

APPLICATION FOR LICENSE TO EXPORT NUCLEAR
MATERIAL AND EQUIPMENT (See Instructions on Reverse)

APPROVED BY GAO
B 180225(R0362)

DCS/DF02

1. APPLICANT'S USE		a. DATE OF APPLICATION May 22, 1990		b. APPLICANT'S REFERENCE RBU-5		2. NRC USE		a. DOCKET NO. 11004308		b. LICENSE NO. XSNM02536	
3. APPLICANT'S NAME AND ADDRESS						4. SUPPLIER'S NAME AND ADDRESS					
a. NAME Transnuclear, Inc.						b. NAME National Nuclear Corporation					
b. STREET ADDRESS Two Skyline Drive						c. STREET ADDRESS 1275 Hammerwood Avenue					
c. CITY Hawthorne				STATE NY		ZIP CODE 10532		d. CITY Sunnyvale			
STATE CA				ZIP CODE 94089							
d. TELEPHONE NUMBER (Area Code - Number - Extension) (914) 347-2345 Ext. 3056						e. CITY Sunnyvale					
5. FIRST SHIPMENT SCHEDULED July 1990						6. FINAL SHIPMENT SCHEDULED July 1990		7. APPLICANT'S CONTRACTUAL DELIVERY DATE Same as item 5		8. PROPOSED LICENSE EXPIRATION DATE One year from date of issuance	
						9. U.S. DEPARTMENT OF ENERGY CONTRACT NO. (If Known) To be determined					
10. ULTIMATE CONSIGNEE						11. ULTIMATE END USE					
a. NAME Siemens AG, Unternehmensbereich KWU						b. NAME Return of property to ultimate consignee and owner (See attached end use statement)					
b. STREET ADDRESS Postfach 110060						c. STREET ADDRESS Return of unirrad. rods after testing in U.S.					
c. CITY - STATE - COUNTRY D-6450 Hanau 11, W. Germany						11a. EST. DATE OF FIRST USE					
12. INTERMEDIATE CONSIGNEE						13. INTERMEDIATE END USE					
a. NAME											
b. STREET ADDRESS											
c. CITY - STATE - COUNTRY											
14. INTERMEDIATE CONSIGNEE						15. INTERMEDIATE END USE					
a. NAME											
b. STREET ADDRESS											
c. CITY - STATE - COUNTRY											
16. NRC USE						17. DESCRIPTION					
						(Include chemical and physical form of nuclear material, give dollar value of nuclear equipment and components)					
18. MAX. ELEMENT WEIGHT						19. MAX. WT. %		20. MAX. ISOTOPE WT		21. UNIT	
Uranium in the form of uranium dioxide, enriched to 3.5% maximum in unirradiated test rods						(U) 10.079		3.5% EXACT		235) 202 90 MAY 24 P2 RECEIVED	
										Kgs	
22. COUNTRY OF ORIGIN - SOURCE MATERIAL						23. COUNTRY OF ORIGIN - SNM WHERE ENRICHED OR PRODUCED					
						24. COUNTRIES WHICH ATTACH SAFEGUARDS (If Known)					
25. ADDITIONAL INFORMATION (Use separate sheet if necessary)											
9006040297 900522 PDR EXPORT XSNM-2536 PDC											
26. The applicant certifies that this application is prepared in conformity with Title 10, Code of Federal Regulations, and that all information in this application is correct to the best of his/her knowledge.											
27. AUTHORIZED OFFICIAL						a. SIGNATURE Patricia B. Quain			b. TITLE Traffic Coordinator		

SIEMENS

Energieerzeugung KWU

5/21

XSJMO2536
11004308

TRANSNUCLEAR, Inc.
Two Skyline Drive
Hawthorne
N.Y. 10532

Attn. Mr. M. George

Ihr Zeichen

Ihre Nachricht

Unser Zeichen

Datum

KS/F1

May 14th, 1990

Re: 7 unirradiated fuel rods at National Nuclear Corp.
INY 90015-6
Your Telefax No. 90173 dated Jan. 22th, 1990

Please find enclosed the requested End Use Statement for the unirradiated test rods in accordance with your draft and in order to obtain the necessary US NRC export license.

