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Datasheet for the decision of 31 July 2017

Case Number: T 1698/13 - 3.2.07

Application Number: 08158060.7

Publication Number: 2003075

IPC: B65G53/66

Language of the proceedings: EN

Title of invention:
Plant for the controlled-speed pneumatic transport of granular material and conveyance speed control process

Patent Proprietor:
Moretto S.P.A.

Opponent:
Motan Holding GmbH

Headword:

Relevant legal provisions:
EPC Art. 56, 84
RPBA Art. 13(1), 13(3)

Keyword:
Inventive step - main request (no)
Late filed document - admitted (no)
First auxiliary request - admissibility (yes) - clarity (yes) - inventive step (yes)

Decisions cited:
T 1871/09, T 1072/07

Catchword:

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Case Number: T 1698/13 - 3.2.07

D E C I S I O N
of Technical Board of Appeal 3.2.07
of 31 July 2017

Appellant: (Patent Proprietor)	Moretto S.P.A. Via dell'Artigianato, 3 35010 Massanzago (Padova) (IT)
Representative:	Leihkauf, Steffen Falk Jacobacci & Partners S.p.A. Via Senato 8 20121 Milano (IT)
Respondent: (Opponent)	Motan Holding GmbH Stromeyersdorfstrasse 12 78467 Konstanz (DE)
Representative:	Hofstetter, Schurack & Partner Patent- und Rechtsanwaltskanzlei PartG mbB Balanstrasse 57 81541 München (DE)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 18 June 2013 revoking European patent No. 2003075 pursuant to Article 101(3)(b) EPC.**

Composition of the Board:

Chairman	K. Poalas
Members:	G. Patton
	I. Beckedorf

Summary of Facts and Submissions

I. The appellant (patent proprietor) lodged an appeal in the prescribed form and within the prescribed time limit against the decision to revoke European patent No. 2 003 075.

The opposition had been filed against the patent as a whole and was based on Article 100(a) EPC (lack of novelty and lack of inventive step).

The opposition division held that the subject-matters of claims 1 of the then main request (patent as granted) and of the then first, second, third, fourth, fifth, seventh and eighth auxiliary requests were lacking inventive step and that the then late-filed sixth auxiliary request was not admissible.

II. Oral proceedings before the board took place on 31 July 2017, details of which are recorded in the minutes.

The appellant requested that the decision of the opposition division be set aside and that the patent be maintained as granted (the main request) or, alternatively, that the patent be maintained in amended form on the basis of one of the sets of claims filed as auxiliary requests 1 to 8 with letter dated 29 January 2016.

The opponent (respondent) requested that the appeal be dismissed.

III. Claim 1 of the main request (patent as granted) reads as follows:

"A plant for the transport of plastic granular material comprising at least one container (100) for at least one plastic granular material (1a) to be transported, at least one receiver-meter group (RD1, RD2, ..., RDn) designed to receive plastic granular material from said at least one container (100), at least one conveyance duct (L1, L2, ..., Ln) of said plastic granular material from said at least one container (100) to said at least one receiver-meter group (RD1, RD2, ..., RDn), depressurization means (11, 11a) arranged to suction a gaseous medium from said at least one container (100), and at least one vacuum duct (LV; LV1, LV2, ..., LVn) between said at least one receiver-meter group (RD1, RD2, ..., RDn) and said depressurization means (11, 11a), thereby creating a flow of said granular material and said gaseous medium in said at least one conveyance duct or line (L1, L2, ..., Ln) directed to said at least one receiver-meter group (RD1, RD2, ..., RDn) and a flow of gaseous medium between said at least one receiver-meter group (RD1, RD2, ..., RDn) and said depressurization means, characterized in that it comprises speed detection means of said flow (MP; VT1, VT2, ..., VTn) located in said at least one vacuum duct or line (LV; LV1, LV2, ..., LVn), adjusting means of the power (DV) of said depressurization means and electronic control means (ECU) designed to receive in input control signals from said speed detection means (MP; VT1, VT2, ..., VTn) and to emit control signals in output for driving said adjusting means (DV), and wherein said at least one conveyance duct (L1, L2,. ..., Ln) is provided with a cleaning valve (VP1, VP2, ..., VPn) designed to intercept a respective conveyance duct (L1, ., Ln)."

