Special Documentation Transportation cask for shipping radioactive sources

Radiometric level measurement





Table of contents

1	About this document 4
1.1 1.2	Document function4Symbols used4
1.3	Supplementary documentation 4
2	Radiation protection 6
2.1 2.2 2.3	Prerequisite6General information6Estimating the dose7
3	Handling the transportation cask
	T40, T75, T110 7
3.1 3.2 3.3	Transport cask versions 7 Storage conditions 9 Transport options 9
3.4	Scope of delivery of a loaded transportation cask
4	Inserting the source cansules
-	(loading by the customer onsite) 10
4.1	General information 10
4.2 4.3	Safety instructions10Procedure10
5	Scope of delivery when returning
	an empty transportation cask 14
5.1	Checking the cask 14
6	Replacing source capsules 14
6.1	General information
6.2 6.3	Safety instructions
6.4	Returning a loaded transportation cask 18
7	Using the removal tool for
	cylindrical source capsules 19
7.1 7.2	Unlocking the transportation insert 19 Removing the source capsule and equipping the source capsule insert 19
8	Annendiy 20
81	Loading plan: transportation insert for
0.1	radioactive sources
9	Certificate of suitability for HQG60. 22

1 About this document

1.1 Document function

This document describes the removal of source capsules from the transportation insert and the loading of the transportation cask when returning the product.

1.2 Symbols used

1.2.1 Safety symbols

ACAUTION

This symbol alerts you to a dangerous situation. Failure to avoid this situation can result in minor or medium injury.

A DANGER

This symbol alerts you to a dangerous situation. Failure to avoid this situation will result in serious or fatal injury.

NOTICE

This symbol contains information on procedures and other facts which do not result in personal injury.

WARNING

This symbol alerts you to a dangerous situation. Failure to avoid this situation can result in serious or fatal injury.

1.2.2 Symbols for certain types of information

i

This symbol indicates additional information

This symbol indicates a reference to documentation

1.2.3 Symbols in graphics

1., 2., 3....

Indicates a series of steps

1, 2, 3,...

Indicates item numbers

A, B, C, ...

Indicates views

1.3 Supplementary documentation

The documentation is enclosed with the devices or available in the Downloads area of the Endress+Hauser website: www.endress.com \rightarrow Downloads.

FSG60 (137Cs), FSG60 (60Co)

TI00439F/00/EN

Technical Information for gamma radiation source FSG60 and FSG61

FQG60, FQG61, FQG62, FQG63, FQG66

SD00297F/00/EN

Special Documentation for source container FQG60, FQG61, FQG62, FQG63, FQG66 Instructions for loading and changing the source



2 Radiation protection

2.1 Prerequisite

Staff who remove the source capsules from the transportation insert or who load the transportation cask must have the appropriate training and approval to perform the task and must be familiar with the design and construction characteristics of the transportation cask.

Before starting work: personnel must read and understand the instructions in the manual and supplementary documentation as well as the certificates (depending on the application).

2.2 General information

WARNING

Radiation protection

Never grip the source capsule directly by the hands; always use a tool (removal aid, long pair of tweezers) to keep a distance of at least 10 cm (3.94 in).

When working with radioactive sources, avoid any unnecessary exposure to radiation. All unavoidable radiation exposure must be kept to a minimum. Three basic concepts apply to achieve this:



- A Shielding
- B Time
- C Distance

2.2.1 Shielding

Ensure the best possible shielding between the radiation source and yourself and all other persons. Effective shielding is provided by source containers (FQG60, FQG61/FQG62,FQG63, FQG66) and all high-density materials (lead, iron, concrete etc.).

2.2.2 Time

Remain as short as possible in the area exposed to radiation.

2.2.3 Distance

Keep as far away from the radiation source as possible. The radiation intensity decreases in proportion to the square of the distance from the radiation source.

2.3 Estimating the dose

Under the conditions stated above, it is assumed that the replacement procedure (removal and installation) will take 2 minutes. This results in the following dose ¹): 15 mSv²) for 18.5 GBq ¹³⁷Cs or 12.1 mSv for 1.85 GBq ⁶⁰Co.