With best regards,

K. Schädlich

Enclosure

Distribution

Herr Beck/WQW/L
Herr Bergmann/WAZ-T
Herr Döring/TSI-KU
05/07524-3

Leitung:
Johannelementewerk Hanau
Horst Roepenack

Postanschrift:
Siemens AG

Postfach 110060
D-6450 Hanau 11

Bearbeiter:
K. Schädlich

Besuchsadresse:
Rodenbacher Chaussee 6

Telefon (06181) 58-01
Durchwahl: 3620
Tel. (06181) 58-3401
Fax (06181) 58-
Tlx 61817001=siebew
Tx 4184124 sik d

Bereichsvorstand Energieerzeugung: Dr. H. v. Pierer (Vorsitzender), H. Hirschmann, Dr. W. Keller

SIEMENS

Energieerzeugung KWU

XSNM02636
11004308

Ihr Zeichen

Ihre Nachricht

Unser Zeichen

Datum
May 10th, 1990

End use statement

Re: Unirradiated test rods for die Rod Scanner with type
designations 3 ND 1.2 through 3 ND 7.2, total 7 fuel rods

Dimensions and materials can be seen in the attached description.

The a.m. test rods are the property of Siemens BW Hanau.

Country of origin of material: USA (Code: A)

The 7 test rods were shipped on March 23th, 1990 from Frankfurt
Airport to San Francisco Consignee:

National Nuclear Corporation
1275 Hammerwood Avenue
Sunnyvale, CA. 94089

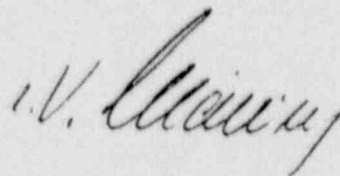
The test rods are used for the acceptance test of a non-destructive
enrichment measuring device (Rod Scanner).

It is planned that the 7 test rods will be shipped from NNC to
Siemens after completion of tests in July 1990.

Place and date of issue

Signature of ultimate Consignee

6450 Hanau 11, May 10th, 1990



Brennelementewerk Hanau
Leitung
Horst Roepenack

Postanschrift:
Siemens AG

Postfach 110060
D-6450 Hanau 11

Name: Beck

Besuchsadresse:
Rodenbacher Chaussee 6

Telefon (06181) 58-01
Durchwahl:
Tel. (06181) 58- 3259
Fax (06181) 58- 3502
Teletex 61817001=siebew
Telex 4184124 sik d

Bereichsvorstand Energieerzeugung: Dr. H. v. Pierer (Vorsitzender), H. Hirschmann, Dr. W. Keller

SIEMENS

XSUN025
1100-500

~~Nuclear Lieferkette~~

No. (Pos) U 00952 19.03.1990

Pos. (Item)	Menge (quantity)	Bezeichnung (product)
	kg BQ ₂	Quantity
1	1,634	1 unirradiated fuel rod No. 3ND1
2	1,639	3ND2
3	1,618	3ND3
4a	0,083	3ND4
4b	0,277	3ND4
4c	0,825	3ND4
4d	0,279	3ND4
4e	0,173	3ND4
5a	0,047	3ND5
5b	0,871	3ND5
5c	0,345	3ND5
5d	0,277	3ND5
5e	0,094	3ND5
6a	0,277	3ND6
6b	1,086	3ND6
6c	0,275	3ND6
7	1,637	3ND7
1-7	11,437	

