3. 200-AMPERE THREE-POLE MANUAL FAULT-INTERRUPTER WITH THREE-POSITION(CLOSED-OPEN-GROUND) DISCONNECT
4. WINDOW FOR VIEWING OPEN GAP AND GROUNDED POSITION OF LOAD-INTERRUPTER SWITCH OR FAULT INTERRUPTER
5. GAS FILL PORT
6. OPERATING MECHANISM
7. MANUAL OPERATING HANDLE
8. PRESSURE GAUGE
9. TWO-HOLE GROUND PAD
10. SUBMERSIBLE SF6-INSULATED TANK
11. 200-AMPERE BUSHING-WELLS FOR LOAD-INTERRUPTER SWITCH
12. 200-AMPERE BUSHING-WELLS FOR FAULT-INTERRUPTER
13. OVERCURRENT CONTROL
14. 14-GAUGE PAD-MOUNTED ENCLOSURE
15. RETRACTABLE LIFTING TAB
16. PENTAHEAD BOLT LOCKING MECHANISM ACCOMMODATES PADLOCK WITH .375" DIAMETER SHACKLE
17. HINGED LIFT-UP ROOF
18. ROOF RETAINER TO HOLD ROOF IN POSITION
19. 600-AMPERE COPPER BUS
20. WARNING SIGN
21. REMOVABLE PANEL
23. OPERATION COMPARTMENT LABEL
24. TERMINATION COMPARTMENT LABEL
25. VOLTAGE INDICATION WITH TEST FEATURE

OPTIONAL FEATURES IN THIS ASSEMBLY

-L2 POTENTIAL INDICATION WITH TEST FEATURE, WITH PROVISIONS FOR LOW-VOLTAGE PHASING
-M4 200-AMPERE BUSHING WELLS IN LIEU OF 600-AMPERE BUSHINGS AT LOAD-INTERRUPTER AND BUS TERMINALS
-O TWO-HOLE GROUND PAD, ONE PER WAY
-P6 PAD-MOUNTED STYLE, FIVE OR SIX-WAY UNIT, MILD-STEEL OUTER ENCLOSURE, OLIVE GREEN FINISH
-T4 THREE-POLE MANUAL FAULT-INTERRUPTERS: QTY. (4)
-Z5 COPPER BUS (MAIN BUS CAN BE RATED UP TO 1200 A)

SPECIAL FEATURES

40. 18" MILD STEEL BASE SPACER WITH TANK SUPPORTS
41. SPECIAL WAY CONFIGURATION
LI / LI / FI / FI / FI / FI

RATING			IEC	ANSI
STANDARD				
HERTZ			50/60	50/60
KV, MAX DESIGN			12	15.5
KV, BIL			95	95
AMPERES	MAIN BUS	CONTINUOUS	630	600
	LOAD-INTERRUPTER SWITCHES	CONTINUOUS	200	200
		LOAD DROPPING	200	200
		FAULT CLOSING DUTY-CYCLE TEN-TIME SYMMETRICAL	12,500	12,500
		CONTINUOUS	200	200
		LOAD DROPPING	200	200
RMS	FAULT INTERRUPTER	FAULT CLOSING DUTY-CYCLE TEN-TIME SYMMETRICAL	12,500	12,500
		INTERRUPTING SYMMETRICAL	12,500	12,500
	SHORT-CIRCUIT	SYMMETRICAL	12,500	12,500