WARNING

Keep radiation exposure to a minimum when replacing the radiation source

- ► As a general rule, have radiation sources replaced at Endress+Hauser.
- Always have Endress+Hauser replace radiation sources for activities over 18.5 GBq (¹³⁷Cs) or 1.85 GBq (⁶⁰Co).

3 Handling the transportation cask T40, T75, T110

3.1 Transport cask versions

3.1.1 Transportation cask T40



h: 430 mm (16.9 in)

øD: 400 mm (15.7 in)

Material: 304 (1.4301); PUR 2K texture paint RAL2000 (orange)

Max. total capacity:

- ⁶⁰Co (0.37 GBq)
- ¹³⁷Cs (18.5 GBq)

Max. empty weight: 60 kg (132.30 lb)

Max. permitted loading weight: 15 kg (33.08 lb)

Operating temperature: -40 to +70 °C (-40 to +158 °F)

Worst case assumption: radiation source for 2 min at a distance of 10 cm (3.94 in) from the body without shielding. The radiation weighting factor has been assumed to be "1" (γ-radiation). The individual organ doses have not been considered.

²⁾ This is approximately one tenth of the limit for the organ dose according to Section 54 (2.) of the German Radiation Protection Ordinance (Strahlenschutzverordnung) for hands or forearms of occupationally exposed persons, category B, value 150 mSv.

3.1.2 Transportation cask T75



h: 565 mm (22.2 in) øD: 580 mm (22.8 in) Material: 304 (1.4301); PUR 2K texture paint RAL2000 (orange) Max. total capacity Max. total capacity: • ⁶⁰Co (4.81 GBq) • ¹³⁷Cs (888 GBq)

Max. empty weight: 151 kg (332.96 lb)

Max. permitted loading weight: 24 kg (52.92 lb)

Operating temperature: –40 to +70 $^\circ C$ (–40 to +158 $^\circ F)$

3.1.3 Transportation cask T110



h: 574 mm (22.6 in)

øD: 580 mm (22.8 in)

Material: 304 (1.4301); PUR 2K texture paint RAL2000 (orange)

Max. total capacity:

- ⁶⁰Co (111 GBq)
- ¹³⁷Cs (888 GBq)

Max. empty weight: 272 kg (599.77 lb)

Max. permitted loading weight: 28 kg (61.74 lb)

Operating temperature: -40 to +70 °C (-40 to +158 °F)

3.2 Storage conditions

- It is not permitted to store containers outdoors when loaded!
- Both empty and loaded containers must be stored in such a way that they are dry, protected from the weather and secured against theft!
- It is not permitted to store containers that are not fully closed!

See also the handling instructions (SD01389F/00).

3.3 Transport options

Two M12 eyebolts for slings are provided in the cover for transportation purposes (included in the delivery).

See also the handling instructions (SD01389F/00).

3.4 Scope of delivery of a loaded transportation cask

- Loaded transportation cask
- Transportation cask loading report
- Loading plan; transportation insert for radioactive source capsules
- Copies of the certificates for the loaded source capsules if replacing the radiation source
- Special tool (long pair of tweezers, removal aid, collecting vessel)
- Manufacturer's Declaration³⁾
- Documentation
 - SD01316F/00 (Special Documentation: transportation cask)³⁾
 - SD01389F/00 (Special Documentation: handling instructions)

3.4.1 Checking the cask

The following checks must be performed before sending the transportation cask:

- The maximum total capacity may not be exceeded.
- The container must be intact and undamaged.
- The scope of delivery must be complete and the labeling must correspond to the contents.

³⁾ Not for returns

4 Inserting the source capsules (loading by the customer onsite)

4.1 General information

• Heed the handling instructions (SD01389F/00).

- Heed the information in SD00297F/00 for the removal of the source capsule insert!
- Pay attention to radiation protection.
- Pay attention to the loading plan.
- Pay attention to the information in the "Using the removal tool for cylindrical source capsules" section.

4.2 Safety instructions

WARNING

Avoid excessively high radiation.

- Only use one source capsule at any one time.
- The transportation insert remains in the transportation cask the entire time.
- ▶ If the seal on the transportation cask is damaged, replace the seal (see SD01389F/00).

WARNING

Risk of injury!

• The container must be placed on a level, solid surface.

4.3 Procedure

- 1. Remove the lead seal on the cover of the transportation cask.
- 2. Release the screw connections on the cover (8 x M10 with 15mm AF).
- 3. Remove the cover and set it aside.



