FÉDÉRATION DE L'INDUSTRIE DU VERRE a.s.b.l.
VERBOND VAN DE GLASINDUSTRIE v.z.w.

INDUFED Sustainable goods

SPF ECONOMIE
BELNOTIF – Mr CRAVOTTA / Mme AVERMATE
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Sent by e-mail to Belspoc@economie.fgov.be

Brussels, 2016-09-30

Dear Madame, dear Sir,

REF : Belgian flat glass industry concerns about notified draft on German technical regulation entitled: *Specimen Administrative Provision / Technical Building Regulations (MVV TB)*

Notification on TRIS:

http://ec.europa.eu/growth/tools-databases/tris/en/search/?trisaction=search.detail&year=2016&num=376

The Belgian glass industry has analysed carefully the above-mentioned draft regulation and would like to express its objections on two sections of this document.

The sections concerned are the following:

1. Page 27, Appendix A 1.2.7/2, clause 2, *and*
   pages 268 to 270, Technical Rule on provisions for the manufacture of heat-soaked thermally toughened soda-lime safety glass (ESG-H):

The clause on page 27 restricts the use of *heat soak thermally toughened soda lime silicate safety glass* according to the harmonised standard EN 14179-2 to locations below 4m and in areas with no circulation. In other words, for the majority of the applications, this glass cannot be used and another type of heat soaked glass, described in pages 268 to 270, shall be used instead.

The Belgian glass industry has the following objections to the "technical rule" described in pages 268 to 270:

- Although implicitly based on EN 14179-1 and EN 14179-2, these rules deny totally these standards and replace a published harmonized standard written by the best experts in the field in Europe (including German ones) by a text of 2 pages.

- Additional requirements and requirements that contradict the European standard are made mandatory in Germany. The main issue is the request to double the duration of the holding time period of the heat soak process cycle.
- This text upgrades the AVCP system from system 3 to system 1. It imposes also more frequent calibration than foreseen in the standard.
- Moreover, in several places, this text contains technical inaccuracies.

We consider that this section is creating obstacles to the free movement of goods and are asking to replace it by a reference to EN 14179-2.

See annex 1 for further details.

2. Page 27, Appendix A 1.2.7/2, clause 1: Re DIN 18008-1:2010-12, Section 9:

This clause concerns laminated safety glass, a product CE-marked according to EN 14449.

There are 2 issues:

- This clause restricts the use of laminated glass to the ones containing PVB interlayer(s) only. Laminated glass using other types of interlayer(s) than PVB (i.e. EVA, PU, ionomers, etc.) as well as laminated glass containing a coating against the interlayer cannot be used, irrespective of their performances. In the pact, a certification (Zulassung) was required to be allowed to use these products. We don't know yet if it will be required after the publication of this new regulation.
- This clause introduces additional tests on the PVB interlayer that is foreseen neither in the harmonised standard EN 14449 nor in the supporting standards, EN ISO 12543 series.

See annex 2 for further details.

Considering that this draft German technical regulation is an obstacle to the free circulation of good, we would like to take the necessary steps to inform the European Commission about this issue through their contact Grow-Notif-Infractions@ec.europa.eu or any other way you will consider appropriate.

We thank you in advance for the attention you will give to our request and remain at your disposal for any further information you may require.

Sincerely,

Luc Dumont
Business & Strategy Advisor

ANNEXES : 2

Annex 1

Note: in black, the text as per the English version posted on TRIS
In red: the comments from the Belgian glass producers' federation.

Page 27:

2 Washers as per DIN EN 14179-2 may only be used outside thoroughfares and up to a maximum installation height of 4 m.

Comment:
Note: the term "washers" is a bad translation. It shall be read as "heat soaked glass".
This sub-clause restricts the use of heat-soaked thermally toughened soda-lime safety glass CE-marked according to the harmonised standard EN 14179-2 to the zones not facing circulation areas and to a maximum high of 4 m in the façade. For all other situations in the building, the glass described in pages 268 to 270 shall be used instead.