Claim 1 of the first auxiliary request reads as follows (the amendments with respect to claim 1 of the main request are in bold, emphasis added by the board):

"A plant for the transport of plastic granular material comprising at least one container (100) for at least one plastic granular material (1a) to be transported, at least one receiver-meter group (RD1, RD2, ..., RDn) designed to receive plastic granular material from said at least one container (100), at least one conveyance duct (L1, L2, ..., Ln) of said plastic granular material from said at least one container (100) to said at least one receiver-meter group (RD1, RD2, ..., RDn), depressurization means (11, 11a) arranged to suction a gaseous medium from said at least one container (100), and at least one vacuum duct (LV; LV1, LV2, ..., LVn) between said at least one receiver-meter group (RD1, RD2, ..., RDn) and said depressurization means (11, 11a), thereby creating a flow of said granular material and said gaseous medium in said at least one conveyance duct or line (L1, L2, ..., Ln) directed to said at least one receiver-meter group (RD1, RD2, ..., RDn) and a flow of gaseous medium between said at least one receiver-meter group (RD1, RD2, ..., RDn) and said depressurization means, characterized in that it comprises speed detection means of said flow (MP; VT1, VT2, ..., VTn) located in said at least one vacuum duct or line (LV; LV1, LV2, ..., LVn), adjusting means of the power (DV) of said depressurization means and electronic control means (ECU) designed to receive in input control signals from said speed detection means (MP; VT1, VT2, ..., VTn) and to emit control signals in output for driving said adjusting means (DV), **wherein said electronic control means (ECU) includes a control microprocessor set to create different transport condition profiles as a function of the type of**

granular material (1a) to be transported and, for this purpose, the control microprocessor has a first storage portion containing a pre-store table of plastic granular materials (1a) with respective characteristic parameters of respective optimal transport speed profiles of said plastic granular materials (1a) and wherein said at least one conveyance duct (L1, L2,. ..., Ln) is provided with a cleaning valve (VP1, VP2, ..., VPn) designed to intercept a respective conveyance duct (L1, ..., Ln)."

Claim 14 of the first auxiliary request reads as follows (corresponding to claim 15 of the patent as granted):

"A control process of the conveyance speed of a plastic granular material along at least one conveyance line between at least one container of the plastic granular material to be conveyed and at least one receiver-meter group (RD1, RD2, ..., RDn) of a plant according to any preceding claim, comprising:
- the application of a depressurization to said plastic granular material through at least one conveyance duct (L1, L2, ..., Ln) extending between said at least one container and said at least one receiver-meter group (RD1, RD2, ..., RDn) and through said at least one vacuum line or duct (LV; LV1, LV2, ..., LVn), whereby suctioning a gaseous medium from said at least one container (100) and to create a flow of said plastic granular material and said gaseous medium along said at least one conveyance duct (L1, L2, ..., Ln) directed to said at least one receiver-meter group (RD1, RD2, ..., RDn) and a flow of gaseous medium between said at least one receiver-meter group (RD1, RD2, ..., RDn) and depressurization means (11, 11a), characterized in that it comprises:

- detecting the speed of said gaseous flow in said at least one vacuum line or duct LV; LV1, LV2,..., LVn), and
- adjusting said flow rate of said gaseous flow by varying the depressurizing power of said depressurization means as a function of the detected parameters of said flow, thereby adjusting the speed of said granular material travelling along said at least one conveyance duct (L1, L2, ...Ln)."

In view of the present decision it is not necessary to discuss the second to eighth auxiliary requests and to recite the wording of their independent claims.

IV. The following documents cited in the appeal proceedings are relevant for the present decision:

E1: JP 60-067325 A;
E1T: Translation into English of E1, 5 pages;
E2: US 6 588 988 B;
E3: EP 2 003 075 A, corresponding to the patent application of the contested patent;
E7: US 2 684 869 A.

At the oral proceedings the appellant filed annotated and coloured figures 6 of the contested patent (A1).

V. The appellant argued essentially as follows:

Document E2, being referred to for the first time in appeal proceedings at the oral proceedings before the board, should not be admitted into the proceedings since it is late-filed and *prima facie* not relevant for the present decision.

The prior art referred to in connection with figures 1 to 5 in E3 does not belong to prior art pursuant to Article 54(2) EPC since it relates to appellant's in-house knowledge at the filing date of the contested patent.

Vis-à-vis E1 taken as closest prior art, the feature of claim 1 of the main request "the transport of plastic granular material" should be regarded as a distinguishing feature as the plant disclosed in E1 is unsuitable therefor. In addition, E1 does not disclose the following features a) and b) of claim 1:

(a) receiver-meter group; and

(b) at least one conveyance duct is provided with a cleaning valve designed to intercept a respective conveyance duct.