NOTE THE FOLLOWING DEVICES WIRED PER:
CDR-6404 DUAL C. T. WIRING DIAGRAM

CATALOG NO.: 936242R1-L2M4OP6T4Z5-S256

REVISIONS					
000	SCM62203	11/21/2012	JP	RACINE	

D	PREBILL		
None	11/25/2013		
INCHES			
VISTA			

CAUTION

S&C ELECTRIC COMPANY
Excellence Through Innovation

S&C MANUAL VISTA
UNDERGROUND DISTRIBUTION SWITCHGEAR
MODEL 624

SHEET 1 OF 1
DIMENSIONAL DRAWING
DRAWING NO.
936242R1-S256

Appendix B

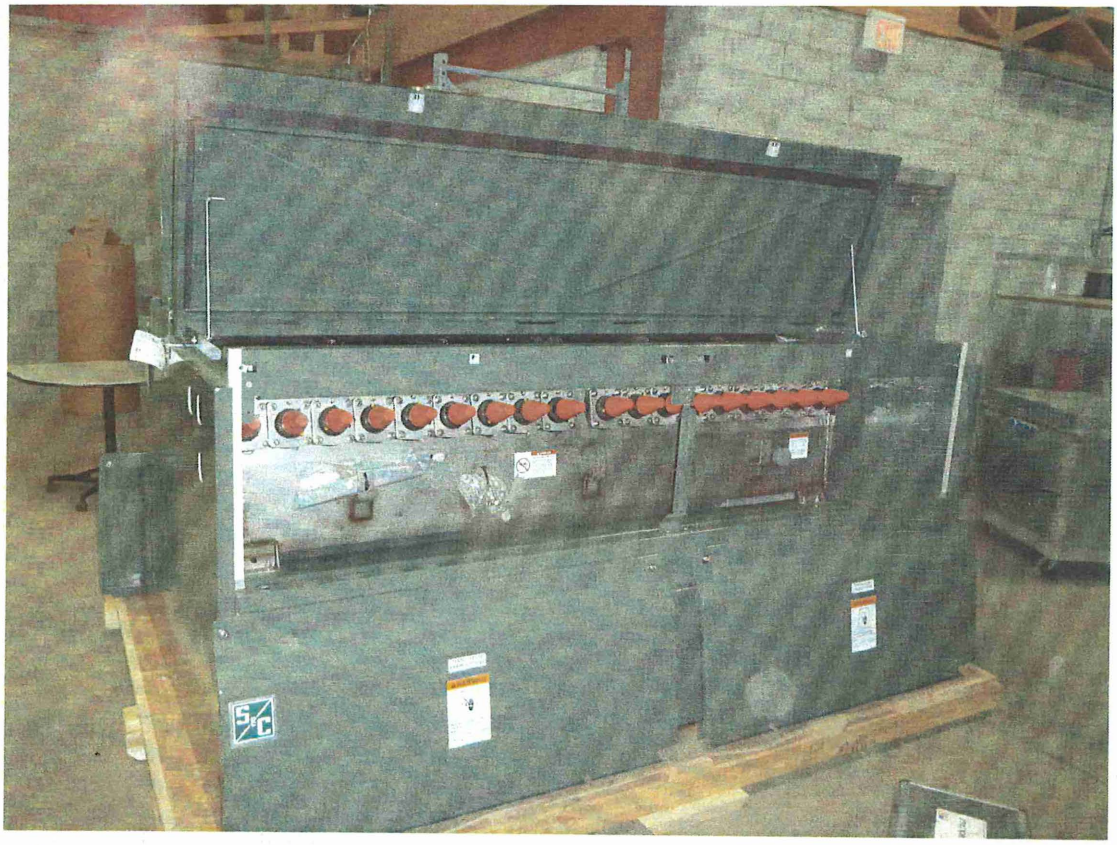


Image 1 – S&C Vista Model 624 DSG (termination side, enclosure open)

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MINNESOTA DEPARTMENT OF
LABOR & INDUSTRY

(651) 284-5064
1-800-DIAL-DLI
TTY: (651) 297-4198

March 28, 2014

William T. Sutherland, PE
MinnTech Engineering
18564 Kristie Lane
Eden Prairie, MN 55346

Subject: S & C Electric Company
MV Pad-Mount Distribution Switchgear 15 kV Class
Vista Model 624
Serial Number 14V0209

Installed at: Minnesota Correctional Facility MCF-OPH
5329 Osgood Avenue North
Stillwater, Minnesota 55082

Dear Mr. Sutherland:

As requested in your March 28, 2014 letter, the accompanying evaluation dated March 25, 2014 is accepted as evidence of compliance with recognized safety standards of the subject equipment for the purpose of compliance with Minnesota Rules part 3801.3620.

Acceptance by the Department of Labor and Industry shall not be construed as evidence that the subject equipment conforms to non-electrical safety requirements that may be applicable to such equipment by other authorities, nor as evidence that it conforms to other safety requirements which may rely on proper operation of the electrical equipment, except to the extent that those requirements are covered by the electrical standards employed in the evaluation.

The Department of Labor and Industry assumes no obligation to further inspect the construction of this equipment, but retains the right to require corrections or to reject the equipment if a representative of the agency observes deviations from the standards which are deemed to be hazardous.

Only the equipment actually evaluated is accepted. Other allegedly identical or similar equipment will be accepted only where the manufacturer of the equipment and the person performing the evaluation have complied with the requirements of subpart 2 of the rule with regard to subsequent production.

Sincerely,
DEPARTMENT OF LABOR AND INDUSTRY

Marcus R. Sampson
Third Party Certifications

File Number: 20140328.16

cc: Steven Dudley, Electrical Area Representative
Joseph Wheaton, Contract Electrical Inspector