Pages 268 to 270

Technical Rule on provisions for the manufacture of heat-soaked thermally toughened soda-lime safety glass (ESG-H)
– June 2016 Version –

New research findings show that at temperatures over 290°C can lead to reconversion processes and hence to renewed increases in failure probability due to nickel sulfide inclusions. Therefore, the temperatures in Section 2.1 have been reduced compared to earlier regulations.
The new temperature regulation applies from the date on which the new version of EN 14179-2 is announced in the Official Journal of the European Union. Prior to this, the temperature regulations of Building Regulation List A Part 1, Annex 11.11 (2015/2) apply.

Reason for opposition: deny of EN 14179-1:200**5**
Comment:
The Belgian glass industry welcomes the fact that Germany will accept the temperature modifications as per EN 14179-1:2016 and will apply it when the harmonised part of this standard, EN 14179-2, will be cited in the OJEU.
Nevertheless, prior to this citation, we suggest making reference to EN 14179-1:2005 instead of to the Bauregelliste in order to avoid conflicts with the article 8.3, second paragraph, of Regulation (EU) No 305/2011 (CPR).

1 Properties and composition
Heat-soaked thermally toughened soda-lime safety glass must be made from thermally toughened soda-lime safety glass (ESG) as per DIN EN 12150-2 made from float glass as per DIN EN 572-9. Soda-lime safety glass (ESG) may also be enamelled or coated as per DIN EN 1096-4. Under DIN EN 12150-1, the edges must be seamed (KGS), precision-ground (KGM), sanded (KGN) or polished (KPO). Each pane must be subjected to heat soaking as per Section 2.1.

Reason for opposition: deny of EN 14179-1:2016
Comment:
There are inconsistencies is this paragraph.
The basic glass is NOT toughened glass according to EN 12150-2 as the thermally toughening step is included in the whole process and therefore also covered by EN 14179. The glass that can be used to produce heat soaked thermally toughened soda lime safety glass is therefore annealed soda lime glass as listed in EN 14179-1:2016, clause 4:
— soda lime silicate glass according to EN 572-1;
— float glass according to EN 572-2;
— drawn sheet glass according to EN 572-4;
— patterned glass according to EN 572-5;
— supplied and final cut sizes according to EN 572-8;
— coated glass according to EN 1096-1.
The German proposal refers only to float glass, and do not mention drawn sheet and patterned glass.
Please note that possible enamelling is part of the process of toughening and not a different glass substrate.
Reference to EN 12150-1 for edge working is unnecessary as EN 14179-1:2016 clause 9 deals with the same subject.
Reference to EN 14179-1:2016 would simplify this clause and avoid any risk of misinterpretation or conflict.

After heat soaking, the requirements under DIN EN 12150-1:2015-12, Table 11 apply to bending strength and the requirements under DIN EN 12150-1:2015-12, Table 10 apply to the break structure for all pane dimensions.

Reason for opposition: deny of EN 14179-1:2016
Comment:
This cannot be accepted: all these requirements are contained in EN 14179-1:2016 table 11 and EN 14179-1:2016 table 10, respectively.
Making reference to EN 12150-1, which deals with thermally toughened soda lime silicate safety glass only, i.e. without heat soaking process, is wrong and legally not acceptable.

2 Manufacture, packaging, transportation and marking

2.1 Manufacture

The ESG panes must be manufactured as per Section 1 and subjected to heat soaking after cooling to room temperature. The distance between ESG panes must be at least as large as the distance maintained during initial type testing of the construction product. A value of at least 20 mm is recommended. In the heat-up phase the glass mass must be heated up at the heat-up rate laid down in initial type testing, with a maximum temperature of 290 °C not being exceeded in any part of the entire glass mass. The heat-up phase is deemed completed as soon as the entire glass mass reaches a temperature of at least 250 °C.

Reason for opposition: deny of EN 14179-1:2016
Comment:
This text is not acceptable as a lot of important informations given in EN 14179-1:2016 clause 6 and in annex A are missing.
In EN 14179-1:2016, clause 6, *Heat soak process system,* takes 2 pages with 2 figures, and Normative annex A, *Heat soak process system calibration test*, takes 11 pages and 9 figures. Experts from all over Europe spent time to detail the heat soak process system and the calibration procedure, it is not to have it replaced by a few sentences without any reference to the EN standard !!!
Moreover, it is not the conditions of the Type Test that are the reference for the production, but the conditions defined during the calibration procedure.