Regarding feature b) alone, the skilled person would have no incentive to apply a cleaning valve in the plant of E1 and would face technical difficulties in doing so. He would not arrive at the claimed position and function of the cleaning valve as they do not belong to the skilled person's common general knowledge and are not disclosed in or suggested by E7.

Features a) and b), together with "the transport of plastic granular material" if seen as a distinguishing feature, show a synergetic effect in such a way that the technical problem to be solved is to efficiently switch from one type of granular material to another without contaminating each other and without any interruption of production.

Since the above-mentioned problem has not been addressed in the available prior art documents, and the claimed solution has not been disclosed therein, inventive step should be recognised.

In comparison with the first auxiliary request filed with the statement setting out the grounds of appeal claim 1 of the first auxiliary request filed with letter dated 29 January 2016 differs in that the term "plastic" has been inserted before the term "granular material". Since this does not change the substance of the claims of the previous first auxiliary request, it should be admitted into the appeal proceedings.

The expression "optimal transport speed profiles" in claim 1 of the first auxiliary request is clear to a skilled person with a mind willing to understand.

The following features c) have been introduced into claim 1 of the first auxiliary request:

(c) wherein said electronic control means includes a control microprocessor set to create different transport condition profiles as a function of the type of granular material to be transported and, for this purpose, the control microprocessor has a first storage portion containing a pre-store table of plastic granular materials with respective characteristic parameters of respective optimal transport speed profiles of said plastic granular materials.

They are not disclosed in E1. In view of the technical effect associated therewith, the problem to be solved is to be seen as to provide a timely response to the

change of working conditions in the industrial plant known from E1.

Since the claimed solution is not disclosed in the available prior art documents and does not belong to the skilled person's common general knowledge, inventive step for the subject-matter of claim 1 of the first auxiliary request is to be acknowledged.

This applies *mutatis mutandis* to claim 14 of the first auxiliary request, which comprises the features of the plant according to claim 1.

VI. The respondent argued essentially as follows:

Document E2, although presented for the first time in appeal proceedings at the oral proceedings before the board, should be admitted into the appeal proceedings as it shows the skilled person's common general knowledge regarding cleaning valves.

The subject-matter of claim 1 of the main request lacks inventive step starting as closest prior art either from E1 or from the prior art referred to in E3, see paragraphs 13 to 28 and figures 1 to 5.

Starting from E1, only feature b) is not disclosed in E1. This feature is usual and known in the technical field as illustrated for instance in E7 so that the skilled person would immediately arrive at the claimed solution without inventive skills.

Should feature a) be regarded as not disclosed in E1, it would have no synergetic effect with feature b). In view of the technical effect associated with feature a), the partial problem to be solved is merely to

provide a metered amount of granular material to the transformation machines. Such a measure for solving such a problem is known and usual in the present technical field, so it cannot justify inventive step.

The subject-matter of claim 1 of the main request should thus be regarded as lacking inventive step.

As the first auxiliary request was late-filed in the appeal proceedings, it should not be admitted into the proceedings.

The expression "optimal transport speed profiles" renders claim 1 of the first auxiliary request unclear as "optimal" is a relative term without a well-recognised meaning in the technical field in question.

Features c) added to claim 1 of the first auxiliary request are not disclosed in E1. They constitute however an obvious measure the skilled person would think of when a plant/process is computer controlled.

Claim 1 is directed to an apparatus claim, so its features should be assessed for novelty and/or inventive step over the prior art in accordance with their structure. Hence, the claimed microprocessor cannot be regarded as inventive. Furthermore, data tables stored in a memory in order to feed the microprocessor cannot be seen as inventive either.

Finally, selecting an obvious measure from a list of obvious alternatives cannot be regarded as inventive.

The subject-matter of claim 1 of the first auxiliary request should therefore be regarded as lacking inventive step.

Reasons for the Decision

1. *Prior art*

1.1 Document E2

1.1.1 The respondent cited document E2 for the first time in appeal proceedings at the oral proceedings before the board. The admission of E2 into the appeal proceedings is hence subject to the board's discretion pursuant to Articles 13(1) and (3) RPBA as it constitutes a change in the respondent's case.

1.1.2 According to the respondent, E2 has been referred to in order to prove that cleaning valves belong to the skilled person's common general knowledge.

