

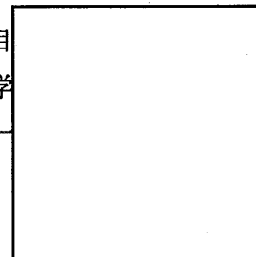
核燃料輸送物設計承認英文証明願

東工大研第 1 号

平成31年4月19日

原子力規制委員会 殿

東京都目黒区大岡山2丁目
国立大学法人東京工業大学
学長 益



下記の核燃料輸送物の設計が「IAEA 放射性物質安全輸送規則（2012年版）」の技術基準に適合していることについて英文により証明していただきたく、申請します。

記

1. 核燃料輸送物の名称

S300型

2. 設計承認番号

J/2022/AF-96

3. 英文証明の申請を行う理由

S300型輸送物は、中性子線源を米国へ返還する際に使用する予定であり、輸送関係国に本輸送物設計承認の有効確認をおこなうため

4. 承認を受けようとする設計の事項

添付参照

5. 核燃料輸送物設計承認書（写）

別紙参照

1. The Competent Authority Identification Mark : J/2022/AF-96

2. Name of Package : S300

3. Type of Package : Type A Fissile Package

4. Specification of Package

(1) Materials of Packaging : See the attached Table-1

(2) Total Weight of Packaging : 204 kg or less

(3) Outer Dimensions of Packaging

(i) Outer diameter : Approximately 60.2 cm

(ii) Height : Approximately 88.4 cm

(4) Total Weight of Package : 218 kg or less

(5) Illustration of Package : See the attached Figure-1

5. Specification of Radioactive Contents : See the attached Table-2

6. Description of Containment System

The containment boundary of this package is comprised by the special form capsule.

7. For Package containing Fissile Materials

(1) Restrictions on Package

(i) Restriction Number "N" : 167

(ii) Array of Package : No Restriction

(iii) Criticality Safety Index (CSI) : 0.3

(2) Description of Confinement System

Confinement system consists of and special form capsule.

(3) Assumptions of Leakage of Water into Package

Based on the criticality calculation, even if water invades, the inside of the main body of container and the inside of the special form capsule do not have any problem.

(4) Special Features in Criticality Assessment

There is no special device.

8. For Type B(M) Packages, a statement regarding prescriptions of Type B(U) Package that do not apply to this package

No applicable.

9. Assumed Ambient Conditions

- (i) Ambient Temperature Range : -40°C to 38°C
- (ii) Insolation Data : Table 12 of IAEA Regulation (No.SSR-6)

10. Handling, Inspection and Maintenance

(1) Handling Instructions

- (i) Package should be handled carefully in accordance with the schedule and procedures established properly taking all possible safety measures.
- (ii) Package should be handled using appropriate lifting devices such as forklift or crane.
- (iii) When packaging is stored outdoors, appropriate measures should be taken, avoiding the direct exposure to the weather.

(2) Inspections and Maintenance of packaging

The following inspections should be performed not less than once a year (once for every ten times in case where the packaging is used not less than ten times a year) and defect of packaging should be repaired, if any, in order to maintain the integrity of packaging.

- (i) Visual Inspection
- (ii) Shielding Inspection
- (iii) Subcriticality Inspection

(3) Actions prior to Shipment

The following inspections should be performed prior to shipment.

- (i) Visual Inspection
- (ii) Weight Inspection
- (iii) Surface Contamination Inspection
- (iv) Dose Rate Inspection
- (v) Subcriticality Inspection
- (vi) Contents Inspection
- (vii) Lifting Inspection

(4) Precautions for Loading of Package for Shipment

Package should be securely loaded to the conveyance at the designated tie-down portion of the packaging so as not to move, roll down or fall down from the loading position during transport.