A hold time of at least four hours is then implemented to ensure that the temperature of all glass masses in the furnace does not exceed the 250 °C–290 °C range, even temporarily.

Reasons for opposition:
- deny of EN 14179-1:2016
- additional requirements / barrier to trade

Comment:
This is in contradiction with EN 14179-1:2016 where it is clearly written that the minimum duration of the holding phase is 2 hours. The request of 4 hours holding phase, coming from the old Bauregelliste, is an additional requirement from Germany and therefore a barrier to trade.
With this requirement, heat soaked thermally toughened soda lime silicate safety glass lawfully placed on the market everywhere in Europe will not be accepted in Germany.
This is absolutely unacceptable and is the main reason for the rejection of this text by the Belgian glass industry.

During the hold time, the target glass temperature should be 260 °C ± 10 °C. If there is a deviation in the above temperature range or the hold time is not reached, the batch may be subjected to at most one further heat soaking.

Reason for opposition: technical problem
Comment:
Redoing a heat soak process on a glass that have reached a temperature slightly above 270°C for a very short period of time is a non-sense. This additional heat soak process cycle will not increase the safety and, because of the risk of de-toughening the glass, will be detrimental.
Please remain with the text written in EN 14179-1:2016 by making a reference to it only.

Batches that exceed the upper temperature limit of 290 °C must be discarded. The manufacturing conditions laid down during initial type testing as per Section 3.3 must be adhered to.

The panes must be tested after heat soaking for visible damage to the glass edges.

2.2 Packaging, transportation and storage

The glass elements may only be transported with suitable transport aids that exclude damage to the glass edges. In the case of intermediate storage, appropriate pads must be used to protect the glass edges.

2.3 Marking

The ESG-H panes must match the properties listed in Section 1 and the manufacturing conditions under Section 2.1 and must be marked by the manufacturer with the conformity mark (Ü-mark) as per state conformity regulations. The abbreviated designation for the construction product is "ESG-H as per MVV TB Appendix 11.1".

The ESG-H panes must be permanently and visibly marked with the following information – where applicable using comprehensible abbreviations:

- Manufacturer, manufacturing plant where applicable
- ESG-H
- Certification body

Reason for opposition: additional requirements / barrier to trade
Comment:
EN 14179-1 requires the following:
Heat soaked thermally toughened soda lime silicate safety glass conforming to this European Standard shall be permanently marked. The marking shall give the following information:
— name or trademark of manufacturer;
— number of this European Standard: EN 14179-1.

There is no need to mention the certification body as this product is under AVCP system 3 and is therefore not certified.

With this requirement, heat soaked thermally toughened soda lime silicate safety glass lawfully placed on the market will not be accepted in Germany. Moreover, the products made according to this new German rule (which is strongly inspired by the old Bauregelliste) will not comply with the standard and therefore cannot be CE-marked. It is a barrier to trade in both directions.

Marking must only be made if the preconditions of Section 3 are met.

The manufacturer must be named (footnote: the manufacturer of an ESG-H pane is the firm that carries out the heat soaking). If the manufacturer's name does not allow for the clear allocation of the ESG-H pane to the manufacturing plant, manufacturing plant information is also required. Instead of the manufacturer's name, the distributor of the construction product may also be given along with manufacturing plant information. The manufacturing plant information must be provided in encrypted form if the manufacturing plant can be clearly determined at all times by the manufacturer or distributor and by the certification body and monitoring body.

Reason for opposition: additional requirements / barrier to trade
Comment:
In EN 14179-1, the information required for the traceability of the product shall not be indelibly marked on the product. According to CPR article 11.4, information necessary to ensure traceability can be provided "on the packaging or in a document accompanying the construction product".