1.1.3 The board shares the respondent's view that the cleaning valve referred to in claim 10 of E2 ("conveying line emptying arrangement") is in addition to valve 9, the latter being responsive to the measured pressure for regulating the introduction of the conveying gas as shown in the figure, see also column 3, lines 27 to 29 and claim 1. The board notes that E2 merely discloses that cleaning valves are known without any further details with respect to, for instance, their way of functioning or relative position with respect to the conveyance duct of the plant. The board being of the opinion, which has not been contested by the appellant, that cleaning valves as such belong to the skilled person's common general knowledge does not see any need for any further evidence of said fact and does therefore not admit E2 into the appeal proceedings (Articles 13(1) and (3) RPBA).

1.2 Prior art discussed in document E3

1.2.1 According to the impugned decision, points 15, 16, 21 and 23, the disclosure of the prior art referred to in document E3, see paragraphs 13 to 28 and figures 1 to 5, is considered as plausible closest prior art for concluding that the claimed subject-matter lacks inventive step.

With its written submissions in appeal proceedings, the respondent has also followed and further developed this line of argumentation.

1.2.2 The board shares, however, the appellant's view that said prior art discussed in E3 does not belong to prior art pursuant to Article 54(2) EPC since it merely relates to the appellant's **in-house knowledge** at the filing date of the contested patent.

As a matter of fact, this disclosure was published with the application as originally filed and the respondent has not provided any evidence showing that said disclosure was made available to the public prior to the priority date of the contested patent.

1.2.3 The above was the preliminary opinion of the board provided to the parties in the annex to the summons to oral proceedings, see point 5. The respondent has not questioned the above-mentioned board's opinion in either its written submissions nor orally at the oral proceedings. The board – having once again taken into consideration all the relevant aspects concerning said issue – sees no reason to deviate from its above-mentioned finding.

1.2.4 As a consequence, all inventive step objections involving the prior art disclosed in E3 raised by the respondent and/or held detrimental to the maintenance of the contested patent in the impugned decision have been considered by the board as not valid. They are not therefore further discussed in the present decision.

2. *Main request (patent as granted)*

The respondent has contested that the subject-matter of claim 1 of the main request involves inventive step starting from E1 as closest prior art, see also impugned decision, point 14.

2.1 Disclosure of E1

E1 discloses a plant for the transport of granular material comprising at least one container 1, 2, 3 and 4 ("hoppers") for at least one granular material to be transported, at least one receiver group 15 ("cyclone separator"), 17 ("storage tank") designed to receive granular material from said at least one container 1, 2, 3 and 4, at least one conveyance duct 5 ("conveyance pipe") of said granular material from said at least one container 1, 2, 3 and 4 to said at least one receiver group 15, 17, depressurization means 18 ("vacuum blower") arranged to suction a gaseous medium from said at least one container 1, 2, 3 and 4, and at least one vacuum duct 16 ("air pipe") between said at least one receiver group 15, 17 and said depressurization means 18, thereby creating a flow of said granular material and said gaseous medium in said at least one conveyance duct or line 5 directed to said at least one receiver group 15, 17 and a flow of gaseous medium between said at least one receiver group 15, 17 and said depressurization means 18. The plant of E1 comprises

speed detection means 19 of said flow ("flow meter") located in said at least one vacuum duct or line 16, adjusting means 18a of the power ("motor") of said depressurization means 18 and electronic control means 14 ("control box") designed to receive in input control signals from said speed detection means 19 and to emit control signals in output for driving said adjusting means 18a (E1T, page 3, line 17 to page 4, line 24; claims; figure 1).

2.2 Feature: "a plant for the transport of plastic granular material"

2.2.1 The appellant considers that the plant disclosed in E1 is **not suitable for** "the transport of plastic granular material" as claimed.

It argues that E1 discloses only the transport of "powder" or "dust" which differ from "granular material" in that the former exhibit a finer grain size. Furthermore, "powder" and "dust" behave differently from granular material, in particular during air-flow transportation.

For the appellant, the plant of E1 comprises ejectors 6, 7, 8 and 9 for sucking out the dust from the hoppers 1, 2, 3 and 4 and these make it even more unsuitable for "granular material", such ejectors being notoriously unsuitable for handling granular material. The same holds true for the cyclone separator 15 of E1.

The appellant holds the view that the definition of granular material used in claim 1 does not encompass "powder" or "dust". From the description of the contested patent, see paragraph 2, the skilled person will understand that claim 1 deals with the transport

of "small scales, sheets or plates produced by grinding-crushing of slab, sheet, film and the like plastic material", i.e. macroscopic plastic granules, excluding thereby "dust" and "powder".

The feature of claim 1 "for the transport of plastic granular material" should then be regarded as a distinguishing feature over E1.