- 4. Remove the removal aid, tweezers and collecting vessel and set them aside.
- 5. Release the screw connection on the cover of the shielding container (4 x M8 with 13mm AF).

6. Remove the cover. The transportation insert for the source capsules is now free and remains in the transportation cask the entire time.

╘╼



7. Twist off the ball knob of the removal aid.

8. Using the removal aid, push down the retaining bolt in the middle of the transportation insert ("Using the removal tool for cylindrical source capsules"). The entire transportation insert is unlocked.



- 9. Remove the cover of the transportation insert using the tweezers.
- **10.** Remove the source capsule(s) in the first level (A) of the transportation insert and place the capsule in the source capsule insert of the source container. (Example: The first level (A) is filled with a maximum of 8 source capsules. For more precise information on the loading, see the loading plan). The second level (B) may only be opened once all the source capsules in the first level (A) have been removed! Proceed in the same way with the second level (B).



11. To remove the source capsules from the third level (C): remove the second level (B) of the transportation insert using the tweezers.

A0038103

12. The third level (C) may only be opened once all the source capsules in the second level (B) have been removed! Remove the source capsule(s) in the third level (C) of the transportation insert and place the capsule in the source capsule insert of the source container.



- 13. Twist off the knob of the removal aid.
- 14. Take the removal aid apart.



- **15.** Reinsert all the removed levels of the transportation insert in the reverse order and then fit the cover of the transportation insert.
- 16. Screw the rod of the removal aid into the cover of the transportation insert.
- **17.** Lift up the rod and simultaneously apply counterpressure with the tweezers to engage the retaining bolt of the transportation insert ("Replacing the source capsules").



- 18. Fit the cover.
- 19. Secure the cover: 4 x M8 with 13mm AF (max. 15 Nm (11.06 lbf ft)).
- 20. Insert the special tool (removal aid, tweezers, collecting vessel) into the transportation cask.

21. Check the outer seal carefully and fit the cover.



22. Close the transportation cask (8 x M10 with 15mm AF (max. 25 Nm (18.43 lbf ft)). Return the transportation cask to Endress+Hauser (see also "Returning an empty transportation cask").



5 Scope of delivery when returning an empty transportation cask

- Empty transportation cask
- Special tool (long pair of tweezers, removal aid, collecting vessel)

5.1 Checking the cask

The following measures are necessary before sending the transportation cask:

- Fill in the checklist and enclose it
- Check the container to ensure it is intact and undamaged
- Check for completeness

6 Replacing source capsules

6.1 General information

• Observe the information in the "Radiation protection" section!

- Heed the handling instructions SD01389F/00.
- Heed the information in SD00297F/00 for the removal of the source capsule insert!
- Pay attention to the loading plan.
- Pay attention to the information in the "Using the removal tool for cylindrical source capsules" section.

6.2 Safety instructions

WARNING

Avoid excessively high radiation

- ► The transportation cask is opened before the following steps are performed!
- Only use one source capsule at any one time.
- ▶ The transportation insert remains in the transportation cask the entire time.
- ► If the seal on the transportation cask is damaged, replace the seal (see SD01389F/00/ DE).

WARNING

Risk of injury!

• The container must be placed on a level, solid surface.

6.3 Example: cylindrical source capsules

- 1. Remove the lead seal on the cover of the transportation cask.
- 2. Release the screw connections on the cover (8 x M10 with 15mm AF).

3. Remove the cover and set it aside.

4



- 4. Remove the removal aid, tweezers and collecting vessel and set them aside.
- 5. Remove the used source capsule from the source capsule insert of the source container. The source capsules can be placed in the collecting vessel provided.
- 6. Release the screw connection on the cover of the shielding container (4 x M8 with 13mm AF).
- **7.** Remove the cover. The transportation insert for the source capsules is now free and remains in the transportation cask the entire time.



- 8. Twist off the ball knob of the removal aid.
- 9. Using the removal aid, push down the retaining bolt in the middle of the transportation insert ("Using the removal tool for cylindrical source capsules"). The entire transportation insert is unlocked.



