Decision on Opposition

Opposition No. 2018-700912

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The case of opposition to the granted patent regarding inventions of Patent No. 6323601 titled "CONCRETE COMPOSITION AND METHOD FOR MANUFACTURING CONCRETE COMPOSITION" has resulted in the following decision.

Conclusion

The correction of the Scope of Claims of Patent No. 6323601 shall be approved of as the corrected Claims [1 to 7], and 8 according to the corrected Scope of Claims attached to the written correction request.

The patent for Claim 8 of Patent No. 6323601 is to be revoked.

The patent for Claims 1, 2, and 4 to 7 of Patent No. 6323601 shall be maintained.

The opposition to the granted patent of Claim 3 of Patent No. 6323601 shall be dismissed.

Reasons

No. 1 History of the procedures

The application of the patent for Claims 1 to 8 of Patent No. 6323601 (hereinafter, referred to as "the Patent") was filed on July 28, 2017 (Priority Date: February 2, 2017). The establishment of patent right was registered on April 20, 2018, and its gazette containing the patent was published on May 16, 2018. Thereafter, an opposition to the granted patent was filed on November 12, 2018 by Aiko Hayashi (hereinafter, referred to as "Patent Opponent 1") on the basis of Evidence A No. 1 to Evidence A No. 7 as means of proof. Another opposition to the granted patent was filed on November 16, 2018 by Toshihiko Hama (hereinafter, referred to as "Patent

Opponent 2") on the basis of Evidence A No. 1 to Evidence A No. 5 as means of proof. Then, a notice of reasons for revocation dated February 8, 2019 was notified. A written opinion and a written request for correction (hereinafter, referred to as "the Correction Request") were submitted on April 12, 2019. A written opinion dated June 4, 2019 was submitted by Patent Opponent 2 with Evidence A. No. 8 to Evidence A No. 15. Then, a notice of reasons for revocation (an advance notice of a decision) dated July 3, 2019 were notified.

Regarding the request for correction dated April 12, 2019, Patent Opponent 1 was asked for an opinion with a specified period but there was no response.

In addition, the Patentee did not reply to the notification of the reasons for revocation (an advance notice of a decision) dated July 3, 2019.

(Means of proof)

(From Patent Opponent 1)

Evidence A No. 1: Japanese Patent Laid-Open No. 2010-30885

Evidence A No. 2: Japanese Patent Laid-Open No. 2001-9417

Evidence A No. 3: Japanese Patent Laid-Open No. 2009-274937

Evidence A No. 4: Hiromi Hosono, et al., "Research on Fluidity Evaluation and Quality Control of the PC-Grout," Journal of Japan Society of Civil Engineers, Ser. E2, Vol. 71, No. 1, pp. 72-85, 2015

Evidence A No. 5: Hiroshi Yagabe, "Study on Fluidity Improvement Effect of Inorganic Powder Slurry," p. 56-1-56-4, Graduate School of Human Environment, Kyushu University, 2008, Website URL: http://www.hues.kyushu-u.ac.jp/education/student

Evidence A No. 6: Akira Yamamoto, et al., "Effects of Quality variations of Fly Ash on Concrete,"
JSCE 56th Annual Scientific Lecture (October 2001), pp. 256-257

Evidence A No. 7: Yuichi Yamada, et al., "Fly Ash," Concrete Engineering,
Vol. 26, No. 4, April 1988, pp. 14-18

(From Patent Opponent 2)

Evidence A No. 1: "Book Making Clear Cement Standards - JIS manual," published by the Japan Cement Association, March 1993, pp. 1-5

Evidence A No. 2: Japanese Patent Laid-Open No. 1999-278908

Evidence A No. 3: Japanese Patent Laid-Open No. 1999-139859

Evidence A No. 4: "44. Quality of Various Types of Fly Ash and Fluidity of

Concrete," Cement Technology Annual Report 39, published by the Japan Cement Association, 1985, pp. 201-204

Evidence A No. 5: "37 Action of Fly Ash, C&C Encyclopedia [Basic Explanation of Cement and Concrete Chemistry], published by the Japan Cement Association, July 1996, pp. 92-93

Evidence A No. 8: Japanese Patent Laid-Open No. 2015-124133

Evidence A No. 9: Japanese Patent Laid-Open No. 2008-302507

Evidence A No. 10: Japanese Patent Laid-Open No. 2000-247715

Evidence A No. 11: Japanese Patent Laid-Open No. 1997-194241

Evidence A No. 12: "Fly Ash for Use in Concrete A6201 (1999)," JIS Handbook [10] Fresh concrete, published by Japanese Standards Association (JSA), January 31, 2001, pp. 137-139

Evidence A No. 13: Japanese Patent Laid-Open No. 2016-88778

Evidence A No. 14: Japanese Patent Laid-Open No. 2015-10009

Evidence A No. 15: Japanese Patent Laid-Open No. 2015-221734

No. 2. Regarding Request for correction

1. Contents of correction

The contents of correction according to the Correction Request are as follows (underlines were added by the body).