2.2.2 The board does not share this view for the following reasons already provided to the parties in the annex to the summons to oral proceedings, point 6.2.2, which was not subsequently contested by the appellant in writing or orally at the oral proceedings.

In the claims of E1T it is explicitly mentioned that the disclosed apparatus conveys "granular material". Hence, the disclosure of E1 is not restricted to dust as mentioned in the single embodiment (nor to powder as mentioned in the PAJ abstract). Furthermore, contrary to the appellant's view (see letter dated 2 October 2014, page 2, first paragraph), it is not explained in E1 that the invention is limited to dust. On the contrary, it is explicitly stated on page 4, last line to page 5, line 2 of E1T that the invention is **not** limited to the embodiment disclosed, i.e. "dust gathered from exhaust gas", and it may be applied to **another "granular material"**. As a consequence, the skilled person would derive from the above-mentioned information that the apparatus of E1 is suitable not only for "dust" but also for "granular material" in a general manner.

As put forward by the respondent, ejectors unambiguously exist in different sizes for transporting granular material with different sizes. This also

applies to cyclone separators. Therefore, the plant of E1 does not comprise structural features which would render it unsuitable for transporting granular material. Furthermore, since the appellant's submissions do not explain why E1 would be unsuitable for transporting granular material made of plastic, it is considered that E1 is suitable for the transport of **plastic** granular material as claimed.

Finally, the board cannot find any reason why in the present case the features of the claims of the main request, in particular the expression "granular material", should be seen as being limited and/or interpreted in any way by the description of the contested patent. The expression should only be assessed according to its broadest possible technically feasible meaning (see T 1871/09, not published in OJ EPO, reasons 3.4).

In this respect, the board cannot therefore find fault in the finding of the opposition division, see impugned decision, point 11.2, first item.

2.3 Feature: "receiver-meter group"

The board shares the appellant's view that the "receiver-meter group" specified in claim 1 is to be functionally **suitable for metering**, which is not the case for the cyclone separator 15 and storage tank 17 of E1.

As a matter of fact, contrary to the respondent's allegation, the cyclone separator 15 of E1 does not supply the granular material to the storage tank 17 in a measured manner but rather supplies it as it comes.

As the respondent maintained, claim 1 does not state which component is metered, or how and why there is metering. "Meter" also relates to an unstated intended use. However, these arguments relate to inventive step and do not remove the fact that the "receiver-meter group" specified in claim 1 is to be suitable for metering, which is not the case for the cyclone separator 15 and storage tank 17 of E1.

This feature is therefore a distinguishing feature over E1, contrary to the finding of the opposition division, see impugned decision, point 11.2, second item.

The above was the board's preliminary opinion provided to the parties in the annex to the summons to oral proceedings, point 6.3. It has not been contested subsequently by the respondent in writing or orally at the oral proceedings.

2.4 Feature: "cleaning valve"

This feature of claim 1 concerns a valve which has a **cleaning function**. Therefore, the valve specified in claim 1 is to be suitable for cleaning at least part of the conveyance duct on which it is mounted. However, neither its structural features, e.g. those shown in figure 5 of the contested patent, nor its properties, e.g. cleaning efficiency, are specified in claim 1. Nor does claim 1 specify where on the conveyance duct the cleaning valve is mounted.

As put forward in the impugned decision, see point 14.1, this (functional) feature is not disclosed in E1. The board notes that this finding of the opposition division is not in contradiction with the finding,

point 11.2, third item, which concerns the structural features of the valve.

The above was the board's preliminary opinion provided to the parties in the annex to the summons to oral proceedings, point 6.4. It was not contested subsequently by the respondent in writing or orally at the oral proceedings.

2.5 Distinguishing features vis-à-vis E1

In view of the above the following features of claim 1 are not disclosed in E1:

(a) receiver-meter group; and

(b) at least one conveyance duct is provided with a cleaning valve designed to intercept a respective conveyance duct.

2.6 Technical effects and problems to be solved

2.6.1 The first distinguishing feature a) has the technical effect that the granular material is provided in a measured amount to the transformation machine, see contested patent, for instance paragraph 16.

The second distinguishing feature b) enables the cleaning of at least part of the conveyance duct, see contested patent, for instance paragraphs 23, 27 and 30.

The board considers that there is no synergy between the effects of the above-mentioned distinguishing features so that these can be dealt with separately for

assessing the inventive step of the claimed subject-matter.

The first partial technical problem to be solved in view of distinguishing feature a) can therefore be seen as to provide a measured amount of granular material to the transformation machine.