11. Issue Date and Expiry Date

(i) Issue Date : Jun.9, 2017

(ii) Expiry Date : Jun.8, 2022

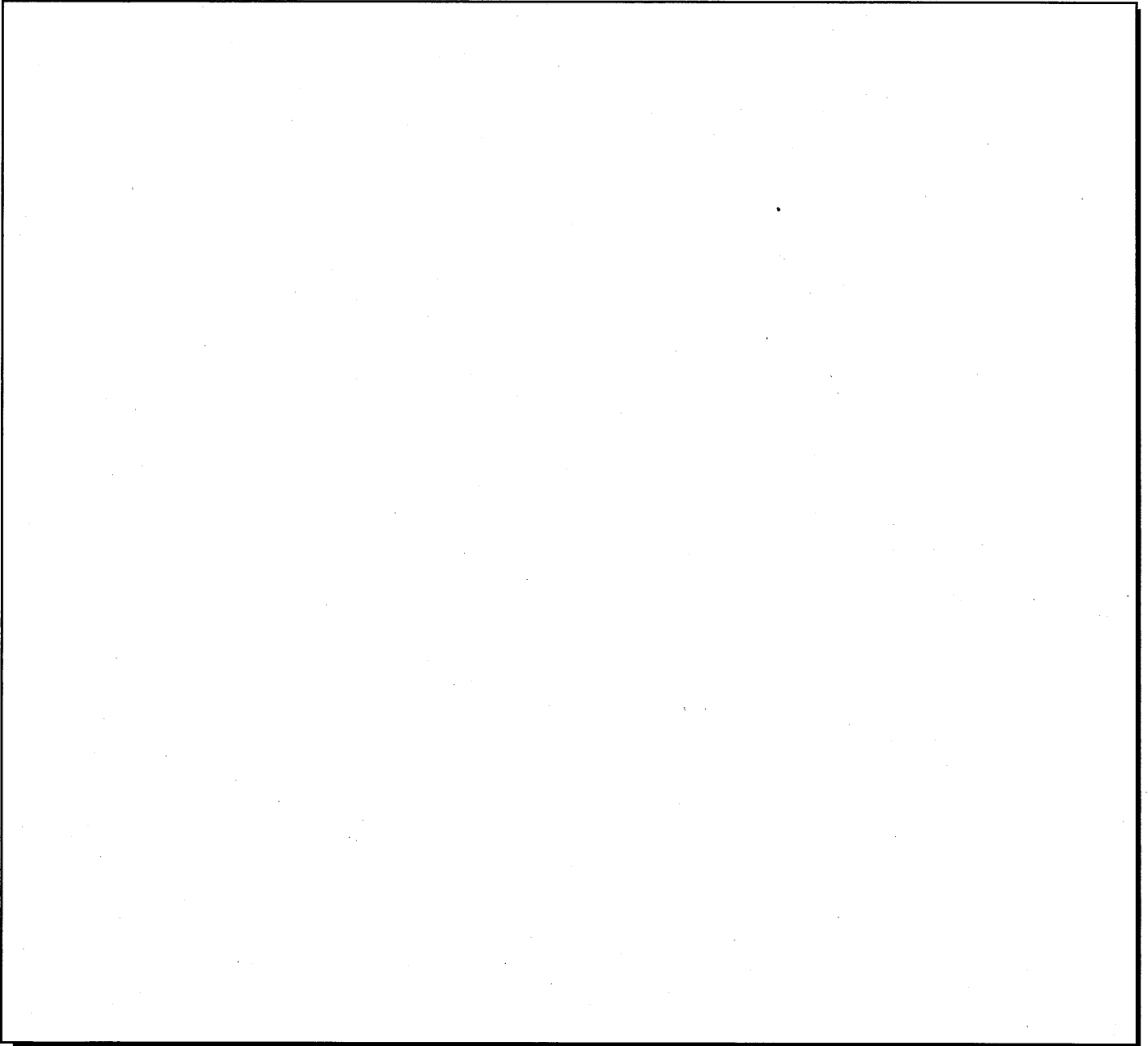
Table-1 Materials of Packaging

Component of S300 Package	Material
Outer pack	
– 17C Drum	Carbon Steel
– Dunnage	Cane Fiber & Fir Plywood
Pipe component	
– Body	Stainless Steel
– Lid	Stainless Steel
Neutron absorber	High Density Polyethylene
Special Form Capsule	
– Body	Stainless Steel
– Lid	Stainless Steel
– Sealing Plug	Stainless Steel