(1) Correction A

Claim 1 in the Scope of Claims is revised from
"A concrete composition comprising ... in a range of 17-27 seconds" to
"A concrete composition <u>for spraying</u> comprising ... in a range of 17-27 seconds."

(2) Correction B

Claim 2 in the Scope of Claims is revised from
"A concrete composition comprising ... in a range of 23 to 27%" to
"A concrete composition <u>for spraying</u> comprising ... in a range of 23 to 27%."

(3) Correction C

Claim 3 in the Scope of Claims is canceled.

(4) Correction D

Claim 4 in the Scope of Claims is revised from
"The concrete composition according to any one of Claims 1 to 3" to
"The concrete composition according to Claim 1 or 2."

(5) Correction E
Claim 5 in the Scope of Claims is revised from
"The concrete composition according to any one of Claims 1 to 4" to
"The concrete composition according to any one of Claims 1, 2, and 4."

(6) Correction F
Claim 6 in the Scope of Claims is revised from
"The concrete composition according to any one of Claims 1 to 5" to
"The concrete composition according to any one of Claims 1 to 2 and 4 to 5."

(7) Correction G
Claim 7 in the Scope of Claims is revised from
"The concrete composition according to any one of Claims 1 to 6" to
"The concrete composition according to any one of Claims 1 to 2 and 4 to 6."

(8) Correction H
Claim 8 in the Scope of Claims is revised from
"a bulk specific gravity after crushing ... relative to a bulk specific gravity before crushing" to
"a bulk specific gravity after crushing ... a bulk specific gravity of 1.087 g/cm^3 or higher and 113 g/cm^3 or lower of the fly ash raw powder before crushing."

(9) Correction I
Claim 8 in the Scope of Claims is revised from
"A method of manufacturing a concrete composition ... comprising: ...
a step of mixing ... ." to
"A method of manufacturing a concrete composition for spraying ... comprising ...
a step of mixing ... ."

(10) Regarding a group of claims
Claims 3 to 7 before the correction depend from Claims 1 and 2 before amendment and thus the corrections of the Scope of the Claims by Corrections A to G

are made for a group of Claims 1 to 7. Also, Claim 8 before the correction is an independent claim, and thus the corrections of the Scope of the Claims by Corrections 8 and 9 are requested for the independent Claim 8.

2. Judgment on correction

(1) Corrections A, B, and I

Correction A restricts the invention of the concrete composition recited in Claim 1 before the correction to that applied "for spraying," which utilizes the rebound reducing effect found as a new attribute of the composition according to the descriptions in paragraphs, such as [0030], [0053], and [0055] of the Description. Thus, Correction A aims at a restriction of the claims within the scope of the matters described in the Description or the Scope of Claims attached to the application of the patent and does not substantially enlarge or alter the claims.

Corrections B and I are also the same as Correction A and aim at a restriction of the claims within the scope of the matters described in the Description or the Scope of Claims attached to the application of the patent and do not substantially enlarge or alter the claims.

(2) Corrections C to G

Correction C deletes a claim. Corrections D to G also delete a part of claims citing selectively the deleted claim. All of the corrections aim at a restriction of the claims within the scope of the matters described in the Description or the Scope of Claims attached to the application of the patent, and does not substantially enlarges or alters the claims.

(3) Regarding Correction H

Correction H adds a numerical restriction to the invention recited in Claim 8 before the correction in which the value of a bulk specific gravity before crushing is not specified to specify it based on a preferable numerical value as a bulk specific gravity of the crushed fly ash described in paragraph [0022] of the Description. Thus, it aims at a restriction of the claims within the scope of the matters described in the Description or the Scope of Claims attached to the application of the patent and does not substantially enlarge or alter the claims.

(4) Judgment on requirements for being independently patentable

Since the opposition to the granted patent was filed to all of the claims, the

Correction Request of the case does not fall under the provision of Article 126(7) of the Patent Act as applied mutatis mutandis by replacing certain terms pursuant to Article 120-5(9) of the patent Act.

3. Closing

As described above, the correction by the Correction Request is intended for the matters listed in listed in item (i) of the proviso to Article 120-5(2) of the Patent Act and falls under the provisions of Article 126(5) and (6) of the Patent Act as applied mutatis mutandis pursuant to the provisions of Article 120-5(9) of the same Act. Accordingly, the correction shall be approved of for the corrected Claims [1 to 7], and 8.

