

Internal distribution code:

- (A) [-] Publication in OJ
- (B) [-] To Chairmen and Members
- (C) [-] To Chairmen
- (D) [X] No distribution

**Datasheet for the decision
of 1 December 2020**

Case Number: T 0346/16 - 3.2.03

Application Number: 08159701.5

Publication Number: 2141288

IPC: E02F1/00, E02F3/88, E02F5/28

Language of the proceedings: EN

Title of invention:

Method for delivering large quantities of under water soil to
a reclamation area

Patent Proprietor:

Dredging International Asia Pacific Pte. Ltd.
Oldendorff Carriers GmbH & Co. KG

Opponent:

Baggermaatschappij Boskalis B.V.

Headword:

Relevant legal provisions:

RPBA 2020 Art. 11, 12(2), 25
RPBA Art. 12(4), 13

Keyword:

Grounds for opposition - fresh ground for opposition (yes)
Main request - added subject-matter (yes)
Novelty - first auxiliary request (yes)
Inventive step - first auxiliary request (no)
Admissibility late filed request - (yes)
Remittal - (yes)

Decisions cited:

G 0010/91, G 0003/14, T 2324/14, T 2026/15, T 1525/17,
T 2344/15, T 1481/05, T 0233/12

Catchword:



Beschwerdekammern

Boards of Appeal

Chambres de recours

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0
Fax +49 (0)89 2399-4465

Case Number: T 0346/16 - 3.2.03

D E C I S I O N
of Technical Board of Appeal 3.2.03
of 1 December 2020

Appellant: Baggermaatschappij Boskalis B.V.
(Opponent 1) Rosmolenweg 20
3356LK Papendrecht (NL)

Representative: V.O.
P.O. Box 87930
2508 DH Den Haag (NL)

Respondent: Dredging International Asia Pacific Pte. Ltd.
(Patent Proprietor 1) 371 Beach Road
24-08 KeyPoint
Singapore 199597 (SG)

Respondent: Oldendorff Carriers GmbH & Co. KG
(Patent Proprietor 2) Willy-Brandt-Allee 6
23554 Luebeck (DE)

Representative: Brouwer, Hendrik Rogier
Arnold & Siedsma
Bezuidenhoutseweg 57
2594 AC Den Haag (NL)

Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
16 November 2015 concerning maintenance of the
European Patent No. 2141288 in amended form.**

Composition of the Board:

Chairman	G. Ashley
Members:	V. Bouyssy
	E. Kossonakou
	C. Donnelly
	D. Prietzel-Funk

Summary of Facts and Submissions

- I. European patent No. 2 141 288 (in the following "the patent") concerns a method for dredging underwater soil and transporting it to a remote reclamation site.
- II. The patent was opposed in its entirety by opponents 1 and 2 on the grounds that its subject-matter lacked novelty and inventive step. Two prior uses ("Kamsar/Odin" and "BulClaimer") were alleged to be part of the relevant prior art.
- III. By letter dated 19 February 2014, opponent 2 withdrew its opposition and thus ceased to be party to the proceedings.
- IV. At the second oral proceedings on 30 September 2015, after having heard the witness Serge Dolk, the opposition division came to the following conclusions:
 - that the amended claims according to the main request before it, i.e. the claims of the fourth auxiliary request filed with letter of 28 August 2015, met the requirements of Article 123(2) EPC;
 - that the claimed subject-matter was novel in light of the available prior art (Annex 9);
 - that the prior use Kamsar/Odin was sufficiently proven;
 - that the claimed subject-matter involved an inventive step when starting from this prior use as closest prior art.
- V. The opposition division thus decided that the patent as amended on the basis of the main request before it met the requirements of the EPC. The division also decided

not to admit the late-filed ground of opposition under Article 100(b) EPC into the proceedings and , to refuse the request of the patent proprietors for apportionment of costs.

VI. This interlocutory decision was appealed by opponent 1 (here -"appellant").

VII. In a communication pursuant to Article 15(1) of the Rules of Procedure of the Boards of Appeal (RPBA 2020) dated 21 February 2020, the Board indicated its preliminary opinion of the case. Oral proceedings were initially scheduled for 8 September 2020. Due to the Covid-19 pandemic the oral proceedings were rescheduled to be held as a videoconference(ViCo) on 17 November 2020, which had however to be interrupted due to technical problems. With the express agreement of the parties to waive the time limit specified in Rule 115(1) EPC, the oral proceedings were re-scheduled for 1 December 2020, again as a videoconference(ViCo).

VIII. Final requests

The appellant requested that the decision under appeal be set aside and that the patent be revoked.

The respondents requested that the appeal be dismissed, alternatively that the patent be maintained on the basis of one of the first to third auxiliary requests, originally filed before the opposition division as the fifth to seventh auxiliary requests with the letter of 28 August 2015, or on one of the fourth to seventh auxiliary requests, filed with the letter of 17 September 2020, or of the eighth auxiliary request, filed by email (the oral proceedings being held as a

videoconference) at the oral proceedings before the Board.

IX. Claims of the respondents' requests

The feature numbering is introduced by the Board for ease of reference; compared with claim 1 as granted, added passages are indicated in bold, deleted passages in strike-through.

(a) Main request

Independent method claim 1 as amended reads as follows :

- (a) Method for delivering large quantities of under water soil (7) from long-distance (being above 500 kilometers single sailing distance) borrow areas to a reclamation and/or disposal site, comprising the steps of
- (b) mooring at least one seagoing transport vessel (1, 10) in the vicinity of the at least one borrow area with a size of at least 50000 DWT (dead weight tons) and considerably larger than the size of a dredging vessel (3, 30), and adapted to receive a large quantity of soil (7),
- (c) providing at least one dredging vessel that dredges soil at the at least one borrow area and transports it to the at least one transport vessel (1, 10)),
- (d) loading the soil into the transport vessel,
- (e) transporting the soil in a transportable state to the long-distance reclamation and/or disposal site,
- (f) mooring the transport vessel in the site, and
- (g) unloading the soil from the transport vessel to the site,

- (h) **wherein the dredged soil (7), prior to loading it into the transport vessel (1, 10), is dried to a water content of less than 20% of the total weight of the dredged soil (7).**

- (b) First auxiliary request

Independent method claim 1 as amended reads as follows :

- (a) Method for delivering large quantities of under water soil (7) from long-distance, (being above 500 kilometers single sailing distance) borrow areas to a reclamation and/or disposal site, comprising the steps of
- (b) mooring at least one seagoing transport vessel (1, 10) in the vicinity of the at least one borrow area with a size of at least 50000 DWT (dead weight tons) and considerably larger than the size of a dredging vessel (3, 30), and adapted to receive a large quantity of soil (7),
- (c) providing at least one dredging vessel that dredges soil at the at least one borrow area and transports it to the at least one transport vessel (1, 10)),
- (d) loading the soil into the transport vessel,
- (e) transporting the soil in a transportable state to the long-distance reclamation and/or disposal site,
- (f) mooring the transport vessel in the site, and
- (g) unloading the soil from the transport vessel to the site,
- (h) **wherein the dredged soil (7), prior to loading it into the transport vessel (1, 10), is dried to a**

water content of less than 15% of the total weight of the dredged soil (7).

