



U.S. Department
of Transportation

Pipeline and
Hazardous Materials
Safety Administration

East Building, PHH-23
1200 New Jersey Ave, SE
Washington, D.C. 20590

IAEA CERTIFICATE OF COMPETENT AUTHORITY
SPECIAL FORM RADIOACTIVE MATERIALS

CERTIFICATE USA/0559/S-96, REVISION 4

This certifies that the sources described have been demonstrated to meet the regulatory requirements for special form radioactive material as prescribed in the regulations of the International Atomic Energy Agency¹ and the United States of America² for the transport of radioactive material.

1. Source Identification - J.L. Shepherd & Associates Model Nos. 6810G - Types I, II, III, IV, V and VI.
2. Source Description - Cylindrical double encapsulations made of Type 314 stainless steel and seal heliarc welded. Approximate outer dimensions are 8.6 mm (0.34 in.) to 16.0 mm (0.63 in.) in diameter and 16.0 mm (0.63 in.) to 42.3 mm (1.665 in.) in length. Sources 6810G - Type I, II, III, IV, V and VI shall be constructed in accordance with attached J.L. Shepherd & Associates Drawing Nos. A-0659-6810G-1, -2, -3, -4, -5, -6, respectively.
3. Radioactive Contents - No more than 370.0 GBq (10.0 Ci) of Cesium-137 as cesium chloride, in pellet or ceramic form.
4. Management System Activities - Records of Management System activities required by Paragraph 306 of the IAEA regulations shall be maintained and made available to the authorized officials for at least three years after the last shipment authorized by this certificate. Consignors in the United States exporting shipments under this certificate shall satisfy the requirements of Subpart H of 10 CFR 71.
5. Expiration Date - This certificate expires on July 31, 2025. Previous editions which have not reached their expiration date may continue to be used.

¹ "Regulations for the Safe Transport of Radioactive Material, 2012 Edition, No. SSR-6" published by the International Atomic Energy Agency (IAEA), Vienna, Austria.

² Title 49, Code of Federal Regulations, Parts 100-199, United States of America.

CERTIFICATE USA/0559/S-96, REVISION 4


This certificate is issued in accordance with paragraph(s) 804 of the IAEA Regulations and Section 173.476 of Title 49 of the Code of Federal Regulations, in response to the April 15, 2020 petition by J.L. Shepherd & Associates, San Fernando, CA, and in consideration of other information on file in this Office.

Certified By:

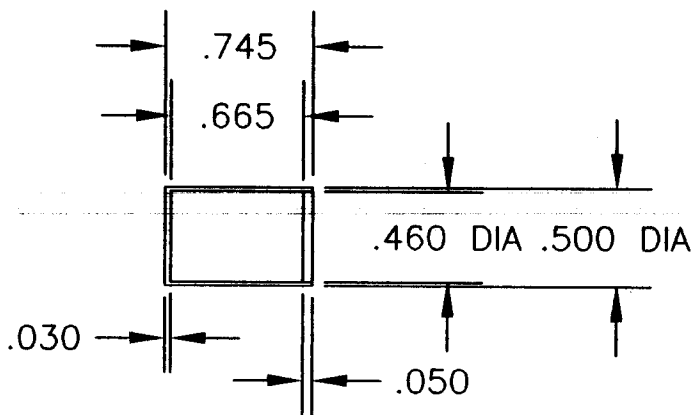


July 24, 2020

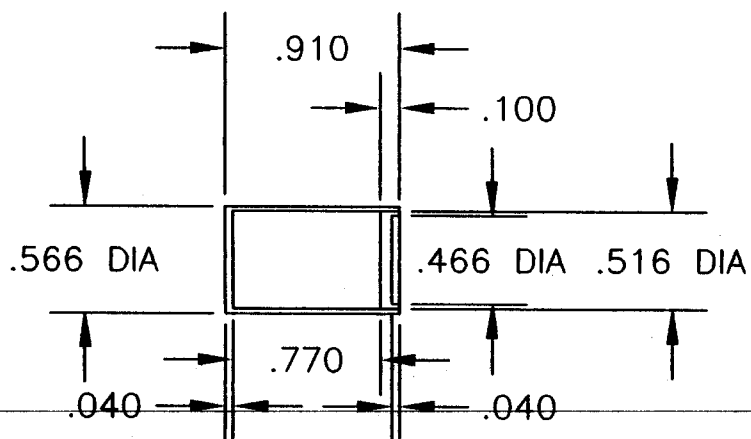
(DATE)

 William Schoonover
Associate Administrator for Hazardous
Materials Safety

Revision 4 - Issued to renew the expiration date.