No. 3. Regarding the Invention

As the correction of the case is approved of as described in the above No. 2, the inventions according to Claims 1, 2, and 4 to 8 of the Patent (hereinafter, respectively referred to as "Invention 1" to "Invention 8" and collectively referred to as "the Invention") are recognized as follows, which are specified by the matters recited in Claims 1, 2, and 4 to 8 of the Scope of the Claims of the Patent:

"[Claim 1]

A concrete composition for spraying comprising:
cement; and crushed fly ash that is obtained by crushing fly ash raw powder having an ignition loss of 3 mass% or higher and 10 mass% or lower,

wherein the crushed fly ash satisfies a condition that a JA funnel flow time of fly ash paste containing 50 parts by mass of water with respect to 100 parts by mass of the crushed fly ash is in a range of 17-27 seconds.

[Claim 2]

A concrete composition for spraying comprising:
cement; and crushed fly ash that is obtained by crushing fly ash raw powder having an ignition loss of 3 mass% or higher and 10 mass% or lower,

wherein when a mixture of the crushed fly ash and water is agitated by "9.2.3 Mixer for Mechanical Mixing" of JIS R5201, a water-powder mass ratio of the mixture at which a current flowing through the mixer for mechanical mixing is a maximum is 23 to 27%.

[Claim 3]
(Deleted)

[Claim 4]

The concrete composition according to any one of Claim 1 or 2,

wherein the ignition loss of the crushed fly ash is 3 mass% or higher and 10 mass% or lower.

[Claim 5]

The concrete composition according to any one of Claims 1 to 2 and 4,

wherein a mixing amount of the crushed fly ash is 20 kg or more and 150 kg or less per 1 m^3 volume of the concrete composition.

[Claim 6]

The concrete composition according to any one of Claims 1 to 2 and 4 to 5, further comprising at least one selected from the group consisting of an admixture and a special admixture.

[Claim 7]

The concrete composition according to any one of Claims 1 to 2 and 4 to 6,

wherein the cement is at least one selected from the group consisting of normal Portland cement, high early strength Portland cement, moderate heat Portland cement, and low-heat Portland cement.

[Claim 8]

A method of manufacturing a concrete composition for spraying containing cement and crushed fly ash that is obtained by crushing fly ash raw powder having an ignition loss of 3 mass% or higher and 10 mass% or lower, the method comprising:

a step of obtaining the crushed fly ash by crushing the fly ash raw powder such that a bulk specific gravity after crushing increases by 1.5% or higher and 3.0% or lower relative to a bulk specific gravity of 1.087g/cm^3 or higher and 1.113g/cm^3 or lower of fly ash raw powder before crushing; and a step of mixing the cement and the crushed fly ash."

No. 4 Regarding the reasons for revocation

1. Regarding the reasons for revocation notified in the notice of reasons for revocation (an advance notice of decision) dated July 3, 2019.

(1) Outline of the reasons for revocation

Since there are deficiencies in the wording of Claim 8 of the case in the respect described below, the patent for Claim 8 of the case has been granted on a patent application in which the wording in the Scope of Claims does not meet the requirement stipulated in Article 36(6)(i) of the Patent Act (violation of support requirements).

Note

The fly ash raw powder used in the examples and comparative examples described in paragraph [0055] and [Table 4] of the Description, is one "produced from a domestic coal-fired power plant, ignition loss: 6.21 mass%, bulk specific gravity 1.10g/cm^3." Based on the fact that this is a matter of common general technical knowledge among those skilled in the art that not only a bulk specific gravity but also other properties of fly ash raw powder generally depend on types of pulverized coal, operating conditions of thermal power plants, and the like, even if it is appropriate to set an increase rate of a bulk specific gravity to "1.5% or more and 3.0% or less" in the case of the fly ash raw powder used in the above Examples and Comparative Examples, it is not possible to judge from common general technical knowledge that the range is appropriate even for other fly ash raw powders having different properties other than bulk specific gravity.

Then, Invention 8 includes one that cannot solve the object "to provide a concrete composition in which cost-effectiveness and environmental load reduction are superior, material separation resistance and/or impact deformation resistance is secured at a high level, and workability is superior for spraying." Therefore, Invention 8 cannot be said to be an invention disclosed in the Detailed Description of the Invention in the Description

(2) Judgment on the reasons for revocation

The reasons for revocation are considered grounded, so the patent for Claim 8 of the case should be revoked by the reasons for revocation.