(c) Second auxiliary request

Independent method claim 1 as amended reads as follows:

- (a) Method for delivering large quantities of under water soil (7) from long-distance, (being above 500 kilometers single sailing distance) borrow areas to a reclamation and/or disposal site, comprising the steps of
- (b) mooring at least one seagoing transport vessel (1, 10) in the vicinity of the at least one borrow area with a size of at least 50000 DWT (dead weight tons) and considerably larger than the size of a dredging vessel (3, 30), and adapted to receive a large quantity of soil (7),
- (c) providing at least one dredging vessel that dredges soil at the at least one borrow area and transports it to the at least one transport vessel (1, 10)),
- (d) loading the soil into the transport vessel,
- (e) transporting the soil in a transportable state to the long-distance reclamation and/or disposal site,
- (f) mooring the transport vessel in the site, and
- (g) unloading the soil from the transport vessel to the site,
- (h) **wherein the dredged soil (7) prior to loading it into the transport vessel (1, 10), is dried to a water content of less than 20% of the total weight of the dredged soil (7) wherein the dredged soil (7) is loaded into at least one buffering vessel (4) to effectuate the drying before loading it into the transport vessel (1,10).**

(d) Third auxiliary request

Independent method claim 1 as amended reads as follows:

- (a) Method for delivering large quantities of under water soil (7) from long-distance, (being above 500 kilometers single sailing distance) borrow areas to a reclamation and/or disposal site, comprising the steps of
- (b) mooring at least one seagoing transport vessel (1, 10) in the vicinity of the at least one borrow area with a size of at least 50000 DWT (dead weight tons) and considerably larger than the size of a dredging vessel (3, 30), and adapted to receive a large quantity of soil (7),
- (c) providing at least one dredging vessel that dredges soil at the at least one borrow area and transports it to the at least one transport vessel (1, 10)),
- (d) loading the soil into the transport vessel,
- (e) transporting the soil in a transportable state to the long-distance reclamation and/or disposal site,
- (f) mooring the transport vessel in the site, and
- (g) unloading the soil from the transport vessel to the site,
- (h) **wherein the dredged soil (7), prior to loading it into the transport vessel (1, 10), is dried to a water content of less than 20% of the total weight of the dredged soil (7), and**
- (i) **wherein unloading the soil from the transport vessel (1, 10) to the reclamation site is carried out mechanically, by a crane (8) or by any other means of excavating and elevating soil out of the holds (2, 20) of the transport vessel (1, 10).**

(e) Fourth auxiliary request

Independent method claim 1 as amended reads as follows:

- (a) Method for delivering large quantities of under water soil (7) from long-distance, (~~long-distance being above 500 kilometers single sailing distance~~) borrow areas, **long-distance being above 500 kilometers single sailing distance**, to a reclamation and/or disposal site, comprising the steps of
- (b) mooring at least one seagoing transport vessel (1, 10) in the vicinity of the at least one borrow area with a size of at least 50000 DWT (dead weight tons) and considerably larger than the size of a dredging vessel (3, 30), and adapted to receive a large quantity of soil (7),
- (c) providing at least one dredging vessel that dredges soil at the at least one borrow area and transports it to the at least one transport vessel (1, 10)),
- (d) loading the soil into the transport vessel,
- (e) transporting the soil in a transportable state to the long-distance reclamation and/or disposal site,
- (f) mooring the transport vessel in the site, and
- (g) unloading the soil from the transport vessel to the site,
- (h) **wherein the dredged soil (7), prior to loading it into the transport vessel (1, 10), is dried to a water content of less than 20% of the total weight of the dredged soil (7).**

(f) Fifth auxiliary request

Independent method claim 1 as amended reads as follows:

- (a) Method for delivering large quantities of under water soil (7) from long-distance, (~~long-distance being above 500 kilometers single sailing distance~~)

borrow areas, **long-distance being above 500 kilometers single sailing distance away**, to a reclamation and/or disposal site, comprising the steps of

- (b) mooring at least one seagoing transport vessel (1, 10) in the vicinity of the at least one borrow area with a size of at least 50000 DWT (dead weight tons) and considerably larger than the size of a dredging vessel (3, 30), and adapted to receive a large quantity of soil (7),
- (c) providing at least one dredging vessel that dredges soil at the at least one borrow area and transports it to the at least one transport vessel (1, 10)),
- (d) loading the soil into the transport vessel,
- (e) transporting the soil in a transportable state to the long-distance reclamation and/or disposal site,
- (f) mooring the transport vessel in the site, and
- (g) unloading the soil from the transport vessel to the site,
- (h) **wherein the dredged soil (7), prior to loading it into the transport vessel (1, 10), is dried to a water content of less than 15% of the total weight of the dredged soil (7).**

(g) Sixth auxiliary request

Independent method claim 1 as amended reads as follows:

- (a) Method for delivering large quantities of under water soil (7) from long-distance, (~~long-distance being above 500 kilometers single sailing distance~~) borrow areas, **long-distance being above 500 kilometers single sailing distance**, to a reclamation and/or disposal site, comprising the steps of

- (b) mooring at least one seagoing transport vessel (1, 10) in the vicinity of the at least one borrow area with a size of at least 50000 DWT (dead weight tons) and considerably larger than the size of a dredging vessel (3, 30), and adapted to receive a large quantity of soil (7),
- (c) providing at least one dredging vessel that dredges soil at the at least one borrow area and transports it to the at least one transport vessel (1, 10)),
- (d) loading the soil into the transport vessel,
- (e) transporting the soil in a transportable state to the long-distance reclamation and/or disposal site,
- (f) mooring the transport vessel in the site, and
- (g) unloading the soil from the transport vessel to the site,
- (h) **wherein the dredged soil (7), prior to loading it into the transport vessel (1, 10), is dried to a water content of less than 20% of the total weight of the dredged soil (7),**
- (i) **wherein the dredged soil (7) is loaded into at least one buffering vessel (4) to effectuate the drying before loading it in the transport vessel (1, 10).**

(h) Seventh auxiliary request

Independent method claim 1 as amended reads as follows:

- (a) Method for delivering large quantities of under water soil (7) from long-distance, (~~long-distance being above 500 kilometers single sailing distance~~) borrow areas, **long-distance being above 500 kilometers single sailing distance**, to a reclamation and/or disposal site, comprising the steps of

- (b) mooring at least one seagoing transport vessel (1, 10) in the vicinity of the at least one borrow area with a size of at least 50000 DWT (dead weight tons) and considerably larger than the size of a dredging vessel (3, 30), and adapted to receive a large quantity of soil (7),
- (c) providing at least one dredging vessel that dredges soil at the at least one borrow area and transports it to the at least one transport vessel (1, 10)),
- (d) loading the soil into the transport vessel,
- (e) transporting the soil in a transportable state to the long-distance reclamation and/or disposal site,
- (f) mooring the transport vessel in the site, and
- (g) unloading the soil from the transport vessel to the site,
- (h) **wherein the dredged soil (7), prior to loading it into the transport vessel (1, 10), is dried to a water content of less than 20% of the total weight of the dredged soil (7),**
- (i) **wherein unloading the soil from the transport vessel (1, 10) to the reclamation site is carried out mechanically, by a crane (8) or by any other means of excavating and elevating soil out of the holds (2, 20) of the transport vessel (1, 10).**

(i) Eighth auxiliary request

Independent method claim 1 as amended reads as follows:

- (a) Method for delivering large quantities of under water soil (7) from long-distance, ~~← long-distance~~ being above 500 kilometers single sailing distance) borrow areas to a reclamation and/or disposal site, comprising the steps of
- (b) mooring at least one seagoing transport vessel (1, 10) in the vicinity of the at least one borrow area

with a size of at least 50000 DWT (dead weight tons) and considerably larger than the size of a dredging vessel (3, 30), and adapted to receive a large quantity of soil (7),

- (c) providing at least one dredging vessel that dredges soil at the at least one borrow area and transports it to the at least one transport vessel (1, 10)),
- (d) loading the soil into the transport vessel,
- (e) transporting the soil in a transportable state to the long-distance reclamation and/or disposal site,
- (f) mooring the transport vessel in the site, and
- (g) unloading the soil from the transport vessel to the site,
- (h) **wherein the dredged soil (7), prior to loading it into the transport vessel (1, 10), is dried to a water content of less than 15% of the total weight of the dredged soil (7),**
- (i) **wherein the dredged soil (7) is loaded into at least one buffering vessel (4) to effectuate the drying before loading it in the transport vessel (1, 10).**

X. Cited evidence

- (a) In the statement setting out the grounds of appeal the appellant referred to the minutes of the witness hearing as well as to Annexes 1 to 52 and Enclosures 1 to 7, which were filed in the opposition proceedings and are listed and cited in the decision under appeal. Of these, Annexes 11 to 52 were filed by the appellant after expiry of the opposition period.