The second partial technical problem to be solved in view of distinguishing feature b) can be seen as to enable the cleaning of at least a part of the conveyance duct.

2.6.2 At the oral proceedings, the appellant contested the above and argued that these two distinguishing features a) and b) have the synergetic effect of enabling the plant to efficiently switch from the transportation of a first type of granular material to the transportation of a second type of granular material **without contamination** between the two granular materials. This would be derivable from paragraph 23 and column 8, lines 11 and 12 of the contested patent.

For the appellant, such switching involves emptying the conveyance duct from the first type of granular material (in blue in A1), continuing to supply said first type of granular material from the receiver-meter group to the transformation machines, finishing any residual first type of granular material and replenishing the conveyance duct with the second type of granular material (in red in A1). This can be achieved only if the cleaning valve and the meter of the receiver-meter group are running concomitantly. If only the cleaning function of the valve is provided and not the metering function, it will be possible to empty the conveyance duct but contamination between the two

granular materials will occur as the first type of granular material will not be completely supplied to the transformation machine. If only the metering function of the valve is provided and not the cleaning function, the second type of granular material will inevitably mix with the first granular material.

In view of this combined effect, the problem to be solved is to efficiently switch from one type of granular material to another without contamination between them and without interruption of production.

For the appellant, since this problem is not addressed in E1, the skilled person would not have any incentive to arrive at the claimed solution. In particular, since there is only a single conveyance duct 5 in E1, contamination between the different types of granular materials cannot be prevented if the switch is performed in sequence in accordance with the claimed solution. For switching from one type of granular material to another, the production in the plant of E1 would have to be interrupted.

Considering E7, even if it would be considered that it discloses cleaning valves 100, 100', these cleaning valves are not positioned as claimed, i.e. **to intercept** the conveyance duct 70, 70' so as to prevent the second type of granular material from contaminating the first type. They are positioned after the conveyance duct, see figure 1. The claimed solution can therefore not be suggested by E7 either.

Inventive step for the subject-matter of claim 1 of the main request should then be acknowledged.

2.6.3 The board does not share the appellant's view since the contested patent neither discloses nor suggests a synergetic effect between the two distinguishing features a) and b).

Even if paragraph 39 of the contested patent refers to "such device", i.e. to the claimed device in a general manner, it does not describe that the alleged combined effect is directly linked to the metering function of the receiver-meter group. This is also true for paragraphs 23 and 24 of the contested patent, which only refer to the cleaning valve.

In fact, the alleged combined effect is not credible. The metering function of the receiver-meter group in the contested patent aims only at providing a measured amount of granular material to the transformation machines, see paragraph 16. This function does not comprise any interaction with that of the cleaning valve, even when switching from one type of granular material to another. To empty the conveyance duct and/or the receiver and completely supply the first type of granular material to the transformation machines, a metering function is not necessary. This can be performed by other suitable means such as for instance by any pumping device or by providing a new empty container in place of container 17 in E1.

The board does not share the appellant's view that according to the claimed solution a combined effect would also be that production would run uninterruptedly. Indeed, in order to avoid contamination, interruption when switching granular materials is inevitable, as illustrated by the space left between the first type of granular material in blue and the second type of granular material in red in

the lower figure of A1. This empty space in the conveyance duct leads to an interruption of production since the supply of granular material will be momentarily interrupted. This again is not linked with the metering function of the receiver-meter group.

Therefore, each feature a) and b) is related to corresponding partial technical problems as discussed under point 2.6.1 above.

2.7 Obviousness

2.7.1 The board is of the opinion that the skilled person faced with the first partial technical problem will immediately arrive at the idea of implementing a metering device which belongs to his common general knowledge after the cyclone separator 15 or possibly after the storage tank 17 of E1. He would encounter no technical difficulty in doing this. Hence, the first distinguishing feature a) does not justify inventive step.

In this context reference is also made to the respondent's arguments given under point 2.3 above.

2.7.2 Regarding the second partial technical problem, the appellant admits that cleaning valves for cleaning a duct are *per se* well-known in the art so that evidence of this common general knowledge is not necessary. For the appellant, the issues at stake are whether the skilled person would have any incentive to implement such a cleaning valve in the plant of E1 and would have any technical difficulty in doing so, and also whether the claimed position and function of the cleaning valve belong to the skilled person's common general knowledge and/or are disclosed in or suggested by E7.