2. Regarding the reasons for revocation notified by the notice of reason for revocation dated February 8, 2019

(1) Outline of the reasons for revocation

Reason for Revocation 1(support requirement): Claims 3 to 8 in the Scope of Claims before the correction do not comply with the requirement stipulated in Article 36(6)(i) of the patent Act due to deficiencies in the wordings of these claims in that the invention-specifying matter of "the crushed fly ash ... a bulk specific gravity after crushing increases by 1.5% or higher and 3.0% or lower relative to a bulk specific gravity" in Claim 3 of the case before the correction and the invention-specifying matter of "crushing the fly ash raw powder such that a bulk specific gravity after crushing increases by 1.5% or higher and 3.0% or lower relative to a bulk specific gravity before

crushing" in Claim 8 of the case before the correction could not be recognized by those skilled in the art as being sufficiently specified as means of solving the problem "to provide a concrete composition in which cost-effectiveness and environmental load reduction are superior, material separation resistance and/or impact deformation resistance are secured at a high level, and workability is superior."

Reason for Revocation 2 (clarity requirement): The invention according to Claim 3 of the case before the correction does not comply with the requirement stipulated in Article 36(6)(ii) of the Patent Act due to deficiencies in the wording of the claim in that the invention-specifying matter of "a bulk specific gravity before crushing" is not a physical property measurable from the crushed fly ash after crushing contained in this composition and its technical meaning is unknown.

Reason for Revocation 3 (novelty): The inventions according to Claims 1, 2, and 4 of the case before the correction have been patented in breach of the provisions of Article 29(1) of the Patent Act, because these inventions are disclosed in Evidence A No. 2 submitted by Patent Opponent 1 and fall under Article 29(1)(iii).

Reason for Revocation 4 (inventive step): Inventions 1, 2, and 4-7 of the case before the correction have been patented in breach of the provisions of Article 29(2) of the Patent Act, because the inventions could have been easily invented by a person skilled in the art based on Evidence A No. 2 submitted by Patent Opponent 1.

Reason for Revocation 5 (prior application): Inventions according to Claims 1 to 8 of the case before the correction have been patented in breach of the provisions of Article 39(2) of the Patent Act, because the inventions are identical to the inventions disclosed in Japanese Patent No. 6414350 filed on the same date as the present application and consultations are unable to be held.

(2) Judgement on Reason for Revocation 1

Claim 3 is deleted by the correction. The wording of Claim 8 after the correction is as stated in the above 1.

Therefore, there is no ground for Reason for Revocation 1.

(3) Judgement on Reason for Revocation 2

Claim 3 is deleted by the correction.

Therefore, there is no ground for Reason for Revocation 2.

(4) Judgement on Reasons for Revocation 3 and 4

A. Regarding Invention 1

(A) Inventions disclosed in Cited Documents

Evidence A No. 2 (Japanese Patent Laid-Open No. 2001-9417, hereinafter, referred to as "A2") describes that coal ash from a coal-fired power plant including fly ash is spherically pulverized by a ball mill or a vibration mill and the entire amount of the modified coal ash is then used as fly ash for concrete ([0004]); the mill is adjusted to enable manufacture of any fly ash from Class I to Class IV fly ash having a fineness specified in JIS A 6201-1999 ([0005]); and the fluidity of these kinds of coal ash is evaluated by the flow value ratio ([0009], [0010], Table 2).

Then, according to A2,

"the invention of "concrete comprising fly ash obtained by crushing fly ash raw powder and adjusting the fineness and flow value ratio thereof to make the fly ash conform to type III and IV fly ash specified in JIS A 6201-1999" (hereinafter, referred to as "Cited Invention") is described.

(B) Comparison between Invention 1 and Cited Invention

Comparing Cited Invention with Invention 1, both are inventions of concrete including crushed fly ash, and they are in correspondence with each other in that they have characteristic values related to fluidity, but are different from each other in the following features.

Difference 1: Invention 1 is "a concrete composition for spraying" comprising: "cement" and "crushed fly ash," whereas Cited Invention does not clearly satifies the composition of the concrete containing the crushed fly ash.

Difference 2: In Invention 1 the crushed fly ash is a crushed fly ash that is obtained by crushing fly ash raw powder having an ignition loss of 3 mass% or higher and 10 mass% or lower, whereas in Cited Invention the property of the ignition loss of fly ash is unclear.

Difference 3: In Invention 1 the crushed fly ash satisfies a condition that a JA funnel flow time of fly ash paste containing 50 parts by mass of water with respect to 100 parts by mass of the crushed fly ash is in a range of 17-27 seconds, whereas the crushed fly

ash of Cited Invention has the adjusted flow value ratio specified in JIS A 6201-1999.

(C) Regarding Differences 1 to 3

First, Difference 1 is examined.