INNER CAPSULE



OUTER CAPSULE

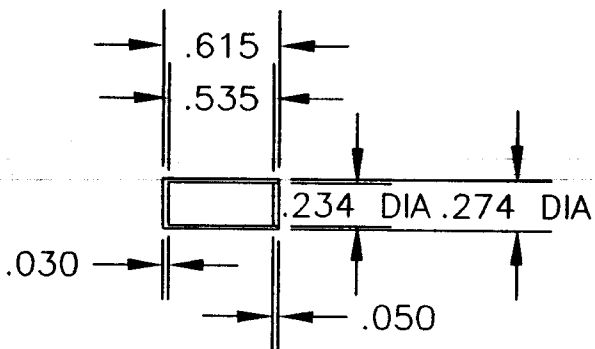
NOTE:

1. MATL = 304 STAINLESS STL.
2. END CAPS TO HAVE .006 REGISTER & .0005 INTERFERENCE FIT, 100% HELIARC WELDED.
3. CAPSULES TO BE CERTIFIED "SPECIAL FORM" PER US DOT 10CFR173.469, 10-1-95 EDITION AND IAEA SAFETY SERIES NO. 6, 1985 EDITION AS AMENDED 1990.
4. REMOVEABLE CONTAMINATION $\leq 5 \times 10^{-5}$ uCi. PER ANSI N 43.6-1997 AND ISO 9978, 1992-02-15.
5. INSIDE CONTENTS - CESIUM-137
CHEMICAL FORM - CHLORIDE OR CERAMIC
6. MAXIMUM ACTIVITY - 370 GBq (10 Ci.) CESIUM-137.
7. ANSI N43.6-1997 AND ISO 2919, 1980-005-01 PERFORMANCE CLASSIFICATION C-43434.

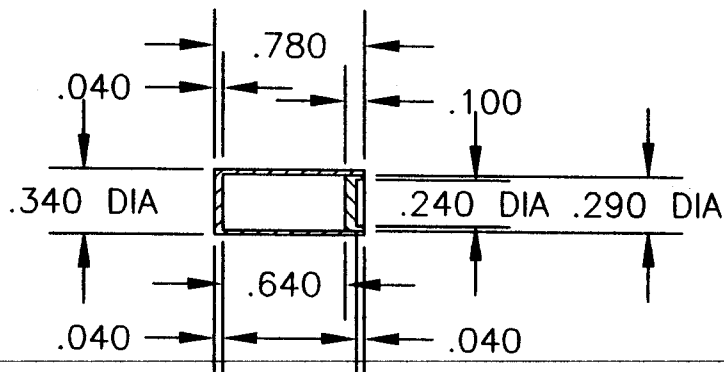
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCE		J. L. SHEPHERD <i>and Associates</i>						
DECIMALS	FRACTIONS					ANGULAR		
.X ± .030			TITLE INNER & OUTER SOURCE CAPSULE 6810G - TYPE I					
.XX ± .010	± 1/16	± 0° 30'	DRAWN	DATE	SIZE	MODEL	DWG NO.	REV
.XXX ± .005			D. TRAN	02JUN98	A	6810G-TYPE I	A-0659-6810G-1	
APPROVED		SCALE		SHEET		OF		
M. Shepherd		FULL		1		1		

NOTE:

