



News Release (Translation only)

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Company: Daiwa House Industry Co., Ltd.
(Code number: 1925,
First Section of the Tokyo Stock Exchange)
Representative: Keiichi Yoshii, President and COO
Contact: Takahumi Nakao, Executive Officer and
General Manager, General Affairs Department
dh.ir.communications@daiwahouse.jp

**Off-Specification Components in and Remedial Work on
Daiwa House Single-Family Houses and Rental Housing**

Daiwa House Industry Co., Ltd. (“Daiwa House”) announced today that it has posted a document, “Off-specification components in single-family houses and rental housing and remedial work,” on its corporate website. The document is attached for your convenience.

Daiwa House estimates that remedial work to address safety concerns due to insufficient fireproofing at 73 affected buildings will cost about ¥100 million. The company anticipates that costs associated with remedial work to rectify off-specification pad footings in single-family houses and rental housing will vary depending on the outcomes of negotiations with affected customers.

Although Daiwa House does not anticipate these costs significantly impacting results forecasts, it wishes to notify stakeholders early that revisions are a possibility.

End

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Daiwa House Industry Co., Ltd.
Keiichi Yoshii, President and COO
3-5, Umeda 3-chome, Kita-ku, Osaka

**Off-Specification Components in and Remedial Work on
Daiwa House Single-Family Houses and Rental Housing**

Daiwa House Industry Co., Ltd. (“Daiwa House” or “we”) has completed an internal investigation undertaken on an insider tip-off alleging use of components that do not conform to specifications in some single-family houses and rental housing built by Daiwa House. We have reported the results, as explained below, with focus on two major themes, to the Ministry of Land, Infrastructure, Transport and Tourism (MLIT) today, 12 April 2019.

Moving forward, Daiwa House will brief customers on the situation and undertake remedial work as directed by MLIT and local building-inspection and other competent authorities.

Daiwa House wishes to once again recognize its responsibility for this incident and apologize to customers and all other stakeholders for the inconvenience and other negative impacts they have incurred.

I. Possibility of insufficient fire safety and off-specification columns (200 rental housing)

Buildings Japan’s building code (Building Standards Act and relevant ordinances) mandates the fireproofing of principal structural elements in buildings characterized as being of “quasi-fireproof construction.” It has come to light, however, that 200 buildings in six prefectures (145 in Tokyo, 15 in Kanagawa, 31 in Chiba, 7 in Saitama, and 1 each in Ibaraki and Gunma) delivered by Daiwa House between 31 January 2001 and 30 June 2010 were erected with corridor supports (inverted-L columns) for external second-floor side corridors that deviated from the company’s standard specifications.

Of these 200 buildings, 73 should, by mandate, have been built with columns of quasi-fireproof construction (columns being “principal structural elements”); however, their architects planned them with columns whose specifications deviate from the Daiwa House’s standard specifications and they were erected with columns that may be insufficiently fire-safe pursuant to the fire-resistance standards mandated by the building and fire codes.

Daiwa House has acquired Certification as a Manufacturer of Type-Certified [Building] Components¹ so that we can manufacture in our own factories structural members that have been type-certified² for design conformity with the Building Standards Act. They are transported to building sites for assembly, and most of the company's housing products are built with such pre-certified components to ensure code compliance.

Buildings erected with type-certified components are eligible for simplified inspection during the design-document approval and building-permitting procedures, but this simplified process is premised on the building's design, at the time of permitting, calling for components that are fully compliant with the specifications for which they are type-certified.

However, the architects of 188 of the aforementioned 200 residences designed the buildings without sufficiently confirming the specifications of type-certified components, and the buildings were constructed with components that deviated from the type-certified specifications.

Because the components did not conform to type-certified specifications, the buildings in question should have gone through the usual procedures for design-document approval and building-permitting³ performed by building inspectorate of the competent local (municipal) building-control body. But as their architects mistakenly believed that their specifications conformed to those for which Daiwa House had acquired type-certification, they were constructed without having been subjected to the usual design-approval and building-permitting process.