Table-2 Specification of Radioactive Contents

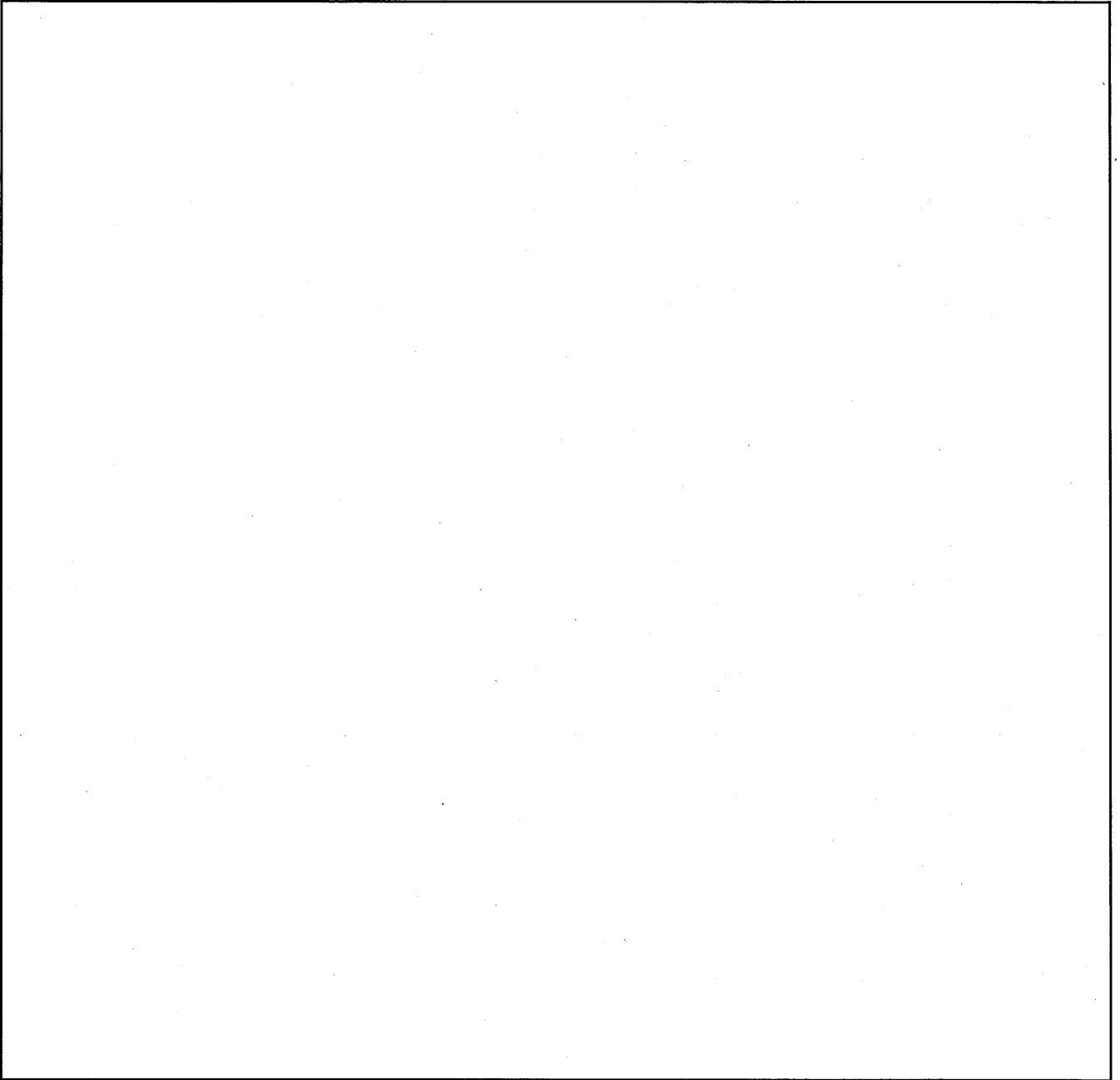
Items	Specification
Description	Neutron Source
Physical State	
Weight of Neutron Source*	
- 1pc (kg or less)	
- Gross weight (kg or less)	
① Storing Number of Neutron Source	
② Activity (TBq or less per package)	
③ Nuclide (TBq or less)	
Total	
Heat Generation Rate (W or less)	1.1