Paragraph [0030] of the Description of the patent is as follows: "a concrete compound for spraying refers to a concrete compound used in a construction method of feeding a concrete composition and water and spraying them from a nozzle tip to a predetermined position by compressed air to be cured. In the spray construction method of concrete, a phenomenon occurs in which aggregates in sprayed concrete rebound due to the impact, a designed amount of concrete is not sprayed, and there is loss in the amount of concrete, called rebound. The rebound reducing effect means that sprayed concrete endures impact, aggregates do not rebound, a designed amount of cement can be sprayed, and there is low loss in the amount of concrete. In the concrete composition having the rebound reducing effect, aggregates and components (for example, cement or fly ash) other than aggregates are not likely to be separated from each other; that is, material separation resistance is high. In addition, in the concrete composition having the rebound reducing effect, aggregates do not rebound, and impact deformation resistance is high. By checking superiority and inferiority of the rebound reducing effect of the spray concrete, superiority and inferiority of material separation resistance or impact deformation resistance can be indirectly evaluated."

Paragraph [0053] of the Description of the patent is as follows:

"(Number of Times of Spread)

Regarding each of the concrete compositions produced according to the compositions shown in Table 3, a test according to German Industrial Standard DIN 1048 was performed as an evaluation test for material separation resistance. In this test, material separation resistance at a high level required for spraying is evaluated. Based on this test value, reduction in rebound of spray concrete can be indirectly evaluated. In addition, impact deformation resistance required for reducing rebound can also be evaluated in this test.

The test method is explained briefly as follows. The slump (cm) was measured according to JIS A1101:2014 "Method of Test for Slump of Concrete", and a single side of a slump plate was pulled up by 4 cm and then was caused to fall. This falling operation was repeated. By repeating the falling operation, the number of times (number of times of spread) was measured until the flow of concrete reached 60 cm. As the number of times for spread increases, material separation resistance and/or impact deformation resistance of spray concrete were evaluated to be superior, and the

rebound reducing effect was evaluated to be higher." Furthermore, in Paragraph [0055], there is described "As can be seen from the results shown in Table 4, in the concrete compositions of Examples 1 to 6, the JA funnel flow time of the fly ash paste was 17 -27 seconds. Therefore, the fluidity was superior, the viscosity was appropriate, the workability was able to be improved, and the number of times for spread was more than that of the concrete compositions of Comparative Examples 1 to 9."

From the above described matters in the Description, the "concrete composition for spraying" of Invention 1 is excellent in material separation resistance and/or impact deformation resistance in order to achieve a rebound reducing effect required in the spray construction method of concrete, and can be said to be particularly suitable for spraying. Specifically, it can be said that the effect is supported by a test for measuring the number of times of spread described in the description.

On the other hand, regarding Cited Invention, A2 does not describe or suggest that the concrete composition is particularly suitable for spraying. Therefore, Difference 1 is substantial.

Further, even if the evidences submitted by Patent Opponent 1 and Patent Opponent 2 are examined, it cannot be deduced that the concrete composition of Cited Invention is particularly provided for spraying.

Therefore, without considering Differences 2 and 3, Invention 1 is not the invention disclosed in Evidence A No. 2 and could not be invented by a person skilled in the art based on such an invention.

(D) Patent Opponent 2's allegation

(D-1) In terms of well-known art

Patent Opponent 2 alleges that it is well known that a concrete composition containing fly ash is used for spraying and the Difference is not remarkable according to the Evidence A No. 8 (hereinafter referred to as "A8") to Evidence A No. 11 submitted by Patent Opponent 2.

However, as stated above, Invention 1 is an invention based on the finding that the concrete composition in question is excellent in material separation resistance and/or impact deformation resistance for spraying and effective in reducing rebound by means of a test for measuring the number of spreads. In addition, even if a concrete composition containing fly ash for spraying is well known, it cannot be foreseen that Cited Invention is excellent in material separation resistance and/or impact deformation resistance as spray concrete and effective in reducing rebound. Besides, it cannot be said that Cited Invention is regarded to be one for spraying since it is a common general

technical knowledge that a concrete compound can be used for not only spraying but also various embodiments. Therefore, the above allegation cannot be adopted.

(D-2) In terms of comparison with the invention disclosed in A8

Patent Opponent 2 also alleges that Invention 1 could be easily invented by those skilled in the art based on the invention disclosed in A8.

However, when comparing Invention 1 to the invention disclosed in A8, they are coincident with each other in that a concrete composition including fly ash is used for spraying, but there is at least a Difference similar to the above Difference 3. Therefore, it cannot be said that the solution could be easy for those skilled in the art.