1. Summary of deficiencies

a. Possibility of insufficient fire safety

With regard to the 73 buildings requiring fireproofing of their principal structural elements⁴ to quasi-fireproof construction specifications and delivered between 2 March 2001 and 30 December 2008, the usual Daiwa House specification calls for fireproofing of the columns supporting second-floor outdoor side corridors; however, the architects of these building specified columns whose specifications deviated from Daiwa House standard specifications, designating specifications whose fire safety could be insufficient for the fire-resistance standards mandated by the building and fire codes, and the buildings were constructed to those wrong specifications.

¹ Building components that are pre-certified for compliance with provisions of the Building Standards Act covering certain safety aspects, e.g. structural durability, fire safety, and emergency evacuation, of prefabricated homes.

² Manufacturers of type-certified building components materials are certified upon thorough screening to ensure that the certified components (structural members) are manufactured to the type-certified standards under appropriate quality control mechanisms.

³ Approval- and permit-application procedures defined by Article 6 of the Building Standards Act. Builders file documents and acquire approvals and permits from local (municipal) building inspection and code enforcement authorities before construction can begin.

⁴ Pursuant to the fireproofing standards demanded by Articles 27 and 62 of the Building Standards Act and local ordinances.

b. Off-specification columns

Steel-frame members (columns supporting second-floor outdoor side corridors) conforming to type-certified specifications should have been used in 188 of 200 affected rental housing delivered between 31 January 2001 and 11 September 2008. In designing these buildings, the architects failed to sufficiently confirm the type-certified specifications and worked into their designs steel-frame members (inverted-L columns supporting second-floor outdoor side corridors) that did not conform with the type-certified specifications, and the buildings were constructed with the off-specification columns.

The 12 remaining rental housing were built after undergoing normal approval and permitting procedures [and are up to code].

Details of off-specification columns

| Correct | Incorrect (indicated by underlining) |
|--|---|
| Corridor supports (□ - 75 mm×75 mm×3.2 mm) | <u>Inverted-L columns (H150 mm×150 mm×7 mm×10 mm)</u> |
| Corridor supports (□ - 60 mm×60 mm×3.2 mm) | <u>Inverted-L columns (H125 mm×125mm×6.5mm×9mm)</u> |
| | <u>Inverted-L columns (Ø114.3mm×4.5mm)</u> |

Number of affected buildings, by issue

| | | b. Off-specification columns | | Total |
|---|--|---|--|---------------------------|
| | | Approved and permitted on mistaken assumption of type-certification | Approved and permitted via usual procedures on no assumption of type-certification | |
| a. Possibility of insufficient fire safety | possible fire-resistance deficiencies | 69 buildings | 4 buildings | 73 buildings ⁵ |
| | fireproofing unnecessary | 119 buildings | 8 buildings | 127 buildings |
| | Total | 188 buildings ⁶ | 12 buildings | 200 buildings |

⁵ Breakdown: Tokyo (46 buildings), Kanagawa Pref. (8 buildings), Chiba Pref. (17 buildings), Saitama Pref. (2 buildings)

⁶ Breakdown: Tokyo (133 buildings), Kanagawa Pref. (15 buildings), Chiba Pref. (31 buildings), Saitama Pref. (7 buildings), Ibaraki Pref. (1 building), Gunma Pref. (1 building)

2. Safety of affected buildings and remedies

The 73 buildings of the 200 affected rental housing requiring fireproofed principal structural elements, may not have been fireproofed to the standards prescribed in national and local building and fire codes. Daiwa House will therefore work in close cooperation with local building control bodies to approach customers and arrange to begin remedial work as soon as possible with the aim of completing it by the end of April 2019.

There were three buildings among the 188 with columns deviating from type-certified specifications that had what we believed could be structurally unfavorable conditions. Daiwa House had a third-party organization inspect these buildings for structural safety tests and has confirmed that they meet the structural safety requirements prescribed by the Building Standards Act. We will continue investigations to ensure that no buildings remain with unaddressed structural-safety issues.