Annex 2: Article from www.theartofdredging.com

Annex 3: Data sheet "Seaway"

Annex 4: Leaflet "Trailing suction hopper dredger"

Annex 5: Copy of the magazine "TERRA et AQUA"
Annex 6: JP 2004011184 A
Annex 7: JP H06206094 A
Annex 8: DE 10119857 C1
Annex 9: WO 00/38975 A1
Annex 10: JP 2001040638 A
Encl. 1: Leaflet "BulClaimer™"
Encl. 2: Leaflet "BulClaimer™"
Encl. 4: Slides of presentation by SemboCorp Ind.
Encl. 5: Press release from Vatne Hansen-Tangen
Encl. 5a: English translation of Encl. 5
Encl. 6: Article of Fedrelamdsvennen
Encl. 6a: English translation of Encl. 6
Encl. 7: Article of "The Business Times"
Annex 11: Excerpt of "Der maschinelle Wasserbau"
Annex 12: Printout of www.shipspotting.com
Annex 13: Printout of www.shipspotting.com
Annex 14: Excerpt of "Dredgers of the World"
Annex 15: Conference Report "Maintenance Dredging II"
Annex 16: Brochure "DP/DT Trailing Suction Hopper
Dredger Pearl River"
Annex 17: Excerpt of thesis by C. van Rhee
Annex 18: Definition of "porosity" in Wikipedia
Annex 19: Definition of "Soortelijke massa van vast
stoffen" in Wikipedia
Annex 20: Printout of www.shipspotting.com
Annex 21: Extract of Norway ship registry
Annex 22: Printout of www.shipspotting.com
Annex 23: Printout of www.dredgepoint.org
Annex 24: Printout of www.rohde-nielsen.dk
Annex 25: M. van de Velde in LinkedIn
Annex 26: M. van de Velde in www.theartofdredging.com
Annex 27: Extract of Cyprus ship registry
Annex 28: Extract of Cyprus ship registry
Annex 29: Extract of Hongkong ship registry
Annex 30: Definitions in Wikipedia

- Annex 31: Extract of Luxembourg ship registry
- Annex 32: <http://www.sandgravel.com/news/article.asp?v1=7582#newsletter>
- Annex 33: Printout of www.marine.com
- Annex 34: Extract of Netherlands ship registry
- Annex 35: Extract of Netherlands ship registry
- Annex 36: Printout of www.marine.com
- Annex 37: Extract of Belgium ship registry
- Annex 38: Written declaration by M. van de Velde
- Annex 39: Written declaration by S. Dolk
- Annex 40: WO 95/21303
- Annex 41: NL 7413459
- Annex 42: US 1,690,380
- Annex 43: Definition of "Handymax" in Wikipedia
- Annex 44: Written declaration by S. A. Miedema
- Annex 45: Written declaration by W. Den Herder
- Annex 46: Article of "Schip en Werf de Zee"
- Annex 47: Article of "HSB International"
- Annex 48: Article of "Schip en Werf de Zee"
- Annex 49: Article of "Schip en Werf de Zee"
- Annex 50: Article of "HSB International"
- Annex 51: Article of "International Dredging and Port Construction"
- Annex 52: Article of "International Dredging and Port Construction"

(b) In addition, with the statement setting out the grounds of appeal, the appellant filed for the first time Annexes 53 to 70.

- Annex 53: Hughes, T.H and White, B., " Effect of the environment on processing and handling materials at sea", 1978
- Annex 54: Green, P.V. and Hughes, T.H., "Stability of bulk mineral cargoes"
- Annex 55: Printouts of Internet

- Annex 56: Code of Safe Practice for Solid Bulk Cargoes
- Annex 57: Int. Maritime Solid Bulk Cargoes Code
- Annex 58: Fageberg, B. and Stavang, A., "Determination of critical moisture contents in ore concentrates carried in cargo vessels"
- Annex 59: Cullinane, K. and Khanna, M., "Economies of scale in large container ships"
- Annex 60: Stopford, M., "Maritime economics"
- Annex 61: Articles of "Geomaris"
- Annex 62: Bulk Materials Int., May/June 2004
- Annex 63: Article of "International Bulk Journal"
- Annex 64: Printout of www.porttechnology.org
- Annex 65: EP 1 350 716 B1
- Annex 66: Definition of "bulk carrier" in Wikipedia
- Annex 67: Printout of www.seabulk.com
- Annex 68: Printout of www.jenike.com
- Annex 69: Printout of www.americansteamship.com
- Annex 70: Richtlijn 28

(c) Finally, the appellant reiterated its offer to have Messrs S. Dolk and M. van der Velde heard as witnesses with respect to the prior use Kamsar/Odin, and for Mr W. Den Herder to provide oral evidence regarding the issues discussed in his written declaration (Annex 45).

I. The arguments of the parties, insofar as relevant for the present decision, can be summarised as follows:

(a) Main request

(i) Added subject-matter, Article 123(2) EPC.

Appellant's case:

The opposition division was incorrect to argue that "less than 20%" and "less than 15%" were disclosed in the application as filed as distinct alternatives and that they were "cited, without any link to another feature to which they could be considered as being inextricably linked".

The specification of a 20% limit in the claim without reference to the TML (transportable moisture limit) amounted to an unallowable intermediate generalisation. Taking the feature of "less than 20%" from this paragraph out of context covered cases where the soil is dried to a moisture content of less than 20%, but is still above the TML of that soil. However, there was no support for this in the application as filed.

Respondents' case:

The patent provided its own definition of "allowable transportable moisture limits" (ATML), see paragraph 17 of the patent specification and claim 3 as granted, and drying to a water content within ATML was equivalent to drying to a water content of less than 20% of the total weight of the dredged soil. The appellant argued that the ATML as defined in the patent actually corresponded to a TML as discussed in the International Maritime code. This was unfounded. There was no indication at all of such a code in the patent description.

Thus, claim 1 of the main request was not an intermediate generalization.

(ii) Admissibility of annexes 40 to 52

Appellant's case:

The opposition division was incorrect in using its discretion not to admit these documents. This was borne out by the fact that the opposition division analysed their content in depth and relied upon them in the decision under appeal. Since the decision under appeal contained a detailed analysis and evaluation of the objections raised, based on passages and teachings of annexes 42-52, they have in any case been de facto admitted into the proceedings by the opposition division.

Respondents' case:

The opposition division in rejecting the annexes 40-52 correctly exercised their discretionary power taking into account the right principles. One of these principles was that the opposition division should argue why the annexes have to be rejected for being late filed. A lack of relevance was essential in this respect, and the opposition division had correctly carried out its duty to reason its decision by commenting in depth on the content of the annexes 40-52 and their irrelevance to the question of novelty and inventive step.

The appellant's argument that claim 1 as maintained contained features that could not be foreseen made no sense. This had been argued above with respect to the definition of ATML. Further, claim 3 as granted already disclosed 15% by weight as upper limit, and 20% by weight could clearly be foreseen. Moreover, this limitation was already part of the requests filed as early as 27 November 2014.

