

News of glass products standardization in Russia

Alexander G. Chesnokov, Head of the standardization and testing department, OAO "Glass Research Institute"

Elena A. Cheremkhina, Research officer of the standardization and testing department, OAO Glass Research Institute. Olga A. Emelianova, Deputy Head of the standardization and testing department, OAO Glass Research Institute. Dushinskaya street 7, 111024, Moscow, Russia. ic.steklo@mail.ru

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Abstract

From GPD 2011 Russia makes a huge progress in glass products standardization. All 26 National Standards described on GPD'11 were approved and joined into force. Our Technical Committee 41 is carrying out development of 32 Interstate standards of CIS on the Russian National Standards base. In addition, we develop five completely new standards. The Interstate Technical Committee "Glass" takes form based on acting Russian Technical Committee 41 "Glass".

Introduction

Today active processes of development, approving and implementation of Technical Orders take place in the Customs Union countries (that is Belarus, Kazakhstan and Russia) as well as Eurasian Economic Association countries. The Technical Orders set unified requirements to the product safety in these countries. Documents in support for verification of product compliance with stated requirements have to be interstate standards of CIS, therefore special attention is focused on their development and renovation.

The main text

Taking into account that commodity turnover between Customs Union countries is increasing by 20-30% per year, time constrains for the development and approval of united standards are extremely short. By now TC 41 "Glass" met established lead times, approval periods and joining into force terms. This is evidenced by the fact that all developed during 2010-2011 national standards are approved and joined into force in Russia. 25 standards are active from July 1, 2012 and 1 standard is acting from January 1, 2013.

In particular, the following product types are manufactured in Russia according to the new standards:

- Flat colorless glass and tint glass;
- Tempered and heat-strengthened glass;
- Various types of coated glass;
- Laminated glass;
- Mirrors.

In Table 1 you can see notations of the new effective standards of Russia and obsolete Russian standards to July 1, 2012.

Table 1. Effective and obsolete Russian standards

Product type	Operating from 01.07.2012	Obsolete from 01.07.2012
Flat colorless glass	GOST R 54170–2010	GOST 111–2001
Flat tinted glass	GOST R 54169–2010	—
Tempered glass	GOST R 54162–2010	GOST 30698–2000
Heat-strengthened glass	GOST R 54180–2010	—
Glass with soft low-emissive coating	GOST R 54176–2010	GOST 31364–2007

Product type	Operating from 01.07.2012	Obsolete from 01.07.2012
Glass with hard low-emissive coating	GOST R 54177-2010	GOST 30733-2000
Glass with solar control or decorative soft coating	GOST R 54178-2010	—
Glass with solar control or decorative hard coating	GOST R 54179-2010	—
Laminated glass	GOST R 54171-2010	GOST 30826-2001
Mirrors	GOST R 54161-2010	GOST 17716-91

We have a special situation for the insulated glass unit standards. 4 new national standards started to work from July 1, 2012:

ГОСТ Р (GOST R) 54175-2010 Sealed insulating glass units. Specifications;

ГОСТ Р (GOST R) 54172-2010 Insulating glass units. Method of determination of life circle;

ГОСТ Р (GOST R) 54173-2010 (EN 1279-4:2002) Insulating glass units. Methods of test for the physical attributes of edge seals;

ГОСТ Р (GOST R) 54174-2010 (EN 1279-6:2002) Insulating glass units. Methods and rules of products quality assurance.

It was supposed, that after these standards start operating, CIS interstate standard GOST 24866-99 "Sealed insulating glass units for building. Specifications" will be discontinued on the territory of Russia.

But building industry community opposed against such change. So today there are two operating standards for the IGUs in Russia: national standard GOST R 54175-2010 and interstate standard GOST 24866-99.

To resolve problem in hands TC 41 supposes to develop new interstate standard for the IGU for replacement of GOST 24866-99 and GOST R 54175-2010 during 2013-2014. This new standard will take into account all IGU market player's interests.