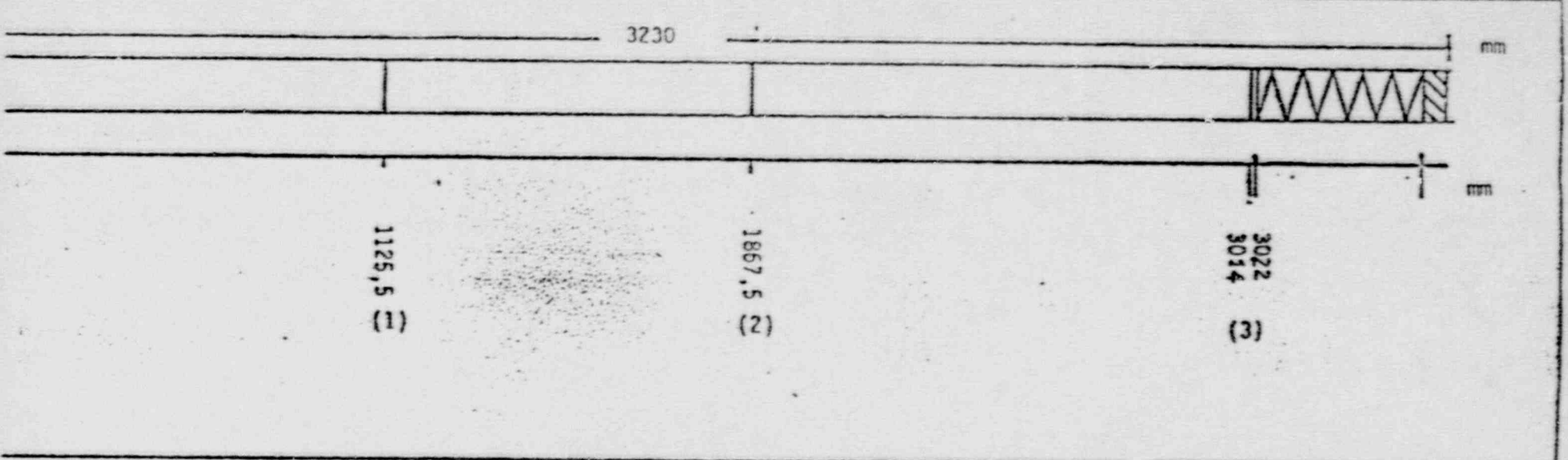
Pos. (Item)	kg U-Element	kg U-235	Anreich. (enrich.) %	Elementtyp	Abkürzung / Vermerk (Remark)
1	1,440	0,017	1,1854	L	
2	1,445	0,029	2,0069	L	
3	1,426	0,050	3,5063	L	
4a	0,073	-	0,7110	N	
4b	0,244	0,003	1,1854	L	
4c	0,727	0,015	2,0069	L	
4d	0,246	0,006	2,5000	L	
4e	0,152	0,002	1,1854	L	
5a	0,041	-	0,7110	N	
5b	0,768	0,009	1,1854	L	
5c	0,304	0,008	2,5000	L	
5d	0,244	0,003	1,1854	L	
5e	0,083	-	0,7110	N	
6a	0,244	0,006	2,5000	L	
6b	0,957	0,019	2,0069	L	
6c	0,242	0,006	2,5000	L	
7	1,443	0,029	2,0069	L	
1-7	10,079	0,202			

EURATOM/DEA
AG/2300/27

ement
mbH
SEN

TEST-STAB Nr.: 3ND 12

Revision	0	Datum	11.1.70
umfaßt	5	Blatt	Blatt-Nr.: 1



Brennstab Beschreibung

Testmerkmale

hr Material : Zirkaloy 4
hr Durchmesser : 9,5 mm
Durchmesser : 8,05mm
Äulenlänge : 3025 mm
UO₂ : 1634 g
U235 : :

- (1) Spalt mit 0,5 mm
- (2) Spalt mit 1,0 mm
- (3) Al₂O₃ - Pellet

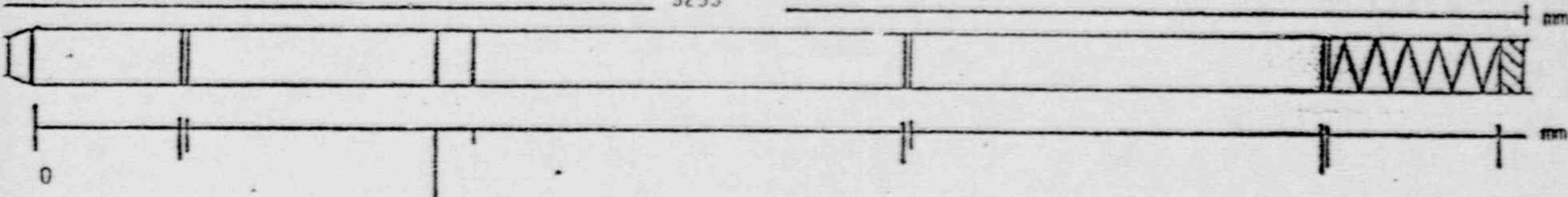
e Säule mit 1,2 x U-235

XS 100 21 1100 1208

TEST-STAB Nr.: 3ND22

Revision <u>0</u>	Datum <u>11.13</u>
umlebl <u>7</u> Blatt	Blatt-Nr.: <u>2</u>

3253



407,5
397,5
(1)
✓

1140,5
988
(2)
6%

1894
1884
(3)
✓

3043
3035
(4)
✓

Brennstab Beschreibung

Rohr Material : Zirkaloy 4
 Rohr Durchmesser : 9,5 mm
 Let Durchmesser : 8,05 mm
 Säulenlänge : 3035 mm
 se UG : 1639 E
 re U235 :

Testmerkmale

- (1) OSP + 15 % rel. Abw. $\leq$ 2,3 % U-235
- (2) OSC + 3 % rel. Abw. $\leq$ 2,06 % U-235
- (3) OSP - 15 % rel. Abw. = 1,7 % U-235
- (4) Al₂O₃-Tabl.