Patent Opponent 2 alleges that the crushed fly ash stated in A8 is any of those having a Blaine specific surface area of 1500 to 4300 cm^2/g and include fly ash type III (a Blaine specific surface area of 2500 cm^2/g or more) or type IV (a Blaine specific surface area of 1500 cm^2/g), which is specified in JIS. A8 does not describe or suggest the relationship between the crushed fly ash used and the JIS standard. Even considering Evidence A No. 12 to 15, the correlation between the Blaine specific surface area of 1500 to 4300 cm^2/g and a JA funnel flow time of 17 to 27 seconds is unknown. Therefore, it cannot be said that Invention 1 is the invention disclosed in A8 or that a person skilled in the art could easily make the invention based on the Invention.

Therefore, the above allegation shall not be adopted.

B. Regarding Invention 2

Comparing Invention 2 with Cited Invention, both are inventions of concrete including crushed fly ash, and they are in correspondence with each other in that they have characteristic values related to fluidity, but are different from each other in the following features.

Difference 1': Invention 2 is "a concrete composition for spraying"
"comprising: cement"; and "crushed fly ash," whereas Cited Invention does not clearly indicate the composition of the concrete containing pulverized fly ash.

Difference 2': In Invention 2 crushed fly ash is crushed fly ash that is obtained by crushing fly ash raw powder having an ignition loss of 3 mass% or higher and 10 mass% or lower, whereas in Cited Invention the ignition loss of fly ash is unclear.

Difference 4: In Invention 2 the crushed fly ash has a water-powder mass ratio of a mixture of 23 to 27% in which the mixture is of the crushed fly ash and water and

agitated by JIS R5201 "9.2.3 Mixer for Mechanical Mixing," the water-powder mass ratio being measured when the current flowing through the mixer for mechanical mixing becomes maximum, whereas in Cited Invention the crushed fly ash is adjusted to the flow value ratio specified in JIS A 6201-1999.

First, Difference 1' is examined. In the above A, Difference 1' is similar to Difference 1, which was examined by comparing Invention 1 with Cited Invention. The "concrete composition for spraying" in Invention 2 is also excellent in material separation resistance and/or impact deformation resistance. In order to achieve the rebound reducing effect required in the spray construction method of concrete, Difference 1' can be said to be particularly suitable for sprayed concrete. Specifically, its effect is supported by a test in which the number of times of spread is measured, described in the Description. On the other hand, regarding Cited Invention, A2 does not describe or suggest that the concrete composition is particularly suitable for sprayed concrete.

As with Difference 1, therefore, Difference 1' is substantial.

Further, even if the evidences submitted by Patent Opponent 1 and Patent Opponent 2 are examined, it cannot be deduced that the concrete composition of Cited Invention is particularly provided for spraying.

Therefore, without considering Differences 2' and 4, Invention 2 is not the invention disclosed in Evidence A No. 2 and could not be invented by a person skilled in the art based on such an invention.

C. Regarding Inventions 4 to 7

Inventions 4 to 7 include all of the matters defining Invention 1 or 2. Just as in the case of the above A or B, therefore, none of Inventions 4 to 7 is the invention disclosed in Evidence A No. 2, and none could be invented by a person skilled in the art based on such an invention.

D. Summary

As stated above, each of the Reasons for Revocation 3 and 4 is groundless.

(5) Judgment on Reason for Revocation 5

As a result of the correction, each of Inventions 1, 2, and 4 to 7 is "a concrete composition for spraying," and is not the same as any of the inventions filed on the same day.

Therefore, Reason for Revocation 5 is groundless.

(6) Summary

As stated above, all of the reasons notified in the written notice of reasons for revocation dated February 8, 2019 are groundless.

No. 5. Regarding reasons for opposition to grant of a patent not adopted in the notification of reasons for revocation

1. Reasons for opposition alleged by Patent Opponent 1

Patent Opponent 1 alleges that the patent for Claims 1 to 8 of the case before the correction should be revoked due to the following Reasons for Opposition 1 to 4 based on Evidence A No. 1 to Evidence A No. 7 (hereinafter, respectively referred to as "A1-1" to "A7-1") as means of proof.

Reason for Opposition 1: The inventions according to Claims 1 to 5, 7, and 8 of the case before the correction are inventions disclosed in 1-1, and thus the patent for the inventions according to Claims 1 to 5, 7, and 8 of the case is registered in violation of Article 29(1) of the Patent Act.

Reason for Opposition 2 (adopted in the notification of reasons for revocation): The inventions according to Claims 1 to 8 of the case before the correction are inventions that could be easily made by a person skilled in the art based on the inventions disclosed in A2-1 to A7-1 and common general technical knowledge, and thus the patent for Claims 1 to 8 of the case before the correction has been granted in violation of Article 29(2) of the Patent Act.

