



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/0335/S-96, REVISION 13

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 - QSA Global, Inc. Model 875 Series.
2. Source Description - Cylindrical single or double encapsulations with the outer capsule made of Type 304L stainless steel and tungsten inert gas or laser welded. Approximate outer dimensions are 6.35 mm (0.25 in.) in diameter and either 19.05 mm (0.75 in.) or 24.2 mm (0.954 in.) in length. Inner capsules, when present, are made of stainless steel or titanium. Construction of the outer capsule shall be in accordance with attached QSA Global, Inc. Drawing No. R875 OUTER, Rev. E. Construction of any inner capsule shall be in accordance with attached QSA Global, Inc. Drawing No. R875 INNER, Rev. C, or QSA Global, Inc. Drawing No. R87527-40, Rev. A.
3. Radioactive Contents - No more than either: 14.8 TBq (400 Ci) of Iridium-192 as a solid metal; 8.14 TBq (220 Ci) of Cobalt-60 as a solid metal; 5.56 TBq (150 Ci) of Selenium-75 in the form of a physically inert and stable metal-selenide compound; 1.11 TBq (30 Ci) of Cesium-137 as encapsulated CsCl₂; 1.85 TBq (50 Ci) of Thulium-170 as Tm₂O₃; or 7.4 TBq (200 Ci) of Ytterbium-169 as Yb₂O₃. Only the activity of Ir-192 in special form may be determined from a measurement of the rate of decay or a measurement of the radiation level at a prescribed distance from the source.

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.

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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 March 31, 2023. Previous editions which have not reached their expiration date may continue to be used.

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 February 22, 2018 petition by QSA Global, Inc., Burlington, MA, and in consideration of other information on file in this Office.

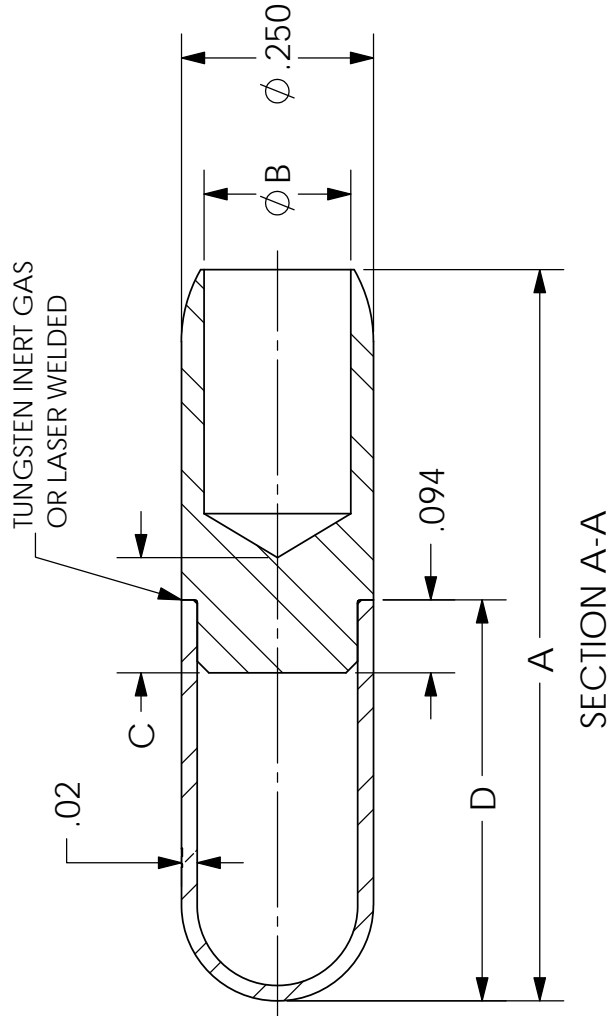
Certified By:



William Schoonover
Associate Administrator for Hazardous
Materials Safety

May 31, 2018
(DATE)

Revision 13 - Issued to extend the expiration date, clarify Se-75 form, and update QSA Global, Inc. Drawing No. R875 OUTER.



SECTION A-A

NOTES:

1. INTERNAL VOID TO BE 0.010 mL OR GREATER.
2. MATERIAL: 304L STAINLESS STEEL
3. INNER CAVITY DIMENSIONS MAY VARY. METALLIC SPACERS SPRINGS AND GUARDS, WHICH SECURE AND/OR LOCATE THE RADIOACTIVE MATERIAL WITHIN THE CAPSULE, MAY BE USED, AND SHALL HAVE A MELTING POINT ABOVE 800°C.
4. MINIMUM WALL THICKNESS TO BE 0.02 INCHES.

UNLESS OTHERWISE SPECIFIED:
ALL DIMENSIONS ARE INCHES
 TOLERANCES:
 FRACTIONS ± 1/8
 XX ± 0.12
 X.XX ± 0.06
 X.XXX ± 0.020