10. Remove the cover of the transportation insert using the removal aid.

A0038112

11. Also remove levels that are not filled. Place the used source capsule into the transportation insert.



- **12.** First fill the lower level of the transportation insert (C).
- When the lower level of the source capsule insert (C) is full, use the tweezers to insert the second level (B) and fill this level. Once level B is full, fill the upper level (A).



- 14. Twist off the knob of the removal aid.
- **15.** Take the removal aid apart.



- **16.** Put the cover of the transportation insert back on.
- **17.** Screw in the rod of the removal aid.

18. Lift up the rod and simultaneously apply counterpressure with the tweezers to engage the retaining bolt of the transportation insert ("Replacing the source capsules").



19. Fit the cover.

╘╼

- 20. Secure the cover: 4 x M8 with 13mm AF (max. 15 Nm (11.06 lbf ft)).
- **21.** Insert the special tool (removal aid, tweezers, collecting vessel) into the transportation cask.
- 22. Check the outer seal carefully and fit the cover.



- 23. Secure the cover screw connections: 8 x M10 with 15mm AF (max. 25 Nm (18.43 lbf ft)).
- 24. Fix a new lead seal on the cover of the transportation cask. Return the transportation cask to Endress+Hauser (see also "Returning a loaded transportation cask").



6.4 Returning a loaded transportation cask

The following conditions must be met:

- The transportation cask must be identified as follows on two opposite sides:
 - Type A label
- Two fully completed labels for hazardous substances
- The transport index has been determined
- The loading plan and special tool are provided in the transportation cask
- The inspection report (see the delivery papers on the exterior of the transportation cask) is filled in
- The transportation cask is securely closed and lead-sealed

The following documents are prepared by Endress+Hauser with the return documents and must be available at the time of dispatch:

- Written authorization (provided to the driver)
- Pick-up order/transportation document according to the ADR (provided to the driver)
- Special Form Certificate if applicable (provided to the driver)
- Wipe test report (completed as per template and submitted to Endress+Hauser in advance for approval). The wipe test report must be included in the cask

7 Using the removal tool for cylindrical source capsules

7.1 Unlocking the transportation insert

The removal tool is only suitable for cylindrical source capsules with a ø6.4 mm!

- 1. Remove the ball knob on the removal aid.
- 2. Press down the transportation insert to unlock it.
- 3. The cover of the transportation insert can now be removed using the tweezers.



7.2 Removing the source capsule and equipping the source capsule insert

1. Place the removal tool vertically onto the source capsule in the transportation insert and press it down.

- 2. The source capsule is captured in the tube of the removal aid.
- 3. Press down the rod to insert the source capsule.



8 Appendix

Loading plan: transportation insert for radioactive sources (2 pages in total)

- Complete **in full** when returning a loaded transportation cask.
- Is included with the delivery documents on the exterior of the transportation cask.

Auxiliary tools (removal aid, tweezers, collecting vessel) must be returned with the transportation cask. You will be charged for any missing tools

8.1 Loading plan: transportation insert for radioactive sources

8.1.1 Customer address

Company:

Street:

Zip code:

Place:

Tel:

8.1.2 Transportation insert, upper level



I Transportation insert, upper level: 3 rings or A

Item 1: Isotope: ¹³⁷Cs □, ⁶⁰Co □, Source No.: ______, Activity: ______
Item 2: Isotope: ¹³⁷Cs □, ⁶⁰Co □, Source No.: ______, Activity: ______
Item 3: Isotope: ¹³⁷Cs □, ⁶⁰Co □, Source No.: ______, Activity: ______
Item 4: Isotope: ¹³⁷Cs □, ⁶⁰Co □, Source No.: ______, Activity: ______
Item 5: Isotope: ¹³⁷Cs □, ⁶⁰Co □, Source No.: ______, Activity: _______
Item 6: Isotope: ¹³⁷Cs □, ⁶⁰Co □, Source No.: ______, Activity: _______
Item 7: Isotope: ¹³⁷Cs □, ⁶⁰Co □, Source No.: ______, Activity: _______
Item 8: Isotope: ¹³⁷Cs □, ⁶⁰Co □, Source No.: ______, Activity: _______