1. MATL = 304 STAINLESS STL.
2. END CAPS TO HAVE .006 REGISTER & .0005 INTERFERENCE FIT, 100% HELIARC WELDED.
3. CAPSULES TO BE CERTIFIED "SPECIAL FORM" PER US DOT 10CFR173.469, 10-1-95 EDITION AND IAEA SAFETY SERIES NO. 6, 1985 EDITION AS AMENDED 1990.
4. REMOVEABLE CONTAMINATION $\leq 5 \times 10^{-5}$ uCi. PER ANSI N 43.6-1997 AND ISO 9978, 1992-02-15.
5. INSIDE CONTENTS - CESIUM-137
CHEMICAL FORM - CHLORIDE OR CERAMIC
6. MAXIMUM ACTIVITY - 370 GBq (10 Ci.) CESIUM-137.
7. ANSI N43.6-1997 AND ISO 2919, 1980-005-01 PERFORMANCE CLASSIFICATION C-43434.

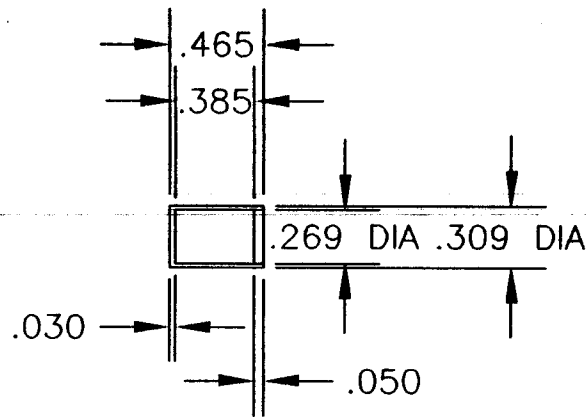


INNER CAPSULE

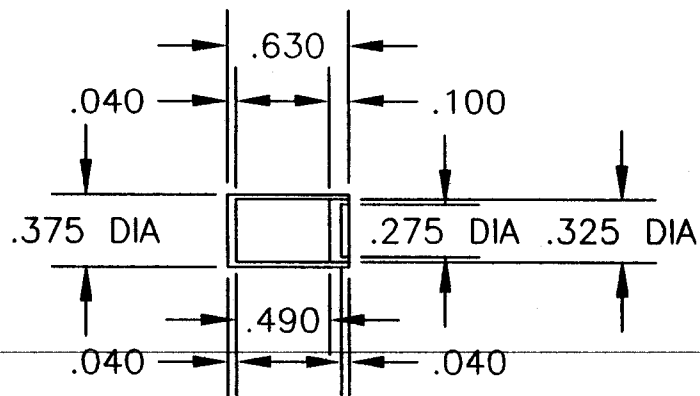


OUTER CAPSULE

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCE		J. L. SHEPHERD <i>and Associates</i>			
DECIMALS	FRACTIONS	ANGULAR	TITLE INNER & OUTER SOURCE CAPSULE 6810G - TYPE II		
.X ± .030					
.XX ± .010	± 1/16	± 0° 30'			
XXX ± .005					
DRAWN D. TRAN	DATE 02JUN98	SIZE A	MODEL 6810G-TYPE II	DWG NO. A-0659-6810G-2	REV
APPROVED <i>m. shepherd</i>	<i>June 2, 1998</i>	SCALE FULL		SHEET 1 OF 1	