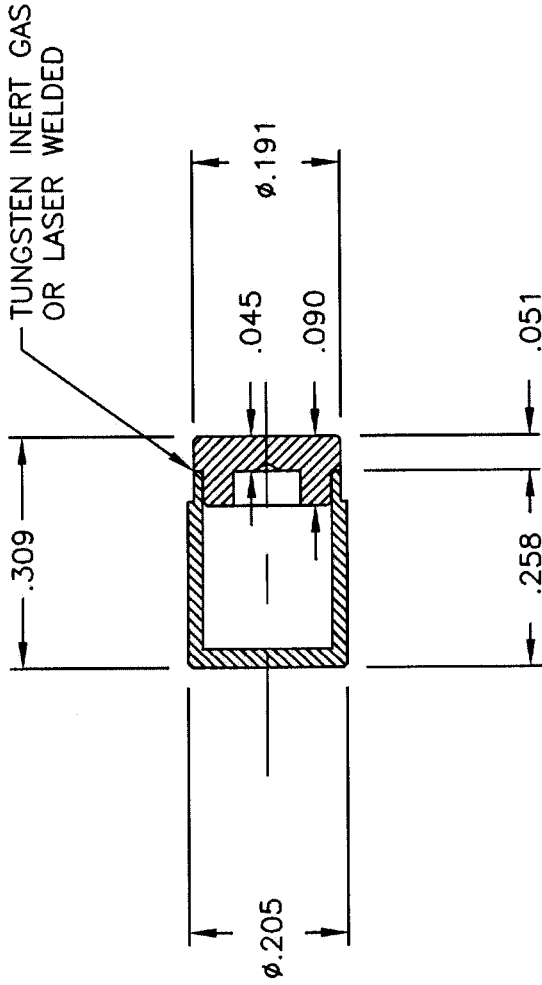
DESCRIPTIVE
DRAWING

40 NORTH AVE., BURLINGTON, MA 01803

CAPSULE NO.	A	ØB	C	D
87501	.954	.190	.150	.522
88702	.750	.190	.118	.522

ERF #	APPROVALS	DATE
3788	e-Signed by Brian Giroldard on 2018-04-26 19:01:36 GMT	
	e-Signed by Lori Poddolak on 2018-04-26 19:29:10 GMT	

TITLE	875 SERIES SDDR OUTER CAPSULE		
SIZE	DWG. NO.	REV	
A	R875 OUTER	E	
	SCALE: NONE	SHEET 1	OF 1



NOTES:

1. MATERIAL: 304L STAINLESS STEEL.
2. INTERNAL VOID VOLUME TO BE 0.010 mL OR GREATER.
3. INNER CAVITY DIMENSIONS MAY VARY. METALLIC SPACERS, SPRINGS AND GUARDS WHICH SECURE AND/OR LOCATE THE RADIOACTIVE MATERIAL WITHIN THE CAPSULE MAY BE USED.
4. MINIMUM WALL THICKNESS TO BE 0.019.

APPROVALS	DATE
<i>[Signature]</i>	25 Jun 07
<i>[Signature]</i>	25 Sep 07

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES
TOLERANCES:
FRACTIONS ± 1/8
X.X ± 0.12
X.XX ± 0.06
X.XXX ± 0.020



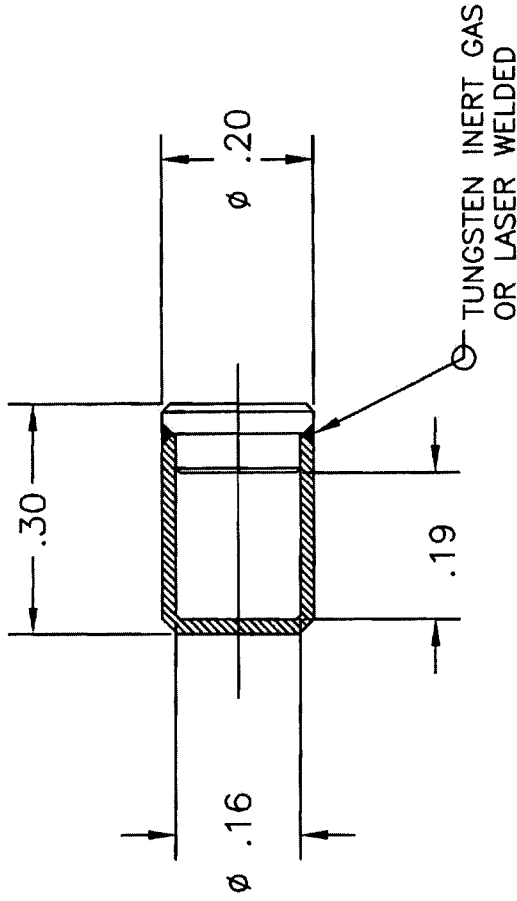
40 NORTH AVE. BURLINGTON, MA 01803

DESCRIPTIVE
DRAWING

TITLE 875 SERIES INNER CAPSULE

SIZE	DWG. NO.	REV
A	R875 INNER	C
SCALE:	NONE	SHEET 1 OF 1

ERF # 1739



NOTES:

1. MATERIAL: 316L STAINLESS STEEL OR EQUIVALENT, OPTIONAL MATERIAL: COMMERCIALLY PURE TITANIUM, GRADE 4.
2. INNER CAVITY DIMENSIONS MAY VARY. METALLIC SPACERS, SPRINGS AND GAURDS WHICH SECURE AND/OR LOCATE THE RADIOACTIVE MATERIAL WITHIN THE CAPSULE MAY BE USED.
3. MINIMUM WALL THICKNESS TO BE 0.009.

APPROVALS	DATE	 40 NORTH AVE, BURLINGTON, MA 01803	DESCRIPTIVE DRAWING
	7-27-07		
	24 June 07	TITLE X540N CAPSULE ASSEMBLY	
UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES		SIZE	REV
TOLERANCES:		A	R87527-40
FRACTIONS $\pm 1/8$		SCALE: NONE	SHEET 1 of 1
X.X ± 0.12			
X.XX ± 0.06			
X.XXX ± 0.020			

ERF # 1739



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

CERTIFICATE NUMBER: USA/0335/S-96

ORIGINAL REGISTRANT(S) :

QSA Global, Inc.
30 North Avenue
Burlington, MA, 01803
USA

Source Production and Equipment Company, Inc.
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USA

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USA