Reason for Opposition 3: The inventions according to Claims 1 to 8 of the case before the correction are recognized to include a "water-reducing agent," but such an agent is not described in the Description. The fact that the inclusion of the water-reducing agent makes the properties of the concrete composition greatly different is a matter of common general technical knowledge of a person skilled in the art, and thus it is not recognized as an invention that can solve the problem and cannot be said that it is described in the Detailed Description of the Invention of the Description. Therefore, the patent for Claims 1 to 8 of the case before the correction has been granted for a patent application that does not comply with the requirement under Article 36(6)(i) of

the Patent Act.

Reason for Opposition 4: Although the uses of the inventions according to Claims 1 to 8 of the case before the correction are not specified, only the spray concrete is described as the use of the concrete composition in the Detailed Description of the Invention of the Description. Therefore, the patent for Claims 1 to 8 of the case before the correction has been granted for a patent application that does not comply with the requirement under Article 36(6)(i) of the Patent Act.

2. Regarding the reasons for opposition alleged by Patent Opponent 2

Patent Opponent 2 alleges that the patent for Claims 1 to 8 of the case before the correction should be revoked due to the following Reasons for Opposition 5 to 8 based on Evidence A No. 1 (hereinafter, referred to as "A1-2") to Evidence A No. 5 as means of proof.

Reason for Opposition 5: The inventions according to Claims 1 and 3 to 8 of the case before the correction are inventions that could be easily made by a person skilled in the art based on the invention disclosed in A1-2 and the common general technical knowledge, and thus the patent for Claims 1 and 3 to 8 of the case before the correction has been granted in violation of Article 29(2) of the Patent Act.

Reason for Opposition 6: Conditions for obtaining the crushed fly ash recited in the inventions according to Claims 1 to 8 of the case before the correction are not fully described in the Description, the requirements for identifying the crushed fly ash are not common, and it is necessary to repeat trials and errors and carry out complicated advanced experiments beyond expectation of a skilled person in the art even taking into consideration the common general technical knowledge. Therefore, the patent for Claims 1 to 8 of the case before the correction is a patent that has been granted for the application in which the Detailed Description of the Invention of the Description does not comply with the requirement under Article 36(4)(i) of the Patent Act.

Reason for Opposition 7: (partially adopted in the notification of reasons for revocation): Regarding the inventions according to Claims 1 to 8 of the case before the correction, a person skilled in the art could not recognize that the problem of the Invention can be solved as long as the "crushed fly ash" in Claim 1 is one in which "a JA funnel flow time of fly ash paste is in a range of 17-27 seconds," a person skilled in

the art could not recognize that the problem of the Invention can be solved as long as the "crushed fly ash" in Claim 2 is one in which "a water-powder mass ratio is a maximum is 23 to 27%." and a person skilled in the art could not recognize that the problem of the Invention can be solved as long as the "crushed fly ash" in each of Claims 3 and 8 is one in which "a bulk specific gravity after crushing increases by 1.5% or higher and 3.0% or lower relative to a bulk specific gravity before crushing" Likewise, a person skilled in the art could not recognize that the inventions according to Claims 4 to 7 are inventions that can solve the problem of the Invention. Neither can be said to have been described in the Detailed Description of the Invention of the Description. Therefore, the patent for Claims 1 to 8 of the case before the correction has been granted for a patent application that does not comply with the requirement under Article 36(6)(i) of the Patent Act.

Reason for Opposition 8 (adopted in the notification of reasons for revocation): The invention according to Claim 3 of the case before the correction is unclear because of specifying the increase rate of the bulk specific gravity calculated based on "the crushed fly ash before crushing," which is not included in the concrete composition. Therefore, the patent for Claim 3 of the case before the correction is a patent that has been granted for the application that does not comply with the requirement under Article 36(6)(ii) of the Patent Act.

3. Judgment by the body

(1) Regarding Reason for Opposition 1

A1-1 describes the invention of concrete containing fly ash crushed using a mill or the like. However, A1-1 does not describe the use of crushed fly ash for spraying, its JA funnel flow time, and the water-powder mass ratio at the maximum current. In addition, A1-1 describes that it is directed to JIS type I or II fly ash. In A1-1, therefore, it is presumed that the degree of crushing is relatively large as compared with the Invention.

Then, when compared with Invention 1 or 2, the invention disclosed in A1-1 has at least Differences 1, 1', 3, 4, which are examined in the above No. 4. Thus, it is the same as the judgment for Reasons for Revocation 3 and 4 and furthermore the degree of crushing is also different. Therefore, there is no ground for Reason for Opposition 1.

