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REPORT

on

ENCLOSURES FOR USE IN HAZARDOUS LOCATIONS

Under The

CLASSIFICATION PROGRAM

Spectrex Inc.  
Cedar Grove, NJ

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## GENERAL

## ENTRIES:

Entries shall use a modified National Standard Pipe Tapered (NPT) or National Standard Pipe Straight (NPS) thread. The pipe thread form shall comply with the Standard for Pipe Threads, ANSI/ASME B1.20.1-1983. Entries shall not be smaller than trade size 1/2 nor larger than trade size 6 and shall provide for five full threads of engagement with a conduit or fitting gauging at L1-1. NPT Threaded entries shall conform to ANSI/ASME B1.20.1-1983 except that entries shall gauge with +1/2 to +3-1/2 turns beyond the L-1 gauging notch in lieu of the +/-1 turns described in ANSI/ASME B1.20.1-1983.

Effective September 7, 2002

## DESCRIPTION

## PRODUCT COVERED:

\*SafeEye enclosures, Cat. Nos. 20/20 CT, OP-IF, OPS-FI, OP-IL, OPS-LI, OP-UF and OPS-FU, followed by any 3 to 8 characters, for use in Class I, Groups C and D Hazardous Locations.

## GENERAL:

All conduit entries must comply with new requirements specified in Section General.

## ENGINEERING CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):

This enclosure is Classified as to explosion and fire hazards only.

## MARKINGS:

Nameplate - The following information is provided on a metal nameplate, secured to the enclosure cover or body by drive pins, drive screws or rivets which enter bottomed holes with a minimum 1/16 in. thickness remaining.

1. Manufacturer name or trademark
2. Manufacturer part number
3. Hazardous Location classes and groups as given under "Product Covered".
4. The following statement: "WARNING - Conduit Seals Must Be Installed Within 18 in. Of The Enclosure. Disconnect The Equipment From The Supply Circuit Before Opening. Keep Assembly Tightly Closed When In Operation. Failure To Comply With This Warning Can Result In Ignition Of Hazardous Atmospheres." See ILL. 2.

Alternate Warning - The following statement appears on cover:

"WARNING - To Prevent Ignition of Hazardous Atmospheres, Disconnect Circuits Before Removing Cover. Keep Cover Tightly Closed While Circuits are Alive. Conduit Runs Must Have Sealing Fittings Connected Within 18 in. (45 cm) of the Enclosure." See ILL. 3.

Supplementary Sticker - The following notice in the form of a pressure-sensitive label appears on the inside of the enclosure where it will be readily visible during installation of equipment inside the enclosure:

"CAUTION"

"To prevent external fire or explosion, do not install switching equipment intended to interrupt more than 10,000 RMS symmetrical amperes. Do not install equipment which will produce external surface temperatures exceeding the ignition temperature of the flammable or combustible materials which may surround this enclosure." See ILL. 4.

Any current-interrupting device which may be installed in this enclosure may fail electrically or mechanically unless they have been investigated and found suitable for operation in this hazardous location.

Conduit openings threaded other than NPT shall have the thread form marked next to the opening. The marking is on a metal plate or stamped or etched into the enclosure.

#### FINISH:

The surface of the enclosure may be painted except at joint and thread surfaces.

#### JOINT SURFACES:

A corrosion inhibitor such as petroletum (petroleum jelly) or soap-thickened mineral oils, may be applied to the joint surfaces before assembly.

#### ASSEMBLY AND CONSTRUCTION DETAILS:

Assembly and construction details are described in connection with the following illustration.

All dimensions are approximate unless otherwise indicated.

Item	ILL.	Fig.
Housing, 20/20 CT		1
Enclosure, OP and UPS	1	
*Enclosure, 20/20 CT	5	

#### ENCLOSURE

Represents all models under products covered except for 20/20 CT

- Cover - 316 stainless steel or cast or wrought aluminum, minimum thickness 0.199 in.
- Housing - Cast or wrought aluminum, minimum thickness 0.199 in. Cover is secured to body by four M6x1.0Px50lg Stainless Steel Cap head screws.
- Conduit Openings - Two provided. Five threads minimum, smooth and well-rounded inner end. Maximum thread sizes are either 3/4 in. by 14 NPT, M25x1.5P. Any conduit openings threaded other than NPT shall be so marked.
- Window - Quartz glass, minimum thickness 0.187 in. secured in position with a locking ring.
- Window Guard - One or two provided, see ILL. 1.

## ENCLOSURE MODEL 20/20 CT

1. Cover - 316 stainless steel or cast or wrought aluminum, minimum thickness 0.199 in.
2. Housing - Cast or wrought aluminum, minimum thickness 0.130 in. at the oval groove and at both holes minimum thickness 0.282 in. Elsewhere minimum thickness of 0.360 in. See Fig. 1 for details. Cover is secured to body by four M6x1.0x50lg stainless steel cap head screws.
3. Conduit openings - Two provided. Five threads minimum, smooth and well-rounded inner end. Maximum thread sizes are either 3/4 in. by 14 NPT, 25x1.5. Any conduit openings threaded other than NPT shall be so marked.
4. Window - Quartz glass, minimum thickness 0.140 in. secured in position with a locking ring.
5. \* Window Guard - One provided, see ILL. 5.

## JOINTS:

\*The following joints represent all models under products covered.

A complete assembled enclosure is provided with the following joints:

<u>Joints Between</u>	<u>Dimensions and Remarks</u>
Enclosure Body and Cover	Metal-to-metal joint at least 3/8 in. wide with clearance between surfaces less than 0.0015 in. and such that a 0.0015 in. feeler gage will not enter the joint more than 1/8 in. at any point.
Window and Housing	At least 3/8 in. wide flat joint sealed with R/C (TVLE2) sealing compounds for use in Hazardous locations, at least the same classes and groups as specified in "Product Covered".

CONCLUSION

Samples of the products covered by this Report have been found to comply with the requirements covering the category and the products are judged to be eligible for Classification and Follow-Up Service. The manufacturer is authorized to use the UL Classification Marking on such products which comply with the Follow-Up Service Procedure and any other applicable requirements of Underwriters Laboratories Inc. Only those products which properly bear the UL Classification Marking are considered as Classified by Underwriters Laboratories Inc.

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