INNER CAPSULE

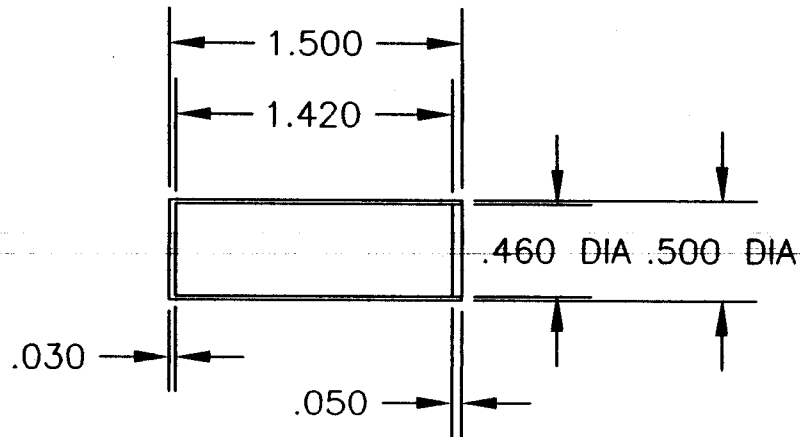


OUTER CAPSULE

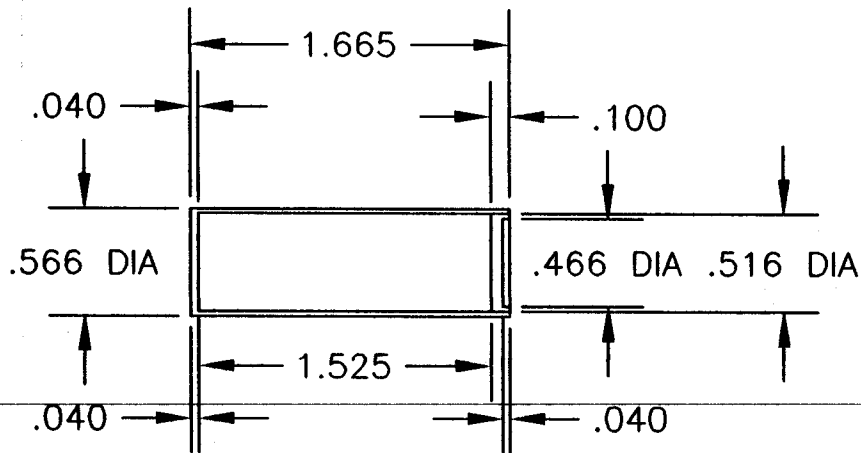
NOTE:

1. MATL = 304 STAINLESS STL.
2. END CAPS TO HAVE .006 REGISTER & .0005 INTERFERENCE FIT, 100% HELIARC WELDED.
3. CAPSULES TO BE CERTIFIED "SPECIAL FORM" PER US DOT 10CFR173.469, 10-1-95 EDITION AND IAEA SAFETY SERIES NO. 6, 1985 EDITION AS AMENDED 1990.
4. REMOVEABLE CONTAMINATION $\leq 5 \times 10^{-5}$ uCi. PER ANSI N 43.6-1997 AND ISO 9978, 1992-02-15.
5. INSIDE CONTENTS - CESIUM-137
CHEMICAL FORM - CHLORIDE OR CERAMIC
6. MAXIMUM ACTIVITY - 370 GBq (10 Ci.) CESIUM-137.
7. ANSI N43.6-1997 AND ISO 2919, 1980-005-01
PERFORMANCE CLASSIFICATION C-43434.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCE		J. L. SHEPHERD <i>and Associates</i>			
DECIMALS	FRACTIONS				
.X ± .030					
.XX ± .010	± 1/16	± 0° 30'			
.XXX ± .005					
DRAWN D. TRAN	DATE 02JUN98	SIZE A	MODEL 6810G-TYPE III	DWG NO. A-0659-6810G-3	REV
APPROVED <i>M. Shepherd</i>	<i>June 2, 1998</i>	SCALE FULL		SHEET 1 OF 1	