OSP = Pellet mit abweichender Anreicherung (Off.Spec. Pellet)
 OSC = Säule (Teilsäule) mit abweichender Anreicherung
 (Off. Spec Column)

ene Säule mit 2 % U-235

XSUM025 30
 11004308

TEST - STAB Nr.: 3ND32

for
element
GmbH
WESEN

Revision 0 Datum 11.1.20

umfoll 7 Blatt Blatt-Nr.: 3

3219



3007,5
2995,5
2900
2890
(2) (3)

50
(1)

Brennstab Beschreibung

Material : Zirkaloy 4
Durchmesser : 9,5 mm
Durchmesser : 8,05 mm
Längslänge : 2995,5 mm
UC : 1618
UC235

Testmerkmale

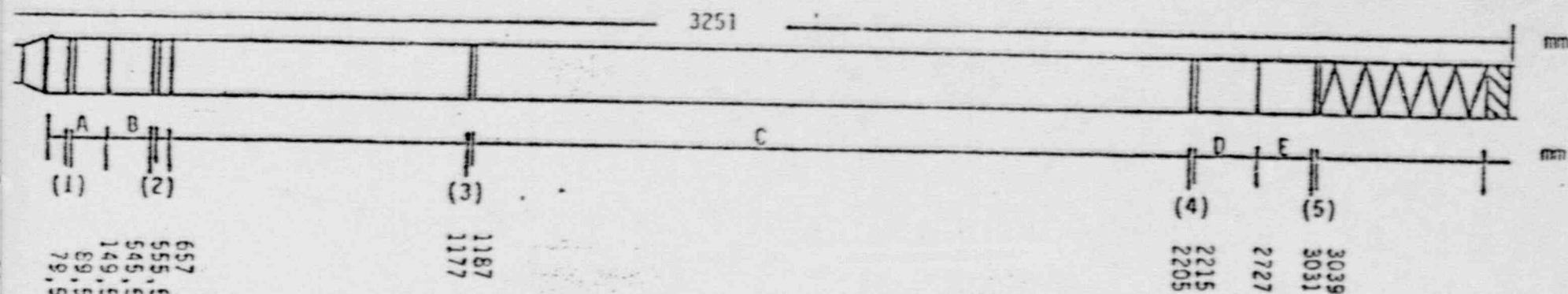
(1) OSP - 20 ± rel. ± 2,8 ± U-235
(2) OSP + 15 ± rel. ± 4,03 ± U-235
(3) Al₂O₃-Tablette

Stüle mit 3,5 ± U-235

XSAME
71020100

TEST-STAB Nr.: 3ND42

Revision 0	Datum 11.1.30
umlaßt 2 Blatt	Blatt-Nr. 4



Brennstab Beschreibung

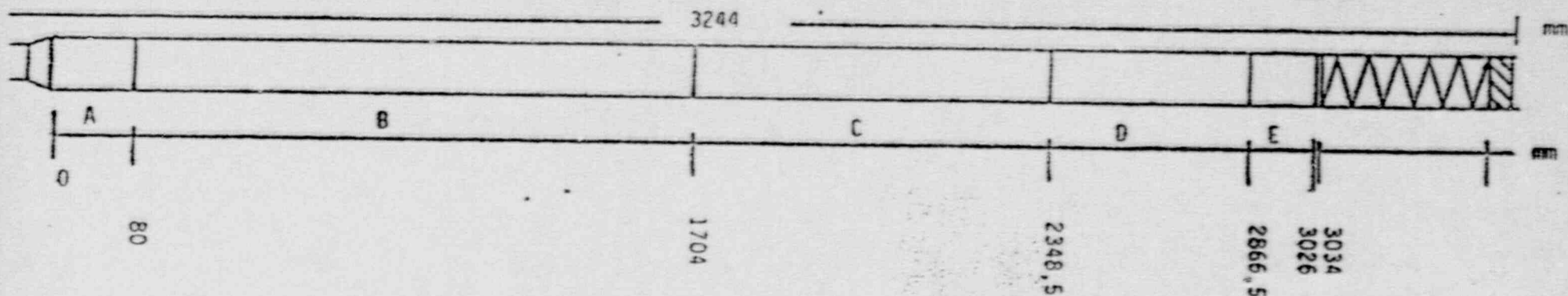
rohr Material	: Zirkaloy 4
rohr Durchmesser	: 9,5 mm
et Durchmesser	: 8,05 mm
Skulenlänge	: 3031 mm
U-235	: 1637 g

Testmerkmale

- (1) OSP mit 1,2 % U-235 ✓
- (2) OSP mit + 15 % rel. Abw. als 11. Pellet an der Zonengrenze $\pm 1,32$ % U-235 1,38 ✓
- (3) OSP mit - 15 % rel. Abw. $\pm 1,7$ % U-235 ✓
- (4) OSP mit + 30 % rel. Abw. als 1. Pellet an der Zonengrenze $\pm 3,25$ % U-235
- (5) Al_2O_3 -Pellet