8.1.3 Transportation insert, middle level



2 Transportation insert, middle level: 2 rings or B

Item 1: Isotope: ¹³⁷Cs D, ⁶⁰Co D, Source No.: ______, Activity: ______
Item 2: Isotope: ¹³⁷Cs D, ⁶⁰Co D, Source No.: ______, Activity: ______
Item 3: Isotope: ¹³⁷Cs D, ⁶⁰Co D, Source No.: ______, Activity: ______
Item 4: Isotope: ¹³⁷Cs D, ⁶⁰Co D, Source No.: ______, Activity: ______
Item 5: Isotope: ¹³⁷Cs D, ⁶⁰Co D, Source No.: ______, Activity: _______
Item 6: Isotope: ¹³⁷Cs D, ⁶⁰Co D, Source No.: ______, Activity: _______
Item 7: Isotope: ¹³⁷Cs D, ⁶⁰Co D, Source No.: ______, Activity: _______
Item 7: Isotope: ¹³⁷Cs D, ⁶⁰Co D, Source No.: ______, Activity: _______
Item 8: Isotope: ¹³⁷Cs D, ⁶⁰Co D, Source No.: _______, Activity: _______

8.1.4 Transportation insert, lower level



☑ 3 Transportation insert, lower level: 1 ring or C

■ Item 1: Isotope: ¹³⁷ Cs □, ⁶⁰ Co □, Source No.:	, Activity:
■ Item 2: Isotope: ¹³⁷ Cs □, ⁶⁰ Co □, Source No.:	, Activity:
■ Item 3: Isotope: ¹³⁷ Cs □, ⁶⁰ Co □, Source No.:	, Activity:
■ Item 4: Isotope: ¹³⁷ Cs □, ⁶⁰ Co □, Source No.:	, Activity:
■ Item 5: Isotope: ¹³⁷ Cs □, ⁶⁰ Co □, Source No.:	, Activity:
■ Item 6: Isotope: ¹³⁷ Cs □, ⁶⁰ Co □, Source No.:	, Activity:
■ Item 7: Isotope: ¹³⁷ Cs □, ⁶⁰ Co □, Source No.:	, Activity:
■ Item 8: Isotope: ¹³⁷ Cs □, ⁶⁰ Co □, Source No.:	, Activity:

The returned sources are clean, leak-tight and free from mechanical damage.

Checked for correctness:

Place and date:_____

Signature of Radiation Safety Officer:_____

Company stamp:

9

Certificate of suitability for HQG60

e-mail: eisenwer www.eisenwe	28-0, Fax 80 28-20 k@ewb-bassum.de erk-bassum.de	Bassum
	Certificate of Co	onformity
P	o.: EWB-EB-TV-T40-T7	5-T110-Rev.13-E
For packages not requiri material.	ng competent authority a	oproval for the transport of radioactive
This is to confirm that the requirements, see part 1	e type of package as give of this Certificate of Cont	n below complies with the applicable formity.
Testing specification:	The transport regulatio methods approved by	ns mentioned in Part 1 for the transport us
Package:	Transport Container see Part 2 of this Certif	140, T75, T110, T130-W, cate of Conformity
Package type:	Type-A, Industrial pack	age IP-2 and IP-3
Conveyances:	Road, railway, air, sea	
Contents:	Radioactive material as	s defined in Part 3
Validity:	Until the testing specifi	cations are amended.
Emergency measures: Responsibility of the se	See written instructions ender:	of the sender.
It is the responsibility of of this Certificate of Cont	the sender to ensure that formity are met before the	all requirements regarding Parts 3 to 9 transport commences.
Amendments:		
Without an EWB approve package, the specification	al based on this Certifications of the contents or inst	e of Conformity, no changes to the ructions as mentioned are admissible.
The safety proof regar regulations mentioned has	ding the compliance of as been tested by the ma	the type of package design with the nufacturer.
The maximum admissibl	e total weight of the pack	age, including the contents is 450kg.
This certificate does not additional instructions of	release the sender from t the respective country af	he necessity to observe possible fected by this transport.
Bassum, 12. December :	2014	
H. Grunau Managing Director, EWB	H. Wo	Rüche rks Inspector, EWB
	abuta agreed ISO 16040 barriers	Pore 1 of 5
Refer to protection notice ISO 16016. Se	chuizvennerk iso ibu ib beachten.	Fage 1015