INNER CAPSULE

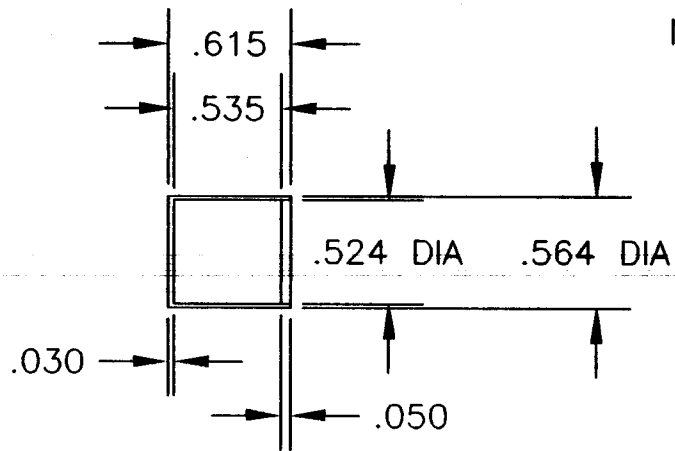


OUTER CAPSULE

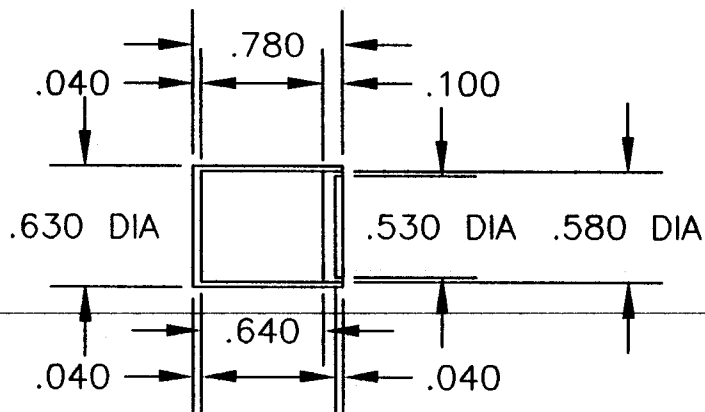
NOTE:

1. MATL = 304 STAINLESS STL.
2. END CAPS TO HAVE .006 REGISTER & .0005 INTERFERENCE FIT, 100% HELIARC WELDED.
3. CAPSULES TO BE CERTIFIED "SPECIAL FORM" PER US DOT 10CFR173.469, 10-1-95 EDITION AND IAEA SAFETY SERIES NO. 6, 1985 EDITION AS AMENDED 1990.
4. REMOVEABLE CONTAMINATION $\leq 5 \times 10^{-5}$ uCi. PER ANSI N 43.6-1997 AND ISO 9978, 1992-02-15.
5. INSIDE CONTENTS - CESIUM-137
CHEMICAL FORM - CHLORIDE OR CERAMIC
6. MAXIMUM ACTIVITY - 370 GBq (10 Ci.) CESIUM-137.
7. ANSI N43.6-1997 AND ISO 2919, 1980-005-01 PERFORMANCE CLASSIFICATION C-43434.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCE		J. L. SHEPHERD <i>and Associates</i>			
DECIMALS	FRACTIONS				
.X ± .030					
.XX ± .010	± 1/16	± ∅ 30°			
.XXX ± .005					
DRAWN D. TRAN	DATE 02JUN98	SIZE A	MODEL 6810G-TYPE IV	DWG NO. A-0659-6810G-4	REV
APPROVED <i>m. shepherd</i>	June 2, 1998	SCALE FULL			SHEET 1 OF 1



INNER CAPSULE



OUTER CAPSULE

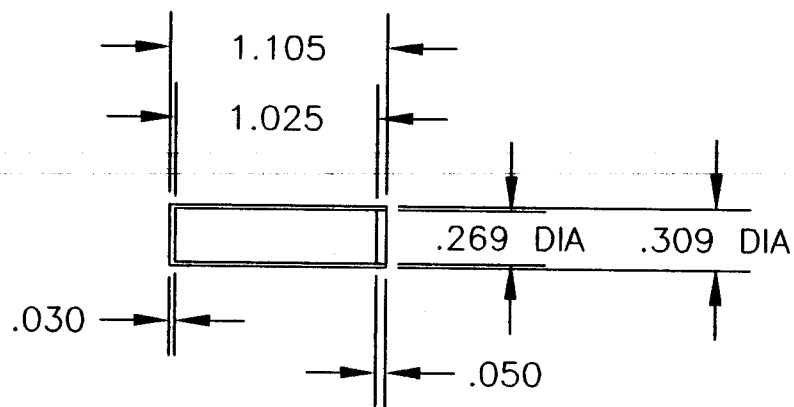
NOTE:

1. MATL = 304 STAINLESS STL.
2. END CAPS TO HAVE .006 REGISTER & .0005 INTERFERENCE FIT, 100% HELIARC WELDED.
3. CAPSULES TO BE CERTIFIED "SPECIAL FORM" PER US DOT 10CFR173.469, 10-1-95 EDITION AND IAEA SAFETY SERIES NO. 6, 1985 EDITION AS AMENDED 1990.
4. REMOVEABLE CONTAMINATION $\leq 5 \times 10^{-5}$ uCi. PER ANSI N 43.6-1997 AND ISO 9978, 1992-02-15.
5. INSIDE CONTENTS - CESIUM-137
CHEMICAL FORM - CHLORIDE OR CERAMIC
6. MAXIMUM ACTIVITY - 370 GBq (10 CI.) CESIUM-137.
7. ANSI N43.6-1997 AND ISO 2919, 1980-005-01 PERFORMANCE CLASSIFICATION C-43434.