Starting today (12 April), Daiwa House will report these issues and provide relevant information to the building inspectorates of the competent building control bodies as well as brief owners and residents of the buildings one-on-one. We will then undertake needed remedies in line with the owners' wishes.

II. Off-specification footings (1,878 buildings in total, including 888 buildings from single-family houses and 990 buildings from rental housing)

Some Daiwa House single-family houses and rental housing include pad footings in their foundations. We discovered that some of our houses and rental housing (1,878 buildings, including 533 built under the Housing Performance Labelling System⁷) delivered in 29 prefectures between 5 October 2000 and 28 February 2013 were erected with pad footings whose specifications did not conform to the specifications type-certified by the Minister of Infrastructure, Land, and Tourism. We also found that the off-specification footings were installed in three scenarios, described below.

1. Summary of deficiencies

a. Off-specification footings on improved surface soil (731 buildings from single-family houses and 845 buildings from rental housing)

Some single-family houses and rental housing erected on improved surface soil⁸ with foundations using pad footings. Their architects, having failed to sufficiently confirm the type-certified specifications, drew up plans calling for footings of a height (mostly 725 mm above base) that deviated from the type-certified height (620 mm above base), and the plans were executed without change.

⁷ A system under which third-party inspectors assess homes on performance benchmarks stipulated in the Housing Quality Assurance Act (Act No. 81 of 1999).

⁸ Soft surface soil improved by mixing cement-based soil stabilizers into it to enhance loading capacity and prevent uneven settling of buildings.

b. Off-specification footings in areas with designated freeze depths (13 buildings from single-family houses and 33 buildings from rental housing)

Some single-family houses and rental housing were erected in areas with designated freeze depths⁹, but type-certification has not been issued for footings used in such areas; their architects, however, mistakenly assumed that footings were type-certified and having failed to sufficiently confirm the type-certified specifications, drew up plans calling for footings of a height (usually 1,500 mm above base) that deviated the type-certified height (620 mm above base), and the plans were executed without change.

c. Off-specification footings on lots of uneven grade (144 buildings from single-family houses and 112 from rental housing)

Some single-family houses and rental housing were erected on lots with uneven grade; i.e., the lots were not flat or had elevation differences. Type-certification has not been issues for footings to be used in buildings erected on such lots; their architects, however, mistakenly assuming that footings were type-certified and having failed to sufficiently confirm the type-certified specifications, drew up plans calling for footings of a height (usually 750 mm above base) that deviated from the type-certified height (620 mm above base), and the plans were executed without change.

Off-specification footings

| Correct | Incorrect (indicated by underlining) |
|--------------------------------------|---|
| Pad footing, height above base 620mm | Pad footing, mostly <u>725mm</u> above base |

Number of affected buildings, by issue

Note: Number of buildings issued housing performance assessment certificates in parentheses

| Off-specification footings | Total | Single-family houses | Rental housing |
|----------------------------|------------------------------------|----------------------------------|--------------------------------|
| | 1,878 buildings (533 buildings) | 888 buildings (530 buildings) | 990 buildings (3 buildings) |

⁹ Local building-control bodies define freeze lines (freeze depths) in areas where the ground tends to freeze to a certain depth in cold weather. In these “cold climate areas” footings must rest on ground below the freeze line.

By 29 prefectures (Number of buildings)