2.8 The board does not share the appellant's view that the skilled person would not consider isolating the conveyance duct 5 of E1 for the mere reason that there would be only one single branched conveyance duct for multiple recipients 1, 2, 3 and 4, i.e. the plant of E1 would have to be shut down. As a matter of fact, it has to be expected that maintenance of such a plant is from time to time unavoidable and that in such a case the person in charge will undertake the necessary measures therefor, e.g. shutting down the plant if necessary. Furthermore, contrary to the appellant's view, the board considers it unnecessary to shut down the plant of E1 to clean the conveyance duct 5 as the ejectors 6, 7, 8 and 9 could be momentarily closed. By doing so, no interference with the remaining parts of the duct 5 would occur.

In this respect the board does not share the appellant's assertion that the ejectors 6, 7, 8 and 9 of E1 would not be suitable for interrupting the material flow from the hoppers 1, 2, 3 and 4. The fact that E1 is silent on this suitability of the ejectors as argued by the appellant does not necessarily mean that they are not suitable therefor. As shown in figure 1, the ejectors are schematically depicted as valves so that the skilled person reading E1 would immediately and unambiguously derive that they are used as valves for closing the duct if necessary. In fact, as a matter of process control and plant maintenance, the skilled person would also immediately realise that the ejectors 6, 7, 8 and 9 have to be able to close the duct. The fact that, as argued by the appellant, the plant of E1, page 3, last paragraph, aims at avoiding stagnation so that it is desirable that the granular material flows does not contradict this.

As already mentioned under point 2.2.2 above, the disclosure of E1 is not considered as being limited to the transport of dust. Therefore, the skilled person would not only think that cleaning in E1 would relate exclusively to dust, but also to granular particles. The board fails to see why the skilled person would not think it necessary to clean out conveyance duct 5 in the plant of E1, even if it were to be seen as limited to the transport of dust as argued by the appellant, since even dust may deposit on the inner wall of the duct, depending *inter alia* on the configuration of said duct.

Contrary to the appellant's view the board is of the opinion that the expression used in claim 1 "cleaning valve design to intercept ... a conveyance duct" is not limited to the structural configuration depicted in figure 5 of the contested patent. "Intercept" covers broader interpretations. In fact, the board shares the respondent's view that the position in the conveyance duct, the function and the way of functioning of the cleaning valve is not specified in claim 1 of the main request so that the clean-out valves 100 and 100' of E7 illustrating the skilled person's common general knowledge are suitable for cleaning at least part of the conveyance duct 5 of E1 (at least the branches 5 from each hopper 1, 2, 3 and 4 to the common branch 5). As also argued by the respondent, the standpipes 70 and 70' of E7 can be regarded as part of conveyance duct intercepted by the clean-out valves.

As a consequence the board cannot find fault in the finding of the opposition division, see impugned decision, points 14.2 and 14.3, that the skilled person faced with the second partial technical problem will

immediately come to the claimed solution using his common general knowledge.

2.9 In view of the above, the subject-matter of claim 1 lacks inventive step.

3. *First auxiliary request*

3.1 Admissibility

3.1.1 The first auxiliary request was filed with the appellant's letter dated 29 January 2016, i.e. after the reply of the respondent.

Its admission in the proceedings is hence subject to the discretion of the board pursuant to Article 13(1) RPBA.

3.1.2 The first auxiliary request corresponds to the first auxiliary request filed with the statement setting out the grounds of appeal with the introduction in claim 1 of the term "plastic" before the term "granular material".

The board fails to see in which respect these amendments increase the complexity of the claimed subject-matter and adversely affect the procedural economy. In particular, the expression "plastic granular material" was present in claim 1 of the patent as granted and was discussed by the parties from the very beginning of the appeal proceedings (see statement setting out the grounds, point 2.1; reply, point II. 1.a), as well as in the impugned decision (see point 11.2).

Consequently, the board admits the first auxiliary request into the proceedings.

3.1.3 The fact that this set of claims is late-filed is not sufficient reason not to admit it, contrary to the respondent's view.

It is noted that the introduction of the term "plastic" in claim 1 of the first auxiliary request means that the issue raised with respect to compliance with Article 123(3) EPC, see respondent's letter dated 14 April 2016, point 1.a, can be set aside.

3.1.4 The above was the preliminary opinion of the board provided to the parties in the annex to the summons to oral proceedings, point 7.1. The respondent has not further argued subsequently against this view in its written submissions or orally at the oral proceedings.

3.2 Clarity

The respondent considers that the expression "optimal transport speed profiles" renders claim 1 unclear as "optimal" is a relative term without a well-recognised meaning in the field.