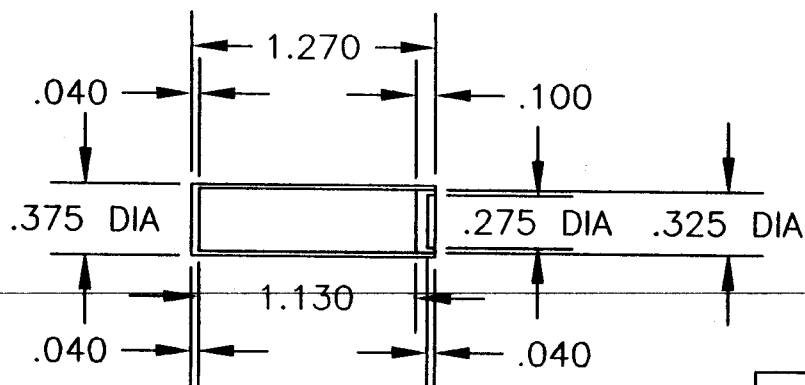
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCE		J. L. SHEPHERD <i>and Associates</i>			
DECIMALS	FRACTIONS	ANGULAR	TITLE		
.X ± .030			INNER & OUTER SOURCE CAPSULE		
.XX ± .010	± 1/16	± ∅ 30°	6810G - TYPE V		
.XXX ± .005					
DRAWN	DATE	SIZE	MODEL	DWG NO.	REV
D. TRAN	02JUN98	A	6810-TYPE V	A-0659-6810G-5	
APPROVED	June 2, 1998	SCALE			SHEET
<i>m. shepherd</i>		FULL			1 OF 1

NOTE:

1. MATL = 304 STAINLESS STL.
2. END CAPS TO HAVE .006 REGISTER & .0005 INTERFERENCE FIT, 100% HELIARC WELDED.
3. CAPSULES TO BE CERTIFIED "SPECIAL FORM" PER US DOT 10CFR173.469, 10-1-95 EDITION AND IAEA SAFETY SERIES NO. 6, 1985 EDITION AS AMENDED 1990.
4. REMOVEABLE CONTAMINATION $\leq 5 \times 10^{-5}$ uCi. PER ANSI N 43.6-1997 AND ISO 9978, 1992-02-15.
5. INSIDE CONTENTS - CESIUM-137
CHEMICAL FORM - CHLORIDE OR CERAMIC
6. MAXIMUM ACTIVITY - 370 GBq (10 Ci.) CESIUM-137.
7. ANSI N43.6-1997 AND ISO 2919, 1980-005-01 PERFORMANCE CLASSIFICATION C-43434.



INNER CAPSULE



OUTER CAPSULE

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCE		J. L. SHEPHERD <i>and Associates</i>			
DECIMALS	FRACTIONS	ANGULAR	TITLE		
.X ± .030			INNER & OUTER SOURCE CAPSULE		
.XX ± .010	± 1/16	± ∅ 30'	6810G - TYPE VI		
.XXX ± .005					
DRAWN	DATE	SIZE	MODEL	DWG NO.	REV
D. TRAN	02JUN98	A	6810G-TYPE VI	A-0659-6810G-6	
APPROVED	DATE	SCALE			SHEET
<i>M. Shepherd</i>	June 2, 1998	FULL			1 OF 1



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1200 New Jersey Ave, SE
Washington, D.C. 20590

CERTIFICATE NUMBER: USA/0559/S-96

ORIGINAL REGISTRANT(S) :

J.L. Shepherd & Associates
1010 Arroyo Ave.
San Fernando, CA, 91340-1822
USA