Refer to protection notice ICO 45045 Code		Deve Orig
Transport container T130-W	11-0845-000-0	St11-0845-000-0.
Transport container T110-EZ with inliner and garage	EB1-T110-500-00	EB1-T110-500-00
Transport container T110	13-0988-000-01	ST13-0988-000-01
Transport container T75	13-0984-000-01	ST13-0984-000-01
Transport container T40	13-0985-000-01	ST13-0985-000-01
Туре	Drawing no.	Parts list no.
The package consists of steel	steel plate, shown o	n the drawing:
Part 2: Description of the pac	<u>:kage</u>	
MDG-Code 2012 inkl. Amdt. 3	6-12 - International N	laritime Dangerous Goods Code
[6] IMDG-Code 2012		-
International Air Transport A Anlage "A"), erstellt im Einvern	Association, Gefahr ehmen mit der ICAO	gutvorschriften (IATA-Beschluss 618 55. Ausgabe
[5] IATA dangerous goods reg	ulations 2014	
radioactive material, 2012 editi	Agency (IAEA) Re on, Specific Safety R	equiations for the safe transport of equirements No. SSR-6, Vienna 2012
[4] Specific Safety Requirement	nts No. SSR-6	
Bekanntmachung vom 16.5.20 (BGBI. Teil II 2013 S. 562)	08 (BGBI. II S.475),	zuletzt geändert durch V v. 25.05.2013
[3] RID 2013 - Regulations or rail (RID) vom 16 November 1993 (RCB	oncerning the interna	tional carriage of dangerous goods by
Beförderung gefährlicher Güte Bekanntmachung vom 03.06 S.237).	r auf der Straße (BGI 2013 (BGBI.II 2013	BI. 1969 II S. 1489), in der Fassung der 3 S.648 und Anlagenband, ber.2014
L2 AUR 2013 - Agreement for Furonäisches Ühereinkomme	ine transport of the	Dangerous Goods by Road (ADR)
Straße, Eisenbahn und Binnen I S. 110)	schifffahrt – GGSEB) i.d.F. der Bek. vom 22.1.2013 (BGBI.
Verordnung über die innerstaa Güter auf der Straße, mit Eise	atliche und grenzübe Inbahnen und auf Bi	rschreitende Beförderung gefährlicher
[1] Gefahrgutverordnung Straß	se, Eisenbahn und Bi	nnenschifffahrt (GGVSEB)
Part 1: Listing of the transpo	rt regulations the ty	pe approval is based on
e-mail: eisenwerk@ewb www.eisenwerk-ba	-bassum.de ssum.de	Bassum
161.1 LU 42 4 11 8U 28-U,	Fax 80,58-50	Maisenwerk 🚓

A0038353

Hinterm Bahnhof 3, 27211 Bassum Tel.: (0 42 41) 80 28-0, Fax 80 28-20 e-mail: eisenwerk@ewb-bassum.de www.eisenwerk-bassum.de



Part 3: Admissible contents:

- Solid, low level radioactive material of class 7 admissible according to ADR 2.2.7 for Type IP-2, IP-3 and Type-A packages. The user of the package must classify the intended contents according to the applicable regulations.
- Type A packages shall not contain activities greater than either of the following: For special form radioactive material — A1; For all other radioactive material — A2.
- Except for gases.
- Except for liquids.
- Except for materials that require a package with an approval by a competent authority.
- Materials with low specific activity (LSA ...) provided these correspond to the restrictions according to ADR 2.2.7 for IP-2, IP-3 and Type A packages.
- Surface contaminated objects (SCO ...) provided these correspond to the restrictions according to ADR 2.2.7 for for IP-2, IP-3 and Type A packages.
- Contents to be allocated to an industrial package type IP-2, IP-3 and Type A according to ADR 4.1.9.
- The limits of the applicable regulations (see part 1) must be observed.
- Contents containing fissile material up to a quantity permitted according to ADR 6.4.11.
- Solid and mobile materials must be packed in the leak-tight containment according to the User Manual /1/.
- The contents must be compatible with the leak-tight containment.
- The contens must not contain additional dangerous properties within the meaning of the dangerous goods regulations.
- Further the requirements of the applicable regulations for Type A and IP-packages (se part 1) are to be adhered to.