(iii) Admissibility of annexes 53 to 70

Appellant's case:

These documents were filed at the earliest possible opportunity with the grounds of appeal and should be admitted into the appeal proceedings since they set out common general knowledge particularly with respect to the feature (h) introduced into claim 1 of the main request. As indicated in the grounds of appeal page 7-11, many of these Annexes filed during opposition proceedings could be grouped as relating to the same or similar features, like:

- bulk carriers and their sizes (Annexes 2, 20, 21 and 27, to which also the witness statements and documents 25, 26, 38, 39 and 45 relate), relevant to especially features (b) and (c);
- dredgers and their sizes (annexes 3, 4, 5, 12, 13, 14, 16, 22-24, 31 - 33, 34 - 35, 36 - 37, 46 - 47, 48, 49 and 50), relevant to especially features (b) and (c);
- use of dredgers and bulk carriers (annexes 11, 15, 51 and 52), relevant to features (d) - (g);
- proof of common general knowledge (Annexes 18, 19, 30 and 43);
- dewatering of soil for transport (Annexes 25, 26, 38, 39, 45; 17, 44), especially relevant to feature (h).

Furthermore, Annex 53 by itself or in combination with Annex 54 was more relevant than Annex 9, since it referred specifically to "long distance transport" and the "TML" of below 20% for the soil described, as well as dewatering prior to loading, to reduce the TML. Indeed, Annex 53 was novelty destroying for claim 1 of the main request. Furthermore, since Annex 54 was specifically referred to by Annex 53, it should be considered part of that disclosure.

Regarding feature (a) of claim 1, it had been in dispute how the features "large quantities" and "long-distance" should be understood/interpreted. Annexes 53 and 54 had been filed at least in order to ensure that both interpretations were covered by the prior art cited, even the interpretation that "above 500 km single sailing distance" should be interpreted as limiting the claim, and showing beyond doubt that such long sailing distances were also already known from the prior art, with dredged soil which had a water content below the TML of 20% prior to loading the soil into a bulk carrier.

Respondents' case:

The appellant's submission regarding the high relevance of these documents was based on the erroneous premise (see above) that claim 1 should have included drying to within the TML as defined in various legal codes. The patent however defined the ATML as drying to a water content of less than 20% by weight.

As to annexes 53 and 54, if they were prima facie as relevant as argued, Annex 53 should have been filed with the opposition. Annexes 53 and 54 related just to the new feature (h) of claim 1 which was already part of the requests filed as early as 27 November 2014. Finally, the appellant argued that the filing of auxiliary requests on 17 September 2020 which provided a long distance above 500 km as an essential feature would warrant admittance of Annexes 53 and 54. However, a long distance above 500 km had always been at least an optional feature of claim 1 as granted.

- (b) First auxiliary request
 - (i) Novelty

Appellant's case:

The subject-matter of claim 1 was not new with respect to Annex 9 and the prior use Kamsar/Odin.

Annex 9 disclosed that sand was transported for example from the Sahara to the Canary Islands, which was a single sailing distance of well over 500 km. A person skilled in the art, reading Annex 9 would immediately understand that this could only be economically feasible using "large transport vessels" having a DWT of over 50000, such as bulk carriers (e.g. page 4 line 1 - 4).

Annex 9 (page 1 line 30 - 35) explicitly disclosed that "seabed substances, in particular sand" was loaded into the bulk carriers. Since dredging was the only way known of reclaiming sand from a sea bed, specific reference was made in figure 8 to a "dredging loading line"; the use of a dredger was disclosed. It was implicit that a transport vessel (bulk carrier according to Annex 9) would have to be moored when being filled or emptied; also Fig. 5 showed that vessel 5 was moored next to a station 27.

The feature of drying the soil, prior to loading the soil into the hull of a vessel, to a water content of 15% had to be understood as drying to a TML of 15%. Annex 9 disclosed drying of sand to be transported with a vessel, hence it had to be dried at or below the TML, because otherwise it would be impermissible to transport the sand with the bulk carrier.

On page 2, lines 14 - 19 of Annex 9 it was disclosed that the sand was loaded into the bulk carrier while at the same time pumping the water out of the bulk carrier at substantially the same rate as it enters into the hull. Since this was the only disclosure of dewatering the cargo in the bulk carrier, it necessarily meant that the sand was dried before it was all loaded into the bulk carrier. Hence, all features of claim 1 as maintained were (at least implicitly) disclosed in Annex 9. Therefore claim 1 as maintained lacked novelty over Annex 9.

Prior Use Kamsar/Odin

In the decision under appeal it was stated that the prior use disclosed all features of claim 1 of the main request, except for:

- the long distance between the borrow area and the disposal site (feature (a)); and
- the step of drying the dredged soil prior to loading it, with a water content of less than 20% of the total weight of the dredged soil (feature (h)).

However "long distance" cannot be considered a limiting feature of claim 1 and 50 miles may be considered a long distance.

Regarding feature (h), Mr. Dolk stated that the sand was dried before being transported to the disposal site. In the prior use the dredged soil was transported from a borrow site to a disposal site by a bulk carrier (transport vessel). In order to be allowed to do so, the dredged soil (sand) had to be dried to at least the TML, which was apparently 15% or less. This was a legal requirement. In the patent 15% by weight was defined as

the TML. Hence feature (h) was also known from the prior use of the Kamsar/Odin.

Annex 53 disclosed all the features of claim 1, namely long distance shipping (2.000 km on page 169), the ship-to-ship transfer of dewatered soil, the drying to the transportable moisture limit prior to loading (end of page 170). For a skilled reader of Annex 53 it is implicit that a vessel having a DWT of over 50.000 tons was used for transporting such soil over distances of 2.000 km or more.

Respondents' case:

Annex 9

Apart from reading into the disclosure of Annex 9 a lot of implicit features that were not disclosed, the appellant used an invalid reasoning to prove that Annex 9 also disclosed prior drying to a water content of lower than 20% by weight. From the false premise, that Annex 9 disclosed drying of sand to be transported with a vessel, the appellant concluded that it had to be dried to below the TML, and therefore also to below 15% by weight, being another false consequence. This reasoning was not only flawed, but also based on the false premise that ATML as defined in the patent was equal to TML as defined in codes. Further, it contradicted the teaching of Annex 9. Indeed, Annex 9 did not disclose drying the dredged soil, and certainly not prior to loading it in the bulk carrier to a water content of less than 15 wt%. On the contrary, Annex 9 taught away from the invention in that it provided a solution for efficient loading and unloading of seabed substance having a high degree of water content. When unloading the vessel, water was replenished into the cargo hold to keep it pumpable (claim 1). When loading

the vessel, water was pumped out of the cargo at the same volumetric rate as it came in (claim 5), keeping the high water content about constant. Therefore, water content was not reduced. Also, during transport, the substance was kept wet by attempting to cover it with a layer of water to avoid the substance and becoming too hard (see page 7, lines 9-11). It was clear from Annex 9 that the substance should be kept wet - also during transport - to be able to load and unload it.

The disclosure of Annex 9 also negated the notion that all transport vessels in the prior art should have a dry load, for instance below a TML, introduced by the appellant. This statement was also refuted by Annex 2 for instance, which clearly disclosed a relatively wet load of the Kamsar. Otherwise, unloading the load by rainbowing - which required fluid characteristics - would not be possible.