| Prefecture name | Single-family houses | | Rental housing | | Total | |
|---------------------|----------------------|--|----------------|--|-------|--|
| | | Issued housing performance evaluation report | | Issued housing performance evaluation report | | Issued housing performance evaluation report |
| Aomori | | | 15 | | 15 | |
| Iwate | 13 | 1 | 21 | | 34 | 1 |
| Miyagi | 6 | 4 | 6 | | 12 | 4 |
| Fukushima | | | 3 | | 3 | |
| Gunma | 1 | 1 | 13 | | 14 | 1 |
| Saitama | 4 | 1 | 1 | | 5 | 1 |
| Chiba | | | 2 | | 2 | |
| Tokyo | 3 | | 2 | | 5 | |
| Kanagawa | 5 | 3 | 6 | | 11 | 3 |
| Niigata | 3 | | 28 | | 31 | |
| Toyama | 14 | 6 | 121 | | 135 | 6 |
| Ishikawa | 109 | 17 | 4 | | 113 | 17 |
| Fukui | 77 | 8 | 46 | | 123 | 8 |
| Yamanashi | | | 12 | | 12 | |
| Nagano | 79 | 60 | 5 | | 84 | 60 |
| Gifu | 38 | 25 | 6 | | 44 | 25 |
| Shizuoka | 7 | 1 | 107 | | 114 | 1 |
| Aichi | 377 | 283 | 530 | 2 | 907 | 285 |
| Mie | 73 | 63 | 5 | | 78 | 63 |
| Shiga | 39 | 23 | 1 | | 40 | 23 |
| Kyoto | 1 | 1 | 10 | | 11 | 1 |
| Osaka | 1 | | 19 | | 20 | |
| Hyogo | 35 | 32 | 24 | | 59 | 32 |
| Nara | | | 1 | | 1 | |
| Hiroshima | 1 | | | | 1 | |
| Tokushima | | | 1 | 1 | 1 | 1 |
| Kochi | | | 1 | | 1 | |
| Fukuoka | 1 | 1 | | | 1 | 1 |
| Oita | 1 | | | | 1 | |
| Totals, by category | 888 | 530 | 990 | 3 | 1,878 | 533 |

2. Safety of affected buildings and remedies

There were 1,878 buildings that did not conform to type-certified specifications. Among them were nine that we believed to have structurally unfavorable conditions. Daiwa House had a third-party organization inspect these buildings for structural safety tests and has confirmed that they meet the structural safety requirements prescribed by the Building Standards Act. We will continue investigations to ensure that no buildings remain with unaddressed structural-safety issues.

Starting today (12 April), Daiwa House will report these issues and provide relevant information to the building inspectorates of the competent building control bodies as well as brief owners and residents of the buildings one-on-one. We will then undertake needed remedies in line with the owners' wishes.

III. Measures to prevent recurrence

At Daiwa House we have been engaged in a company-wide effort to develop and institute thorough corrective measures to ensure against recurrence of these issues since our filing of the "Off-Specification Execution of Fire Shutters, Fire Doors, and Flame-Resistant Sliding Doors in Daiwa House Single-Family Houses and Rental Housing" reports on 16 December 2014 and 30 October 2015, and the "Use in Daiwa House Rental Housing of Attic Party Wall Panels at Deviance from MILT Preapproved Specifications" report on 18 October 2016.

In April 2016, we established a Specifications Supervision section (elevated to a full department in 2017) reporting directly to the president & COO. Specifications Supervision is charged with ensuring communication of technical information pertaining directly to safety performance. It centrally manages technical information pertaining to new and updated specifications and functions as a control tower to ensure that pertinent information reaches all concerned business units.

Although we have worked through the Specifications Supervision Department to prevent use of off-specification components, past incidents have once again come to light. Daiwa House takes this most recent incident very seriously and will report on measures to prevent recurrence as soon as we have clarified the causes and chain of events that led to it. We are committed across the company to restoring lost stakeholder trust and confidence by ensuring safe and secure homes for our customers.

IV. Cost of remedial work

Daiwa House estimates that remedial work to address safety concerns due to insufficient fireproofing at 73 affected buildings will cost about ¥100 million. The company anticipates that costs associated with remedial work to rectify off-specification pad footings in single-family houses and rental housing will vary depending on the outcomes of negotiations with affected customers.

Although Daiwa House does not anticipate these costs significantly impacting results forecasts, it wishes to notify stakeholders early that revisions are a possibility.

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Disclaimer:

This English translation has been prepared for general reference purposes only. The Company shall not be responsible for any consequence resulting from the use of the English translation in place of the original Japanese text. In any legal matter, readers should refer to and rely upon the original Japanese text of the press release dated April 12, 2019.