Part 4: Quality assurance

Planning, type approval, manufacturing and certification of the package are subject to the constant inspection by our quality assurance system consisting of the quality manual no.: EWB-QMH and the associated quality assurance program no.: EWB-QSP-EB1-EB4 including the type list. It is the users responsibility to perform the operation of the package according to the instructions of the User Manual /1/.

Operation, transport and transport-related stay must be performed by the user according to an appropriate quality assurance system to ensure that the conditions of this certificate as well as the national and international Dangerous Goods Regulations to be applied are met. For this QA system exclusively the user of the package is responsible.

Refer to protection notice ISO 16016. Schutzvermerk ISO 16016 beachten.

Page 3 of 5

E:\QSP\4_EWB-QSP-EB1-EB4\40_TL-T40-T110\40.6 Eignungsbescheinigung\EWB-EB-TV-T40-T75-T110-Rev-13-E.doc

Hinterm Bahnhof 3, 27211 Bassum Tel.: (0 42 41) 80 28-0, Fax 80 28-20 e-mail: eisenwerk@ewb-bassum.de www.eisenwerk-bassum.de



Part 5: Loading

The loading must be performed according to the instructions of the User Manual /1/. If necessary any additional shielding of the package must be released by EWB.

Part 6: Measures prior to the transport

Prior to the transport, the measures as specified in the User Manual /1/ must be carried out. Further instructions of the applicable regulations (see part 1) are to be observed.

The user must ensure that the package is marked according to the User Manual /1/ and the regulations (see part 1) applicable at the time of the transport and that the package is identified and labelled according to its contents.

Part 7: Periodic inspections

During every loading process, the inspections must be performed as specified in the User Manual /1/.

The periodic inspections specified in the User Manual /1/ must be performed by the user within the specified intervals.

Part 8: Emergency measures

Exceeding the known regulations and emergency measures, no special measures are required. This does not release the sender from his obligation to take precautions regarding emergency events. During the transport, make sure to carry the written instructions according to ADR / RID and further applicable regulations.

Part 9: Others

Requirements resulting from other legal standards, directives and other definitions (e.g. approval-related specifications, interim storage or final storage condition) are not affected by this certificate.

This certificate does not release the user of this package from the obligation to meet own stipulations regarding the quality assurance and monitoring concerning the operation of the package.

Part 10: Applicable documents

/1/ User Manual no. EWB-HA-TV-T40-75-110 Rev.5

For the Transport Container T110-EZ including inner container and garage, drawing no. EB-T110-500-00, consider Gebrauchsanweisung MultiSource HDR Afterloader, Nr. TD09_099, current revision (available from E&Z Bebig GmbH, Berlin).

Refer to protection notice ISO 16016. Schutzvermerk ISO 16016 beachten.

Page 4 of 5

```
E:\QSP\4_EWB-QSP-EB1-EB4\40_TL-T40-T110\40.6 Eignungsbescheinigung\EWB-EB-TV-T40-T75-T110-Rev-13-E.doc
```

A0038355

	e-n	nail: eisenwerk@	9-U, Fax 8U 28-20 9ewb-bassum.de		2
		www.eisenwer	k-bassum.de	Bassum	7
	<u>Addendu</u>	<u>ım:</u>			
	Updating account b	also of the docur by the sender of t	ments contained in the docu he package prior to every tra	mentation must be taken into ansport or during periodic	
	<u>Inspection</u> Remarks	ns. The procurem	ient of this information must	be provided by the sender.	
	The send	er represents the	user or other users.		
	Release	note	۸.		
	13	12.December 2014	H. Rüchel	H. Grunau / france	
	Revision	Date	Issued by Name, Signature	Checked and approved by	
X					
а. С					
1 .					
4					
× .					
X					
1 .					
1 .					
•					
× .					
*	Refer to protect	ion notice ISO 16016 Schu	tzvermenk ISO 16016 bescher		
	Refer to protect	ion notice ISO 16016. Schu	tvermerk ISO 16016 beachten.	Page 5 of 5	
	Refer to protect E:\QSP\4_EWI	ion notice ISO 16016. Schu B-QSP-EB1-EB4\40_ TL-	tzvermerk ISO 16016 beachten. T40-T110/40.6 Eignungsbescheinigung∖E	Page 5 of 5 WB-EB-TV-T40-T75-T110-Rev-13-E.doc	



www.addresses.endress.com