Prior use Kamsar/Odin (Annex 2)

As with Annex 9, the appellant used an invalid reasoning in an attempt to prove that the prior use also disclosed prior drying to a water content of lower than 15% by weight. First, the appellant incorrectly cited the witness Mr. Dolk in stating that the sand was dried before being transported to the disposal site. Secondly, since the Kamsar was a bulk carrier, the appellant falsely concluded from this that its load had to be dried to below 15% by weight. This reasoning was not only flawed, but also based on the false premise that ATML as defined in the patent was equal to TML, as defined in codes.

(h) First auxiliary request - Inventive step

The appellant contended that the claimed subject-matter did not involve an inventive step:

- in light of common general knowledge ("helicopter view");
- when starting from the Kamsar/Odin prior use as closest prior art, in light of common general knowledge or the teaching of Annexes 40, 41 or 42;
- when starting from Annex 9 as closest prior art, in light of common general knowledge;
- when starting from Annex 40 as closest prior art, in light of the teaching of Annexes 42, 44 or 53;
- when starting from Annex 42 as closest prior art, in light of the teaching of Annex 40;
- when starting from Annex 51 as closest prior art, in light of the teaching of Annex 53;
- when starting from Annex 53 as closest prior art.

Starting from the prior use of Kamsar/Odin, the objective technical problem could be seen as how to increase safety and payload (of the transport vessel during transport). Exactly that problem was addressed and solved by Annex 42. The final paragraph of Annex 42 (page 2, lines 120 - 127) read:

"A loading system for dredged materials as herein described is very economical to operate by reason of the use of gravity for both preliminary and ultimate dewatering, as well as for feeding the material toward common unloading tunnel. The cargo is made safe against shifting so long as it is in a mushy or mobile condition, by reason of contained water, and as long thereafter as may be found necessary under extreme weather conditions. A ship may be loaded to very much greater capacity by reason of separation of the greater portion of the water before the material enters the hold, and control of the loading may be carried on with

regularity and economy by regulation of escape of the material from the hoppers in which it is received from the screen".

Hence Annex 42 disclosed:

- increasing safety ("the cargo is made safe"): and
- increasing payload ("A ship may be loaded to very much greater capacity by reason of separation of the greater portion of water before the material enters the hold").

A person skilled in the art, starting from the prior use of Kamsar/Odin and seeking to increase safety and payload would have consulted Annex 42 since it lay in the same field of dredging and transporting soil, especially sand.

Annex 42 taught that drying of the soil (sand of the Kamsar/Odin) prior to loading it into the hold of the transport vessel would solve this problem ("by reason of separation ... before the material enters the hold"). And hence without further inventive step the skilled person would arrive directly at the method as defined in claim 1.

The respondents submitted that none of the cited documents taught the claimed solution to the above presented objective technical problem. On the contrary, Annex 42 for instance teaches draining the cargo within the transport vessel, by adapting it with dewatering hoppers 5, and a pump 3. Contrary to the position of the appellant, Annex 42 did not show drying prior to loading, and also not drying to a water content below 15 wt%. At best, Annex 42 disclosed saturated sand ("material admitted to the hold contains only the water occupying the voids between the grains"), which had a

water content of about 25 wt%, depending on porosity. This was confirmed by Annex 45 for instance where the witness Mr. Den Herder stated that "the water content of saturated sand, which by weight is about 25%, [...]".

(i) Grounds of opposition under Articles 100(b) and (c) EPC

The respondents gave no consent for these fresh grounds of opposition to be admitted into the appeal proceedings.

(c) Fifth and Eighth Auxiliary requests - Admission in the appeal proceedings and remittal

The appellant objected to the requests' admissibility because they were late filed, took the appellant by surprise and were prima facie unlikely to overcome the outstanding objections.

As early as 1971 a loading installation called "Geomaris" was used for loading transport vessels with dried sand (Annex 48, 51). A picture of this installation was included in the statement setting out the grounds of appeal.

The Geomaris was a floating vessel (see e.g. Annex 51, page 19, right hand column, second paragraph) provided with means for dewatering/drying of the sand and for loading transport vessel moored directly next to it, as could be seen in the said image. The sand dried on the Geomaris was supplied to Rotterdam Harbour from the North sea where it was dredged by trailing suction hopper dredgers of the Geopotus class.

Since the sand dried in the Geomaris, which was specifically referred to in Annex 51 and 61 as dry sand, was transported further by transport vessel, it had to fulfil the requirements of transportable moisture limits (TML) for the sand, which was below 15%. Hence, Annex 51 and 61 disclosed drying of dredged soil prior to loading the dried soil into a transport vessel. The Geomaris acted both as a buffer vessel and a drying plant.

Starting from the Kamsar/Odin prior use and faced with the objective technical problem of increasing safety and payload, the skilled person would have looked for prior art concerning soil (sand) transport, and would have found Annex 51 and/or 61, i.e. on the Geomaris project in general and learn that soil can be loaded into a transport vessel in a transportable state (having the correct TML) directly by using a buffer and drying vessel like the Geomaris for drying and loading the soil prior to loading it into the transport vessel. Since the Geomaris was a floating processing vessel, the skilled person would have realised immediately that the buffer and drying vessel could be moored directly next to the dredger like the Odin R. for buffering and drying the sand directly at the borrow site, before transporting it with the Kamsar, in order to achieve the advantage of loading sand at or below the TML, which was known to increase safety (even a legal requirement) and the payload.

The appellant requested remittal of the case to the opposition division, should the eighth auxiliary request be admitted into the proceedings.

The respondents submitted that the eighth auxiliary request should be admitted into the proceedings because

it clearly overcame all outstanding objections without raising any new issues. In particular, starting from the Kamsar/Odin, no teaching could be found in Annexes 48, 51 and 61 which would motivate the skilled person to use a buffer vessel to effectuate the drying of the soil dredged by the Odin R. prior to loading it in the Kamsar. Claim 1 corresponded to a combination of claims 1, 3 and 4 as granted. Claim 1 was thus now limited to the dry embodiment of the invention disclosed in the patent. The appellant could be expected to deal with this specific limitation of the claimed subject-matter in the oral proceeding.

Since the appellant had had ample opportunity to present its case on the inventive step of the eighth auxiliary request and indeed did so in the oral proceedings before the Board, there was no reason to remit the case. In fact, this would unduly lengthen the proceedings.

Reasons for the Decision

1. Applicable Rules of Procedure of the Boards of Appeal
 - 1.1 The revised version of the Rules of Procedure of the Boards of Appeal (RPBA 2020) entered into force on 1 January 2020 (Articles 24 and 25(1) RPBA 2020).
 - 1.2 Subject to the transitional provisions (Article 25 RPBA 2020), the revised version also applies to appeals pending on the date of the entry into force.
 - 1.3 In the present case, the statement setting out the grounds of appeal was filed before 1 January 2020. Thus, Article 12(4) to (6) RPBA 2020 does not apply, and instead Article 12(4) RPBA 2007 applies (Article 25(2) RPBA 2020).
 - 1.4 Since the summons to the oral proceedings was notified before 1 January 2020, Article 13 RPBA 2007 is to be applied for questions regarding any amendment to the respondents' appeal case in response to the summons.
2. Annexes 40 to 52 - Consideration in the appeal proceedings
 - 2.1 Annexes 40 to 52 were filed after expiry of the opposition period. The opposition division decided not to admit them into the proceedings, using its discretionary power under Article 114(2) EPC, because their content was prima facie irrelevant and their admittance would not change the decision (see decision under appeal, point 2.6.6 of the reasons).