3 Certificate of conformity

3.1 General

Confirmation that ESG-H under Section 1 complies with the provisions of this Appendix should be issued for every manufacturing plant in the form of a certificate of conformity based on in-house quality control and regular external monitoring, including an initial test of the construction product in accordance with the following provisions. For the issuing of a certificate of conformity and external monitoring including product tests, the ESG-H manufacturer must call on a recognised certification body and recognised monitoring body.

The highest competent planning authority must be provided on request with a copy of the certificate of conformity issued by it and with a copy or the initial type testing report.

Reason for opposition: upgrade of the AVCP system from AVCP 3 to AVCP 1.
Comment:
This is an illegal upgrade of the level of AVCP system as defined in Decision of the Commission 2000/245/EC of 2000-02-02, amended by 01/296/EC and as given in Annex III of the mandate for "Flat glass, profiled glass and glass block products".
The only intended uses that require an AVCP system 1 are

- Resistance to fire
- Bullet resistance
- Explosion resistance.

Most of the time (more than 99,9%), the intended use of heat soaked thermally toughened soda lime silicate safety glass is "*use liable to present safety-in use risks*" and is therefore under AVCP system 3.

This upgrade is against CPR article 8 clauses 4 to 6.

3.2 In-house production control

3.2.1 General

In each plant manufacturing ESG-H panes, in-house production control must be set up and carried out for each furnace. In-house quality control is understood to be continuous monitoring of production which should be undertaken by the manufacturer to ensure that the construction products manufactured by it satisfy the provisions of this Appendix.

To ensure continuous operation, the personnel who carry out the following regulated work must be named. In-house production control must include at least the measures specified in Sections 3.2.2 and 3.2.3.

3.2.2 Inspections and tests to be carried out when conducting heat soaking for ESG-H panes:

The data for all control elements laid down during initial type testing for reliable furnace temperature regulation, the description of furnace loading and glass breakage rate must be documented in consultation with the external monitoring body.

Compliance with the manufacturing conditions laid down in Section 2.1 must be checked. Where deviations are detected, the panes may not be marked as ESG-H panes and may not be used as such.

All panes must be tested after heat soaking for damage to the edges. Panes with edge damage at a depth of more than 5 % of glass thickness may not be used as ESG-H panes.

Reason for opposition: technical problem
Comment:
This is an additional requirement to EN 14179-1.
This limit is a non-sense: for a glass with a thickness of 4 mm, the maximum depth of an admissible defect will be 0,2 mm. This is not realistic.
Moreover, there is no evidence that such a defect will have detrimental effect on the glass product.
Note: damages at the edges can also occur before toughening and has no impact on the quality of the thermal toughening and the heat soak process. With such a tight tolerance, it will be difficult to prove if the damage accord before or after toughening.

Testing of bending tensile strength must be carried out during the production process in consultation with the external monitoring body so that faulty batches can be detected in good time. At least 5 samples per nominal glass thickness manufactured per year must be tested as per DIN EN 1288-3 (four edge procedure). When manufacturing ESG-H from glass with strength-reducing coatings, at least 5 samples must also be tested per year and per manufactured nominal glass thickness.

Reasons for opposition:

- additional requirements / barrier to trade
- technical problem

Comment:
This is an additional requirement to EN 14179-1 and is therefore a barrier to trade.
Moreover, EN 1288-3 is not appropriate to determine the residual risk of spontaneous breakage due to nickel sulphide inclusion.

3.2.3 Documentation

The results of the in-house quality control should be recorded and evaluated. The records must contain at least the following information:

- description of construction product or starting materials and constituents
- type of control or test
- date of manufacturing and testing of the construction product or starting materials or constituents
- result of controls and tests and comparison with the requirements where applicable
- address of installation site. Where this is not known, the pane buyer must be logged.
- signature of the person responsible for in-house quality control.

The records should be kept for at least 5 years. They must be submitted to the highest competent building inspectorate authority on request.

If the test result is unsatisfactory, the manufacturer should immediately take the necessary measures to resolve the defect. Construction products which do not comply with the requirements should be handled in such a manner that confusion with compliant products is impossible. After removal of the defect, the relevant test should be repeated immediately, where technically practicable and necessary to demonstrate that the defect has been removed.