TEST-STAB Nr.: 3ND5.2

Revision 0	Datum 11.1.30
umfaßt 4 Blatt	Blatt-Nr.: 5



(1)

Brennstab Beschreibung

Rohr Material : Zirkaloy 4
 Rohr Durchmesser : 9,5 mm
 let Durchmesser : 8,05 mm
 Säulenlänge : 3026 mm
 se UC : 1634 G
 se U235 :

Testmerkmale

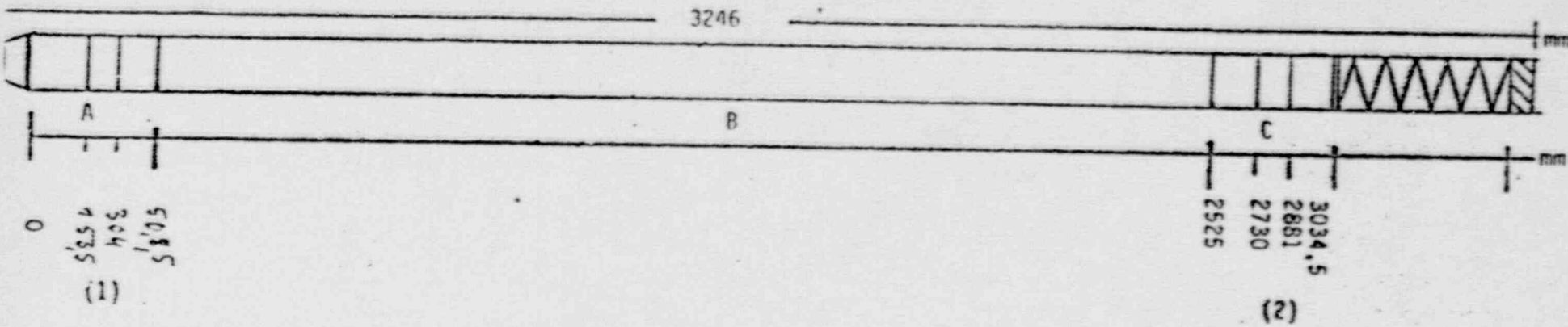
(1) Al₂O₃-Pellet

KS 1100-235
 1100-235

aktor
anagement
on GmbH
SWESSEN

TEST-STAB Nr.: 3ND62

Revision <u>0</u>	Datum <u>11.1.9</u>
umleibt <u>7</u> Blatt	Blatt-Nr.: <u>6</u>



Brennstab Beschreibung

Testmerkmale

Rohr Material : Zirkaloy 4
 Rohr Durchmesser : 9.5 mm
 St. Durchmesser : 8.05 mm
 Säulenlänge : 3034.5 mm
 UC : 1639 C
 U235 :

1: OSC - 3 ± rel. Abw. $\hat{=}$ 2.43 ± U-235
 2: OSC + 3 ± rel. Abw. $\hat{=}$ 2.58 ± U-235

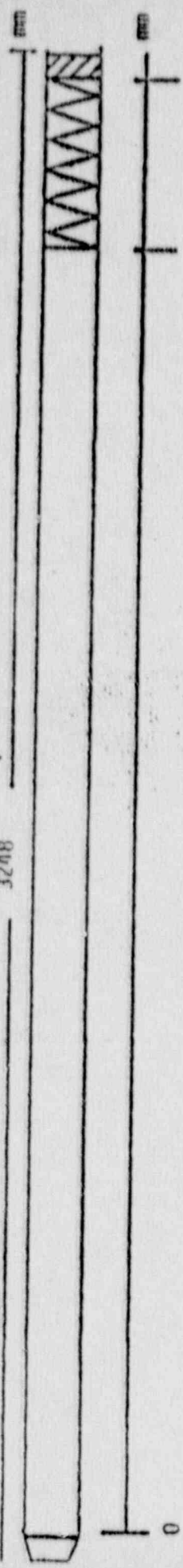
± U-235

1104400
 1104400

TEST-STAB Nr.: 3ND72

Revision	0	Datum	11.1.20
Umfeld	3	Blatt	Blatt-Nr.: 2

3248



3032

Brennstab Beschreibung

Rohr Material : Zirkaloy 4
 Rohr Durchmesser : 9,5 mm
 Stab Durchmesser : 8,05 mm
 Säulenlänge : 3032 mm
 UC : 1637 G
 U235

Testmerkmale

ne Säule mit 2 x U-235

XSN02874
 11004308