- 2.2 In accordance with Article 12(4) RPBA 2007 (applicable pursuant to Article 25(2) RPBA 2020), it lies within the discretion of the Board to hold inadmissible these documents which were not admitted in the opposition proceedings.
- 2.3 The appellant challenged the discretionary decision of the opposition division by essentially submitting that Annexes 40 to 52 were not late-filed. In fact, the appellant alleged that these documents were submitted in reaction to the filing of the main request by the appellant, whereby the feature of drying the dredged soil prior to loading (feature (h)) was taken from the description. The Board is not convinced by this argument.
- 2.4 Claim 1 of the main request is identical with claim 1 of the first auxiliary request filed with letter dated 27 November 2014. It differs from the combination of claims 1 and 3 as granted only in that the upper limit for the water content (15 wt.%) has been (slightly) increased to 20 wt.%. By way of this amendment, the claim has been limited to one of the two preferred embodiments defined in the patent, namely the so-called "dry embodiment" illustrated in figures 1 to 6 and described in paragraphs 17, 18 and 23 to 28 of the patent specification.
- 2.5 The Board cannot consider this amendment as an unexpected development which the appellant could not have foreseen. Thus, Annexes 40 to 52 could have been filed earlier in the opposition proceedings. In fact, Annexes 40 to 43 were filed before (letter dated 29 October 2014) and Annexes 44 to 52 were filed after the claim amendment (letter dated 28 April 2015).

- 2.6 Nevertheless, the decision under appeal contains a detailed analysis and evaluation of objections of lack of inventive step based on passages and teachings taken from Annexes 42 to 52 (points 2.6.1 to 2.6.6 of the reasons). The Board finds it contradictory that the opposition division based its evaluation of inventive step on these disclosures, whilst declaring that the documents were not relevant to that end and thus not to be admitted into the proceedings. Moreover, this latter decision appears to be in contradiction with the fact that in the first oral proceedings, on 28 January 2015, the opposition division had effectively admitted Annex 40 into the proceedings for assessing the novelty of the claimed subject-matter, because it considered that Annex 40 was prima facie more relevant than the prior use (see appealed decision, point 2.8 of the reasons; see minutes, points 3.1 and 3.2).
- 2.7 Consequently, since these documents to all intents and purposes de facto form part of the contested decision's reasoning despite the explicit decision to exclude them, the Board takes the view that it is necessary to take them into consideration when reviewing the opposition division's decision with respect to novelty and inventive step (see e.g. T 2324/14 of 4 October 2017, T 2026/15 of 17 April 2018, T 1525/17 of 23 May 2019).
- 2.8 With respect to Annex 45, there is no need to hear Mr W. Den Herder as a witness because his written assertions are not contested by the respondents.
3. Annexes 53 to 70 - Consideration in the appeal proceedings, Article 12(4) RPBA 2007

- 3.1 The respondents requested that Annexes 53 to 70 be disregarded in the appeal proceedings.
- 3.2 The appellant filed Annexes 53 to 70 for the first time with the statement setting out the grounds of appeal and relied on passages and teachings of these documents to raise a new objection of lack of novelty as well as new objections of lack of inventive step against the claimed subject-matter. These new facts, objections and evidence constitute an amendment to the appellant's opposition case.
- 3.3 The purpose of the opposition appeal proceedings is to give the losing party a possibility to challenge the decision of the opposition division on its merits and to obtain a judicial ruling on whether the decision is correct. Opposition appeal proceedings are not an alternative way of dealing with and deciding upon an opposition (see e.g. T 2344/15 of 12 September 2019, point 2.2 of the reasons).
- 3.4 The appellant essentially submitted that it became clear only during the second oral proceedings on 30 September 2015 that the respondents' main request focused on the method step of drying the dredged soil prior to loading it in the transport vessel. Therefore, Annexes 53 to 70 were filed to document common general knowledge with respect to maritime economics, sand banks, long-distance shipping, transport vessels and unloading thereof, buffer vessels for transferring goods at sea, transportable moisture limits and dewatering of dredged sand or ore.
- 3.5 However, all these issues were already relevant at the latest after the respondents filed their first auxiliary request with letter dated 27 November 2014

(see point 3.4 above). In particular, there was a need at that stage for the appellant to file documentary evidence concerning feature (h) of the so-called "dry embodiment" in the opposition proceedings. The appellant was aware of this, since it submitted further evidence before the second oral proceedings to support its allegation that feature (h) was an obvious measure, with letters of 25 July 2013 (Annexes 17 to 19), 29 October 2014 (Annex 42) and 28 April 2015 (Annexes 44 to 52). It follows that Annexes 53 to 70 could also have been submitted at this early stage of the opposition proceedings.

3.6 Annexes 53 to 70 have been filed mainly to demonstrate that feature (h) is an obvious measure for the skilled person seeking to increase safety and payload. The Board accepts that Annexes 53 and 54 set out the accepted general knowledge at the priority date of the patent with respect to the safe transport of bulk materials such as sand. For this reason, the Board considers it appropriate to admit these documents in as far as they are used to support assertions of common general knowledge.

3.7 However, it is not considered that the content of the remaining documents adds anything to the general knowledge already disclosed in Annexes 15 to 17 and 40 to 52, previously filed in the opposition proceedings. In fact, even the appellant appeared to acknowledge that Annexes 15 to 17 and 40 to 52 already show that it was generally known in the field of dredging to dewater dredged soil for it be transportable by sea in a safe and economic manner.

3.8 Thus, Annexes 55 to 70 will not be taken into consideration.

- 3.9 In the absence of any dispute with respect to the hearing of the witness Mr. S Dolk, there was no need to re-hear him or to hear Mr M. van der Velde as witness.
4. Fresh grounds of opposition - Articles 100(b) and (c) EPC
- 4.1 The opposition division decided not to admit the ground of Article 100(b) EPC into the proceedings, using its discretionary power under Article 114(2) EPC, because it was prima facie irrelevant.
- 4.2 The opposition division's decision was fully reasoned (see appealed decision, point 7 of the reasons) and was based on the right principles. Thus, the opposition division exercised its discretion correctly.
- 4.3 It follows that in the appeal proceedings, the ground of Article 100(b) EPC is a fresh ground for opposition within the meaning of G 10/91, which may not be considered without the consent of the respondents as proprietors (G 10/91, OJ 1993, 420)). Since this has not been given, this opposition ground cannot be considered further.
- 4.4 The appellant argued that claim 1 introduced added subject-matter because it failed to require that the transport vessel is equipped with side tanks and centre cargo compartments (paragraph 23 of the patent specification). However, this objection does not arise from the amendments made to claim 1 in the opposition proceedings. Therefore, it amounts to raising a new ground of opposition under Article 100(c) EPC in appeal proceedings. Since the respondents have also not consented to introducing this new opposition ground

into the appeal proceedings, it cannot be considered further (G 10/91, OJ 1993, 420).

5. Main request - Interpretation of claim 1

5.1 The parties disputed how features (a) and (b) of claim 1 were to be construed. The meaning of feature (h) was also questioned. The Board finds as follows:

5.2 Claim 1 is directed to a reader skilled in the art of dredging under water soil and transporting it using a single transport vessel with a size in the order of 50000 DWT. Thus, the skilled reader is a marine and dredging engineer having experience in the operation of such vessels, and who possesses common general knowledge in both loading and discharging dredged soil.

5.3 Feature (a)

The parties disputed how in feature (a) the term "under water soil" should be construed and whether the expression "large quantities of under water soil" should be read as "quantities of soil in excess of 10 million (10^7) m³ per year" (paragraph 10 of the patent specification).

In the context of claim 1, the term "under water soil" itself is clear and, in the absence of any other specific indication of the claim, it can only be given its normal, everyday meaning. In particular, this term does not cover all possible types of underwater seabed material as the appellant implies is the case. If the respondents had so wished they would have used a less restrictive term. Under water soil exists in different compositions and is dredged for a variety of applications. The invention starts from sand containing

ore dredged in a conventional manner (paragraphs 1, 2, 18 and 32), for instance by suction dredging.