Reason for opposition: deny of EN 14179-1:2016
Comment:
Please remain with EN 14179-1. Heat soak thermally toughened soda lime silicate safety glass is a product under AVCP system 3 and no FPC rules can be defined by a national regulation. Everything is covered by EN 14179-2 and it will remain so in the revised version.

3.3 External monitoring of ESG-H panes

Initial type testing of ESG-H panes must be carried out as part of external monitoring. Initial type testing includes calibrating the furnace system and product testing. Each furnace system must be calibrated. The temperature specifications under Section 2.1 must be adhered to for all relevant loading conditions for the entire glass mass. For this proof, the monitoring body must record at least one test run at maximum load – recording the temperature of the glass surface at critical furnace loading points. All key furnace data (temperature-time diagram for circulating air, location of temperature sensors required for operating the furnace, etc.) and the description of loading conditions (e.g. number of panes, minimum distance between panes, position of glass racks) must be documented as guidelines for subsequent operation of the heat soak furnace. If key production conditions are changed (e.g. when converting or repairing the tested plant), the manufacturer is required to inform the external monitoring body, which will decide whether to repeat the initial type testing.

Reason for opposition: upgrade of the AVCP system from AVCP 3 to AVCP 1.
Comment:
The calibration of the heat soak installation shall not be performed by a notified body as heat soak thermally toughened soda lime silicate safety glass is a product under AVCP 3.
Moreover, the calibration shall not be linked with Type Test as none of the characteristics to declare is the consequence of the heat soak process.

Each furnace must be recalibrated every 2 years. The scope of the test will be determined by the external monitoring body and can involve measuring a loading condition under typical production conditions. This two-yearly test can be dispensed with if the manufacturer has appropriate measuring tools and carries out its own measurements according to the specifications of the external monitoring body. In this case, the external monitoring body determines the monitoring cycle for this test.
During initial type testing, the value of characteristic bending tensile strength and break structure as per DIN EN 12150-1 must be determined for each nominal thickness. In-house production control must be checked via external monitoring at least once a year, and at least twice a year during the first two manufacturing years.

Reasons for opposition:
- deny of EN 14179-1:2016
- additional requirements / barrier to trade

Comment:
- In EN 14179-2:2005, the frequency of calibration shall be one year after initial calibration then every 5 years.
- In the future revision of EN 14179-2, the frequency of calibration shall be one year after initial calibration then every 3 years. This change was not introduced because problems were reported but it was a compromise between Germany and the rest of Europe.

A calibration after 2 years is not necessary as the process is very stable.

The results of certification and external monitoring should be kept for at least 5 years. They should be presented by the certification body or monitoring entity to the German Institute for Building Technology and the authorised top-level building authority when required.

Annex 2

Page 27:

Appendix A 1.2.7/2

1 Re DIN 18008-1:2010-12, Section 9:

The conditions under Section 9.1 can be met if laminated safety glass with PVB film with the following properties is used: Tear resistance ≥ 20 N/mm^2 and breaking elongation ≥ 250 % at a test temperature of 23 °C, test speed: 50 mm/min. (DIN EN ISO 527-3:2003-07). For coated glass as per DIN EN 1096-4, the coating must be done on the side without the PVB film.

Reason for opposition:

- Restriction to interlayers of one chemical composition irrespective of the performances
- Additional tests not foreseen in the harmonised standard EN 14449

Comment:

EN 14449, based on the EN ISO 12543 series, is a performance-based standard and doesn't introduce any restriction to the chemical nature of the interlayer or the position of a possible coating. The same performance can be achieved by different materials and there is no reason to restrict to PVB only.

EN 14449 doesn't define products but defines requirements and ways to assess performances. There is no scientific reason to restrict laminated glass to the ones made with PVB interlayers only. Other types of interlayers exist on the market and have, for some of them, higher performances than ordinary PVB interlayers.

The same reasoning applies for laminated glass incorporating a glass with a coating against the PVB.

In the past, these products were submitted to additional certification (Zulassung) which is an obstacle to the free movement of goods.

Germany is the only country in Europe to impose additional tests on the interlayer. Here again it is a barrier to trade.