*Including [] weight

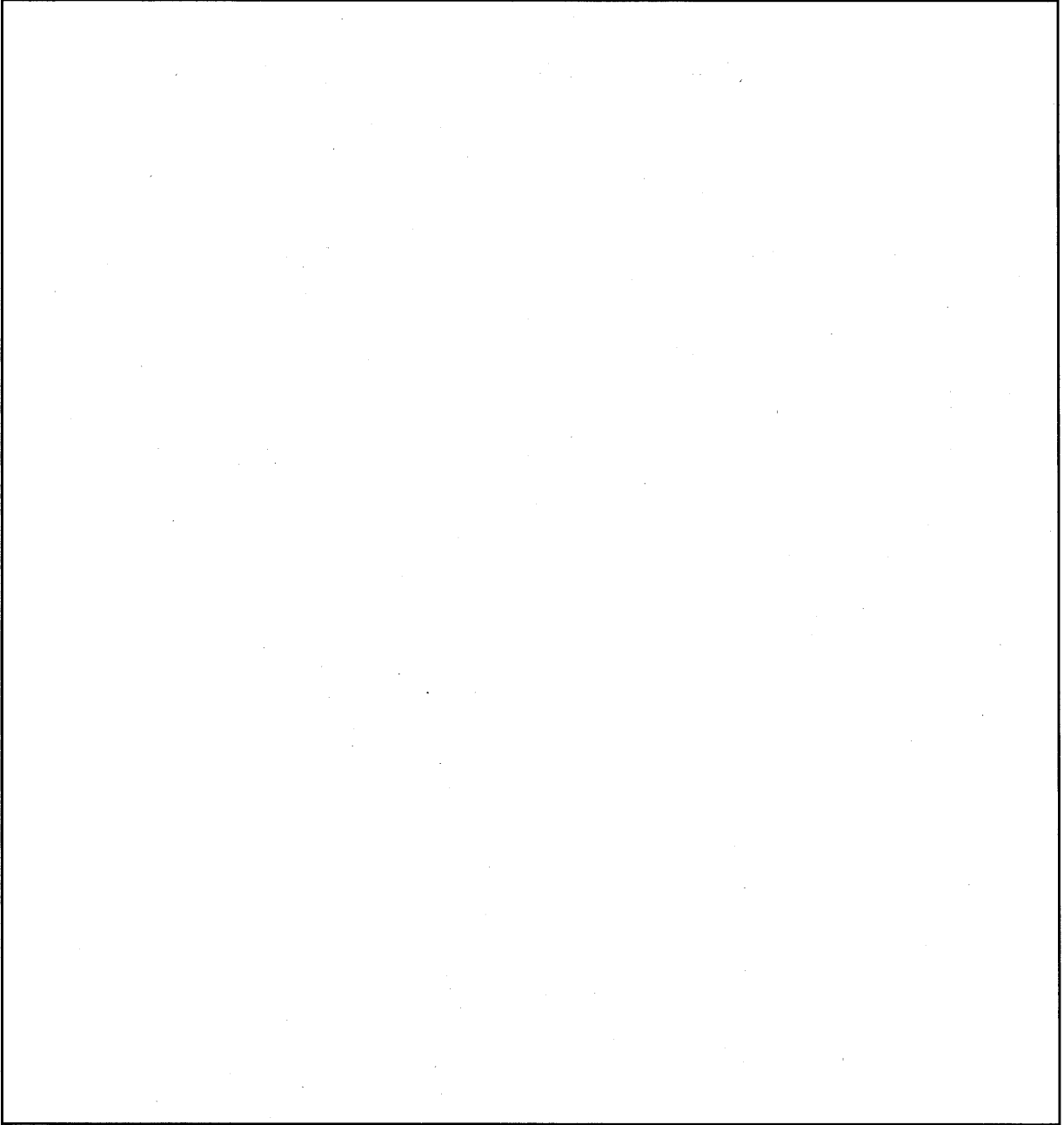


General View of Type S300 Package (1/3)





General View of Type S300 Package (2/3)



General View of Type S300 Package (3/3)