A claim should on its own clearly define the subject-matter for which protection is sought (Article 84 EPC). Since claim 1 itself imparts a clear and credible teaching to the skilled reader, there is no reason for them to consult the description of the patent to give the term "large quantities of under water soil" a different meaning. In particular, the appellant is incorrect in stating that the description and drawings should be used to interpret the claim wording. Thus, in the context of claim 1, the disputed term may be construed in a broad manner. The skilled person knows what "soil" within a particular context is and would generally not consider nodules with a size of 3 to 5 cm as soil. It is also clear from the claim itself that a "large quantity" is the quantity of soil that could be carried by a bulk transporter of 50.000 DWT since feature (b) specifies that it is considerably larger than the size of a dredging vessel (3, 30), and adapted to receive a large quantity of soil.

"Long distance"

The parties disputed whether the bracketed expression "being above 500 kilometers single sailing distance" is limiting or not. The Board is not persuaded by the view of the opposition division that the term "long-distance" is defined as "being above 500 kilometers single sailing distance", and that the brackets were simply used in order to improve the legibility of the claim.

The Board considers that the skilled person reading claim 1 knows that the expressions "long-distance" and

"above 500 kilometers single sailing distance" are not synonymous, and that they are left in doubt as to whether or not the latter expression limits the scope of the claim. This introduces an ambiguity into the definition of the claimed subject-matter (see e.g. T 1481/05 of 6 March 2007, points 3.2 to 3.5 of the reasons). Therefore, in these circumstances, the skilled person would try to resolve this ambiguity by using the description of the patent. In doing so, they would understand that the expression "above 500 kilometers single sailing distance" may be regarded as entirely optional in the context of the claim (paragraph 15 of the patent specification as amended). Indeed, as pointed out by the appellant, if the respondents had wished to limit the subject-matter of the claim to sailing distances greater than 500 kilometers they would have removed the brackets around this specification.

5.4 Feature (b) - Clarity

The appellant submitted that when using a single transport vessel with a size of 50000 DWT (feature (b)), it would be impossible to transport dredged soil in quantities in excess of 10 million m³ per year over a distance in excess of 500 km (feature (a)), as promised in paragraph 10 of the patent specification. The appellant concluded that third parties would not know whether they were working within or outside the range specified.

However, this objection does not arise from the amendments made in claim 1, since features (a) and (b) were already present in claim 1 as granted. Hence, this objection of lack of clarity is inadmissible (G 3/14, OJ 2015, A102).

- 5.5 In the context of feature (h), the term "drying" is generic and covers "dewatering".
6. Main request - Added subject-matter, Article 123(2) EPC
- 6.1 The appellant submitted that, contrary to the decision under appeal, the incorporation of feature (h) in claim 1 introduced subject-matter extending beyond the content of the application as originally filed.
- 6.2 The respondent submitted that feature (h) in claim 1 was supported by the teaching in claim 3 as originally filed and in the paragraph bridging pages 3 and 4 of the description as filed, which stated that:
"in a further embodiment of the method according to the invention, the dredged soil, prior to loading it into the transport vessel, is dried to a water content within allowable transportable moisture limits for dry bulk vessels (also referred to as the dry embodiment). Allowable transportable moisture limits comprise water contents of less than 20% of the total weight of the dredged soil, and more preferably less than 15% of the total weight of the dredged soil."
- 6.3 However, the skilled reader of this statement understands that it refers to a step of drying the cargo, i.e. the dredged soil, to allowable transportable moisture limits "TML".
- 6.4 Since the further requirement of drying the dredged soil to the allowable transportable moisture limit "TML" has not been incorporated in claim 1, the amendment in claim 1 of the main request amounts to an undisclosed generalisation that contravenes Article

123(2) EPC since it includes cases where the soil is dried to a moisture content of less than 20%, but is still above the TML of that soil. The main request is thus not allowable.

7. The same arguments apply, *mutatis mutandis*, to the amendment in claim 1 of the second, third, fourth, sixth and seventh auxiliary requests.

8. First auxiliary request - Novelty, Article 54 EPC

The appellant contended that the claimed subject-matter lacked novelty in light of Annex 9, the prior use and Annex 53.

8.1 With respect to Annex 9, the opposition division judged that this document fails to disclose features (a), (b), (c) and (f) of claim 1.

The Board shares the appellant's view that the relative term "long distance" (feature (a)) cannot be used to distinguish the method according to claim 1 from that disclosed in Annex 9. As regards the further features, the appellant essentially submitted that these features were not explicitly disclosed in Annex 9, but were obvious measures in light of the common general knowledge and would have been carried out as a matter of course. However, this is an argument relating to obviousness rather than to novelty. Therefore, the Board agrees with the opposition division that Annex 9 is not novelty-destroying for the subject-matter of claim 1.

8.2 Prior use Kamsar/Odin

After hearing of the witness Mr. Serge Dolk, the opposition division decided that the appellant had sufficiently proven the alleged prior use, but concluded that its subject-matter failed to disclose the features (a) and (h) of claim 1.

8.3 The Board shares the view of the appellant insofar that a sailing distance of 50 nautical miles is a relatively long sailing distance. Thus, the claimed method differs from the prior use only by feature (h). In this respect, it follows from the witness statement that the dredged sand must have been dewatered and that this was most likely carried out within the Kamsar Voyager, but certainly not within the Odin R (see appealed decision, point 2.5.1 of the reasons; see minutes of the witness hearing, page 4, paragraph 2 to page 5, paragraph 1). Regarding feature (h), Mr. Dolk stated that he assumed that water was sucked from the sand before being transported to the disposal site since they were not paid to transport water. However, there is no direct and unambiguous disclosure of the precise water content of the transported sand. Hence, the subject-matter of claim 1 according to the first auxiliary request differs from method disclosed in the prior use by feature (h).

8.4 The Board decided not to admit into the proceedings the late-filed lack of novelty objection based on Annex 53 (see point 3.6 above).

8.5 In conclusion, the claimed subject-matter is novel and meets the requirements of Article 54 EPC.

9. First auxiliary request - Inventive step

9.1 The appellant contended that the claimed subject-matter did not involve an inventive step:

- (a) in light of common general knowledge ("helicopter view");
- (b) when starting from the prior use as closest prior art, in light of common general knowledge or the teaching of Annex 40, 41 or 42;
- (c) when starting from Annex 9 as closest prior art, in light of common general knowledge;
- (d) when starting from Annex 40 as closest prior art, in light of the teaching of Annex 42, 44 or 53;
- (e) when starting from Annex 42 as closest prior art, in light of the teaching of Annex 40;
- (f) when starting from Annex 51 as closest prior art, in light of the teaching of Annex 53;
- (g) when starting from Annex 53 as closest prior art.

9.2 In the communication pursuant to Article 15(1) RPBA 2020 the Board expressed its preliminary opinion on the alternative lines of attack as follows:

"With respect to attack (a), the Board shares the opinion of the respondents that the so-called "helicopter view" amounts to an ex post facto analysis with inadmissible hindsight. In the present case the so-called "problem-solution approach" is appropriate to assess inventive step in an objective manner.

The prior use appears to be the most promising and relevant starting point for the assessment of inventive step, rather than the method disclosed in Annexes 9, 40 or 42, the latter methods requiring more modifications to arrive at the claimed invention. Thus, the Board

intends to limit the discussion only to attacks (b) which start from the prior use as closest prior art. Should the appellant nevertheless wish to pursue one or the other of alternative attacks (c), (d) and (e), it would first have to be convincingly shown that Annex 9, 40 or 42 is a more suitable starting point than the prior use when applying the problem-solution approach.

