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**Datasheet for the decision
of 9 January 2024**

Case Number: T 0265/21 - 3.4.01

Application Number: 13781208.7

Publication Number: 2805331

IPC: G21F5/10, G21C19/07, G21C19/40,
G21F5/008, G21F5/012, G21F5/12

Language of the proceedings: EN

Title of invention:
SYSTEM FOR STORAGE AND TRANSPORTATION OF SPENT NUCLEAR FUEL

Patent Proprietor:
TN Americas LLC

Opponent:
GNS Gesellschaft für Nuklear-Service mbH

Headword:
Storage for spent nuclear fuel / TN Americas

Relevant legal provisions:
EPC Art. 123(2)
RPBA 2020 Art. 13(1)

Keyword:

Amendments - main request - added subject-matter (yes)
Amendment to appeal case - first, second, third auxiliary
requests - suitability of amendment to resolve issues raised
(no)



Beschwerdekammern

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Case Number: T 0265/21 - 3.4.01

D E C I S I O N
of Technical Board of Appeal 3.4.01
of 9 January 2024

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Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
8 February 2021 concerning maintenance of the
European Patent No. 2805331 in amended form.**

Composition of the Board:

Chair P. Scriven
Members: T. Petelski
D. Rogers

Summary of Facts and Submissions

- I. The appeal, by the opponent, is of the Opposition Division's decision that the patent could be maintained in amended form, on the basis of the claims of the first subsidiary request.
- II. The first subsidiary request was filed, by the proprietor, as one of first to fourth subsidiary requests before the Opposition Division.
- III. The opponent, as appellant, requested that the decision be set aside and the patent revoked.
- IV. In their reply to the appeal, the proprietor requested that the appeal be dismissed (main request), which means maintenance of the patent in the form approved by the Opposition Division, then designated as first subsidiary request.
- V. During oral proceedings before the Board, the proprietor added the requests that the patent be alternatively maintained on the basis of one of three auxiliary requests, corresponding to the second, third, and fourth subsidiary requests before the Opposition Division.
- VI. In this decision, the proprietor's original labelling of the auxiliary requests will be used, namely second

to fourth subsidiary requests.

VII. The proprietor also requested that case be remitted to the Opposition Division for consideration of the second to fourth subsidiary requests.

VIII. Claim 1 of the main request, labelled as first subsidiary request, reads:

A canister (12) for the transportation and storage of nuclear fuel assemblies (20), comprising a basket assembly (70) receivable into a canister shell, the basket assembly comprising:

a plurality of interlocking structural plates (72) that are disposed in spaced parallel relationship to each other in a first direction and a plurality of structural plates (72) disposed in a second direction transverse to the first direction;

said structural plates comprising portions defining spaced apart transverse slots (73) formed along the structural plates, with the slots of the structural plates disposed in a first direction engaging with the slots of the structural plates disposed in the second transverse direction;

wherein the structural plates are composed of a plurality of layers comprising a first layer (80) composed of structural material,

a second layer (84) composed of a heat conducting material selected from the group consisting of aluminum and copper, and a third layer (86) manufactured from a material whether metallic, ceramic or a composite containing an element that absorbs thermal neutrons, the element being selected from the group consisting of boron, cadmium, and gadolinium, and a fourth layer (82) composed of structural material, wherein the second and third layers are between the first and fourth layers,

characterized in that it further comprises an elongated locking key (75) extending along and engaging with adjacent edge portions of adjacent structural plates to lock said adjacent edge portions together and to align the adjacent edge portions of the structural plates together.

- IX. Claim 1 of the second subsidiary request differs from claim 1 of the first subsidiary request in a further feature, which reads:

*... [plate together],
wherein grooves are formed along the edge portions of the structural plates, said grooves are sized to closely receive the locking key therein, said locking key closely receivable within the grooves of the adjacent edge portions of adjacent structural plates.*

- X. Claim 1 of the third subsidiary request differs from claim 1 of the first subsidiary request in that the "adjacent edge portions" in the last feature are defined as "adjacent *lower and upper* edge portions" (emphasis added).
- XI. Claim 1 of the fourth subsidiary request differs from claim 1 of the third subsidiary request in that the locking key is further defined, in the last feature, as "extending orthogonally to a stacking direction of the structural plates".