(2) Regarding Reason for Opposition 3

Even if it is a matter of common general technical knowledge that the properties

of concrete composition vary greatly depending on the inclusion of the water-reducing agent. It cannot be immediately said that the inclusion of the water-reducing agent significantly affects a causal relationship between the matter defining the present invention and a rebound reducing effect based on the number of times of spread; i.e., material separation resistance and/or impact deformation resistance. Therefore, Reason for Opposition 3 is groundless.

(3) Regarding Reason for Opposition 4

The present invention is alleged to have an inventive step due to the rebound reducing effect, and then corrected to one for spraying. Thus, Reason for Opposition 4 is groundless.

(4) Regarding Reason for Opposition 5

A1-2 describes the invention of concrete containing fly ash or crushed fly ash specified in JIS A 6201. However, A1-2 does not describe the use of crushed fly ash for spraying, its JA funnel flow time, and the water-powder mass ratio at the maximum current. Therefore, the invention disclosed in A1-2 has at least the Differences 1, 1', 3, and 4 discussed in the above No. 4, when compared with Invention 1 or 2.

Therefore, it is the same as the judgment for Reasons for Revocation 3 and 4, and there is no ground for Reason for Opposition 5.

(5) Regarding Reason for Opposition 6

It can be fully understood that the present invention according to the matter defining the invention after the correction has the rebound reducing effect defined by the number of times of spread; i.e., it has material separation resistance and/or impact deformation resistance, and it is an invention suitable for spraying in accordance with the Detailed Description of the Invention, particularly the Description in paragraph [0030] explaining use for spraying, and the examples describd in paragraphs [0036] to [0057] . Also, paragraph [0029] describes that the raw material fly ash is not special. Regarding the crushing of fly ash, its method is described in paragraph [0039], and its degree is compared with type II ash conforming to Type II of JIS A 6201. Regarding the physical property values, which are the matter defining the invention of the Invention, the measuring methods are also described in paragraphs [0043], [0044], and the like. From these facts, it is recognized that those skilled in the art can carry out the invention without undue trial and error, complicated advanced experiments, and the like.

Therefore, there is no ground for Reason for Opposition 6.

(6) Regarding Reason for revocation 7

In the Description, the fly ash raw powder shown in the examples is substantially one type for solving the problem of making a concrete composition including crushed fly ash suitable for use in spray concrete. For multiple types of fly ash raw powder, however, the degree of crushing fly ash is represented by "a JA funnel flow time of fly ash paste is in a range of 17-27 seconds" of Invention 1 or "a water-powder mass ratio is a maximum is 23 to 27%" of Invention 2. According to the Descriptions, it is possible to study the correlation between those numerical values and the rebound reducing effect based on the number of times of spread; i.e., material separation resistance and/or impact deformation resistance. Therefore, it can be said that a person skilled in the art could recognize that the above problem can be solved by the requirements specified in the claims. The same applies to Inventions 4 to 7, which depend from Invention 1 or Invention 2.

Therefore, there is no ground for Reason for Opposition 7.

Patent Opponent 2 alleges that the workability of concrete composition, material separation resistance, and impact deformation resistance are largely dependent on the mixing amounts of water, cement, crushed fly ash, fine aggregates, and crude aggregates. In the Description, however, the conditions of only crushed fly ash in the concrete composition are changed and compared. Thus, there is no need of considering the effects of water, cement, crushed fly ash, fine aggregates, and crude aggregates. Furthermore, it cannot be immediately said that the mixing amount of components other than crushed fly ash significantly affects a causal relationship between the matter defining Inventions 1 and 2 and a rebound reducing effect based on the number of times of spread; i.e., material separation resistance and/or impact deformation resistance. Therefore, the above allegation shall not be adopted.

No. 6. Closing

As stated above, the patent for Invention 8 should be therefore revoked under the provisions of Article 113(4) of the Patent Act as the patent has been granted on a patent application not complying with the requirements under the provisions of Article 36(6)(i) of the Patent Act.

The patent for Claims 1, 2, and 4 to 7 shall not be revoked based on the reasons for revocation described in the notice of reason for revocation or reasons for opposition to grant of a patent described in the written opposition to grant of a patent. No other

reason for revoking the patent for Claims 1, 2, and 4 to 7 can be found.

Since Claim 3 was deleted by the correction, there is no corresponding claim to the opposition regarding the granted patent of Claim 3. Therefore, the opposition to Claim 3 shall be dismissed under the provision of Article 135 of the patent Act as applied mutatis mutandis under Article 120-8(1) of the patent Act.

Therefore, the decision shall be made as described in the conclusion.

December 16, 2019

Chief administrative judge: HATTORI Satoshi
Administrative judge: KIKUCHI Noriyoshi
Administrative judge: KON Kimihiko