The Board does not intend to consider alternative attacks (f) and (g) because they are based on Annex 53 and the Board intends to disregard this late-filed document."

- 9.3 The Board has reviewed the factual and legal situation and sees no reason to depart from this preliminary opinion. Consequently, the alternative lines of attack (a) and (c) to (g) were not considered any further.
- 9.4 The claimed method differs from the prior use only by feature (h) as set out in paragraph 8.3 above.
- 9.5 Starting from the prior use, the technical problem objectively solved by distinguishing feature (h) is one of how to increase safety and payload when shipping dredged soil.
- 9.6 The Board shares the appellant's view that the skilled person, faced with this problem, would have consulted Annex 42 since it lies in the same technical field and deals with the same problem.
- 9.7 Annex 42 relates to vessels equipped with means for pumping materials, such as sand and gravel, and stowing the same in the hold of a vessel for transport to a place of disposal (page 1, first paragraph). It teaches a system of pumping material, delivering it into the

hold of a vessel, and stowing it therein under conditions which will render the operation not only economical, but safe from the hazard of overloading with water. According to Annex 42, a ship may be loaded to a very much greater capacity by reason of separation of the greater portion of the water before the material enters the hold, and control of the loading may be carried on with regularity and economy by regulation of escape of the material from the hoppers in which it is received from the screen.

9.8 In particular, Annex 42 discloses that the pumped material is dried by dewatering at a stage in the operation which lies beyond the screening point, but in advance of the admission of the solid material to the hold (page 1, lines 45 to 48). Therefore, whilst the drying of the soil might be said to take place **on** the transport vessel it is carried out prior to the actual loading of the soil **into** the vessel.

9.9 In conclusion, a person skilled in the art, starting from the prior use of Kamsar/Odin and seeking to increase safety and payload would have consulted Annex 42 and would have learnt that drying of the soil (i.e. sand in the case of the Kamsar/Odin) prior to loading it into the hold of the transport vessel would solve this problem ("by reason of separation ... before the material enters the hold").

9.10 Once the skilled person has been given the teaching by Annex 42 that it is necessary to reduce the water content of the soil cargo prior to loading to solve the above objective problem, it follows that the skilled person would then also reduce the water content to a value which is in conformity with international regulations for safe sea transport whilst at the same

time maximising the amount of soil transported. According to Annex 45 it is common general knowledge that a water content of less than 15% is a typical value in such cases for sandy soils (paragraph 3 of Annex 45) mentioned in Annex 42.

9.11 In conclusion, the Board is convinced by the appellant's argument that the subject-matter of claim 1 of the first auxiliary request lacks an inventive step when starting from the prior use (Articles 52(1) and 56 EPC).

10. Fifth Auxiliary request - Admission into the appeal proceedings

10.1 The appellant objected to the request's admissibility because it was late filed and did not readily overcome the objections raised.

10.2 In fact the request was filed in response to the first summons of the Board dated 16 December 2019, and corresponds to the fifth auxiliary request filed with letter of 28 August 2015, in advance of the second oral proceedings before the opposition division.

In the appeal proceedings this request was only filed in response to the first summons of the Board dated 16 December 2019, contrary to the requirements of Article 12 (2) RPBA 2007. It corresponds to the fifth auxiliary request filed with letter of 28 August 2015 in advance of the second oral proceedings before the opposition division. However, during the opposition proceedings it was neither admitted into the proceedings nor discussed at any time. Thus, it needs to be admitted into the appeal proceedings.

10.3 However, the amendment to claim 1 does not overcome the objection of lack of inventive step made against claim 1 of the first auxiliary request, since it consists merely of the deletion of the brackets around the expression "**long-distance being above 500 kilometers single sailing distance**" and the addition of the word "**away**". Indeed the transport vessel of Annex 42 is intended for use over such distances`since it is a bulk cargo vessel (see page 1, lines 105 to 108) intended for transport in rough or unprotected waters (see page 1, lines 13 to 15). Thus, the Board decided not to admit the fifth auxiliary request into the proceedings.

11. Eighth Auxiliary request - Admission into the appeal proceedings

11.1 The eighth auxiliary request was filed during the oral proceedings before the board. It corresponds to the sixth auxiliary request filed with letter of 17 September 2020, in response to the first summons of the Board dated 16 December 2019, with the following amendment in feature (h): ... the dredged soil, prior to loading it into the transport vessel (1, 10), is dried to **a water content of less than 15% of the total weight** of the dredged soil (7).

11.2 According to the established case law of the boards of appeal, such late filed requests will be admitted only if they are *prima facie* (clearly) allowable (Articles 13(1) and 13(3) RPBA 2007).

11.3 The claimed subject-matter is based on claims 1, 3 and 4 as granted. Each of these claims referring back to any one of the preceding claims, their combination is at least implicitly and unambiguously disclosed

thereby. Therefore, the requirements of Article 123(2) EPC are met. Further, since the subject-matter is based on granted claims, objections under Article 84 EPC regarding clarity are also not an issue.

11.4 As regards inventive step, starting from the prior use, the technical problem objectively solved by the distinguishing features is still one of how to increase safety and payload.

11.5 The Board agrees with the respondents that *prima facie* the cited prior art documents could not motivate the skilled person to dewater the sand dredged by the Odin in a buffer ship prior to loading it into the transport vessel Kamsar. In particular, it is not apparent why the Geomaris project would indeed guide the skilled person towards this claimed solution. Neither the prior use nor Annex 42 discloses the deployment of a buffer vessel to effectuate the drying of the soil before loading it in the transport vessel. Therefore, the reasoning leading to a lack of inventive step of claim 1 of the first auxiliary request is clearly no longer applicable. The only documents alleged to show the use of a buffering vessel for drying soil relate to the Geomaris project. This would appear to indicate that three documents in addition to general knowledge would need to be combined in order to show a lack of inventive step.

11.6 Thus, the claim amendment would *prima facie* appear to be allowable, in particular to overcome the objection of lack of inventive step.

11.7 Contrary to the appellant's view, the mere fact that the discussion of whether claim 1 is *prima facie* inventive lasted more than 90 minutes without

interruption is no evidence that claim 1 is clearly not inventive, but rather an indication of the complicated issues involved and the need to ensure that the parties could fully, if repetitively, present their respective arguments. Moreover, while a *prima facie* finding that a claim is not allowable may, by its very nature, be justified in briefer terms than a fully reasoned conclusion, the reasons for a *prima facie* finding may not be so short as to reduce the finding to a mere allegation (T 233/12, reasons Nr. 6.3).

- 11.8 For this reason, the Board decided to admit the eighth auxiliary request into the proceedings.
12. Remittal - Article 11 RPBA 2020 and Article 111(1) EPC
- 12.1 Under Article 11 RPBA 2020 the Board may remit the case to the department whose decision was appealed, if there are special reasons for doing so.
- 12.2 In the present case, substantive issues (such as inventive step of claim 4 as granted) raised in opposition proceedings are not dealt with in the decision under appeal. Under these circumstances, the Board holds that such special reasons are apparent in the present case.
- 12.3 As recalled in Article 12(2) RPBA 2020, the primary object of the appeal proceedings is to review the decision under appeal in a judicial manner. This principle would not be respected if the Board were to conduct a complete examination of the patent for compliance with the requirements of Articles 56 EPC for which no decision of the first instance exists yet. Therefore, the Board considers it appropriate to remit the case to the opposition division for further

examination of the inventive step of the claimed subject-matter of the eighth auxiliary request.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the opposition division for further prosecution.

The Registrar:

On behalf of the Chairman
(According to Art.8(3) RPBA):



C. Spira

C. Donnelly

Decision electronically authenticated