The board does not share the respondent's view for the reasons given by the appellant that a skilled person with a mind willing to understand will interpret this expression as the "desired" transport speed profiles, i.e. the transport speed profile to be achieved for each specific type of plastic granular material.

The above reasoning was communicated to the parties in the annex to the summons to oral proceedings, see point 7.2.1, as the preliminary opinion of the board in this

respect. The respondent did not subsequently present any further arguments against this view in its written submissions or orally at the oral proceedings. The board – having once again taken into consideration all the relevant aspects concerning said issue – sees no reason to deviate from its above-mentioned finding and considers that claim 1 of the first auxiliary request is clear.

3.3 Amendments

3.3.1 The board shares the appellant's view that the following features c) added to claim 1 of the first auxiliary request with respect to claim 1 of the main request (see point III above):

(c) wherein said electronic control means includes a control microprocessor set to create different transport condition profiles as a function of the type of granular material to be transported and, for this purpose, the control microprocessor has a first storage portion containing a pre-store table of plastic granular materials with respective characteristic parameters of respective optimal transport speed profiles of said plastic granular materials

have a basis in the paragraph bridging pages 15 and 16 of the application as originally filed. The requirements of Article 123(2) EPC are then fulfilled. The respondent has not raised any objection in this respect.

3.3.2 As briefly discussed above, the requirements of Article 123(3) EPC are also fulfilled. This has not been contested by the respondent.

3.4 Inventive step

Claim 1

3.4.1 The board shares the appellant's view undisputed by the respondent that features c) are not disclosed in E1.

3.4.2 Distinguishing features c) enable a timely response to the change of working conditions in an industrial plant, see contested patent, paragraphs 4, 9, 23, 24, 25, 28 and 39 (statement setting out the grounds of appeal, point 3.1).

These features have no synergic effect with the further distinguishing features a) and b).

Hence, the board shares the appellant's view put forward at the oral proceedings that the problem to be solved in relation to distinguishing features c) can be seen as to provide a plant enabling a timely response to the change of working conditions, see paragraph 39 of the patent in suit.

3.4.3 The board is of the opinion, as put forward by the appellant as well, that since distinguishing features c) are not disclosed by the available prior art documents nor belong to the skilled person's common general knowledge in relation to the problem to be solved, the subject-matter of claim 1 of the first auxiliary request involves an inventive step.

3.4.4 In this respect the board does not share the respondent's view that features c) would be obvious to the skilled person when a plant/process is computer controlled, as this is an unsubstantiated assertion.

As argued by the appellant, the skilled person could think of other means such as to implement more adequate fluid dynamic modeling with for instance further sensors and controlling loops, i.e. not pre-stored parameters obtained by previous experiments as claimed.

3.4.5 At the oral proceedings the respondent further argued that claim 1 is directed to an apparatus claim so that its features should be assessed for novelty and/or inventive step over the prior art in accordance with their structural form. Having that in mind, implementing a microprocessor for controlling a plant/ process cannot be regarded as inventive. Further, adding data tables in a memory in order to feed the microprocessor cannot be seen as inventive either.

Finally, selecting an obvious measure from a list of obvious alternatives cannot be regarded as inventive (T 1072/07, not published in OJ EPO).

3.4.6 The board does not share this view for the reasons given under points 3.4.3 and 3.4.4 above.

In addition, the microprocessor mentioned in features c) is specified therein by its function, this not being a mere structural feature. The microprocessor has to be suitable for creating different transport condition profiles as a function of the type of granular material to be transported. Indicating its function is the normal way to define, i.e. specifying a microprocessor.

Furthermore, it is neither disclosed nor suggested in the available prior art documents that data be obtained in advance for controlling a plant/process as claimed.

In fact, as discussed at the oral proceedings the claimed solution as a whole (features c)) is not disclosed in any of the available documents nor has it been proven to belong to the skilled person's common general knowledge so that the allegation that it would result from a mere selection from a list of obvious alternatives is unfounded.

Claim 14

3.4.7 Since independent process claim 14 comprises the plant of claim 1, the subject-matter of claim 14 is also regarded as inventive for the same reasons.

In this respect, the board follows the appellant's view that all the features of the plant of claim 1 are included in the control process of claim 14, contrary to the respondent's interpretation.

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 with the order to maintain the patent in amended form on the basis of the following documents:

claims:
1 to 16 filed as auxiliary request 1 with letter of 29 January 2016

description:
page 2 filed during the oral proceedings
pages 3 to 6 of the patent specification

figures:
1 to 7 of the patent specification

The Registrar: The Chairman:

G. Nachtigall K. Poalas

Decision electronically authenticated