Reasons for the Decision

Main request - extension of subject-matter

1. Claim 1 defines that the structural plates are composed of a plurality of layers. Of the plurality of layers, a second (heat conducting) layer and a third (neutron absorbing) layer are arranged between the first and the fourth (structural) layers.
2. Claim 1 covers structural plates having more than four layers, with at least one layer, of any kind whatsoever, located outside the first or fourth structural layers.
3. According to the proprietor, the application as filed provided a basis for this subject-matter. The passage from page 11, line 29, to page 12, line 3, made it clear that the structural layers were the outer layers

only in a non-limiting example of the invention. The application even disclosed an example of additional outer layers on page 13, lines 3 to 7. Here, there were additional coating layers on the outside of at least one of the two structural layers.

4. However, this is not how the skilled person would understand the application as filed. In its general description of the invention, the application discloses that the structural layers are the outer layers of the structural plates (page 3, lines 9 - 11: "outer layers composed of a structural material"). This is reflected by original claim 1, which also defines the structural layers as "outer layers". This means that all other layers must be inner layers.
5. All detailed embodiments that refer to the layer structure consistently show the structural "steel outer layers" 80 and 82 as the outer layers (see Figures 13 - 18). Therefore, the skilled person would understand that the "non-limiting" nature of the example described from page 11, line 32, to page 12, line 3, does not relate to the structural layers being outer layers, but to the four-layer arrangement, as opposed to the three-layer arrangement described on page 12, lines 12 to 14.
6. The "one embodiment of the present invention" that is described in the passage on page 13, to which the proprietor referred, states that

... the plates 72 may include a black oxide coating on one or both steel layers 80 and 82 to provide improved radiation heat transfer from the fuel assemblies In addition, the outer surfaces of the plates 72 may further include a hydrophobic

*silicon coating to improve water
shedding*

This means that the outer structural layers 80 and 82 may have one or two coatings on their outside.

7. The skilled person understands that the "coatings" are not meant to be "layers" in the sense of the application. Firstly, because the application uses different expressions to designate conceptually different things (the coatings are *on* the layers); and secondly, because otherwise the "embodiment" described in lines 3 - 7 on page 13 could not be what it is said to be: an embodiment of the invention as defined in the general part of the description and in the claims.
8. Therefore, there is no basis in the application as filed for the subject-matter defined in claim 1 of structural plates in which the structural layers are not the outer layers (Article 123(2) EPC).
9. Hence, the main request is not allowable.

*Admission of the second, third, and fourth subsidiary requests,
and remittal*

10. Maintenance of the patent on the basis of the second, third, and fourth subsidiary requests was requested, by the proprietor, for the first time, during oral proceedings before the Board. The admission of these requests is subject to the Board's discretion under Article 13 RPBA 2020.
11. Claim 1 of each of these requests uses the identical definition of the layers as claim 1 of the main

request. The differences relate exclusively to the locking key.

12. Due to the identical layer definitions, none of these requests is suited to resolving the problem of added subject-matter with claim 1 of the main request. This was not disputed by the respondent.
13. For this reason, the Board exercises its discretion under Article 13(1) RPBA not to admit the second, third, and fourth subsidiary requests into the proceedings.
14. The proprietor requested remittal to the Opposition Division for consideration of these requests.
15. In view of the Board's decision not to admit them into the proceedings, there is no basis upon which the case could be remitted.

Order

For these reasons it is decided that:

The decision under appeal is set aside.

The patent is revoked.

The Registrar:

The Chair:



D. Meyfarth

P. Scriven

Decision electronically authenticated