In 2012 TC 41 "Glass" developed 32 new projects of CIS interstate standards listed in table 2. Texts of standard projects on Russian language available on our website (<http://glassresearch.ru> or <http://tc41.ru>).

These standards have the following characteristics:

- 5 projects for replacement of the acting CIS standards;
- 27 projects of the new interstate standards;
- 17 projects are harmonized with ISO standards and/or CEN standards;
- 15 projects are original.

Standard projects are distributed between standard types as:

- 5 projects are Specifications type standards;
- 20 projects are test methods standards;
- 7 projects are systematical standards.

These projects are currently at the stage of adjustment and approval. The process shall be finished in 2013. The standards will join into force on the CIS territory approximately starting from 01.01.2015.

Table 2. Interstate standard projects developed in 2012.

#	Title	Harmonization	Replaced standard
1	Wired glass. Specifications	EN 572-3:2012 EN 572-6:2012 EN 572-8:2012	GOST 7481-78
2	Glass and glass products. Marking, packing, transportation, storage		
3	Glass and glass products. Test method boiling (temperature resistance)	ISO 12543-4:2011	
4	Glass and glass products. Test method for resistance to impact of hammer and axe	ISO 16936-2:2005	
5	Glass and glass products. Test method for resistance to ball drop	ISO 16936-1:2005	
6	Glass and glass products. Hardness determination method	ISO 9385:1990	
7	Glass and glass products. Heat resistance determination methods		GOST 25535-82

#	Title	Harmonization	Replaced standard
8	Glass and glass products. Inspection methods for geometric parameters and appearance		
9	Glass and glass products. Methods for determination of mechanical properties. Determination of elasticity modulus at cross static bending		GOST 9900-85
10	Glass and glass products. Methods for determination of mechanical properties. Determination of resistance to static load		
11	Glass and glass products. Method for determination of mechanical properties. Determination of impact toughness		GOST 11067-85
12	Glass and glass products. Methods for determining the optical characteristics. Determination of the refractive index		
13	Glass and glass products. Optical characteristics determination methods. Determination of colour coordinates		
14	Glass and glass products. Determination of the bending strength. Coaxial double ring test on flat specimens with large test surface areas	EN 1288-2:2000	
15	Glass and glass products. Determination of the bending strength. Coaxial double ring test on flat specimens with small test surface areas	EN 1288-5:2000	
16	Glass and glass products. Determination of the bending strength. Test with specimen supported at two points (four point bending)	EN 1288-3:2000	
17	Glass in building – Determination of the bending strength of glass – Part 1: Fundamentals of testing glass	EN 1288-1:2000	
18	Glass and glass products. Visual faults. Terms and definitions		
19	Glass and glass products. Procedures for goodness of fit and confidence intervals for Weibull distributed glass strength data	EN 12603:2002	
20	Glass and glass products. Acceptance rules		
21	Glass and glass products. Terms and definitions		
22	Glass and glass products. Explosion resistance test method	EN 13541:2012	
23	Glass and glass products. Test method of bullet resistance		
24	Matt glass. Specifications		
25	Inorganic glass and glass-crystalline materials. Determination of chemical composition. General requirements for methods of determining the content of major chemical components		
26	Painted glass. Specifications		
27	Coated glass. Classification	EN 1096-1:2012	
28	Coated glass. Test methods for class A, B, S coatings	EN 1096-2:2012	
29	Coated glass. Test methods for class C and D coatings	EN 1096-3:2012	
30	Coated glass. Acceptance rules	EN 1096-4:2004	
31	Adhesive backed polymeric filmed glass. Specifications	prEN 15755-1:2008	
32	Patterned glass. Specifications	EN 572-5:2012 EN 572-8:2012	GOST 5533-86

TC 41 "Glass" has a plan for 2013-2014 with development of 26 CIS interstate standards on the base of national Russian standards approved in 2010-2011. We discussed these standards during the previous GPD conference. Texts of the standard projects on Russian also available through TC 41 website <http://tc41.ru>, where all new versions of developing interstate standards will be available too. In order to combine efforts of all specialists interested in new CIS interstate standards development for building and technical glass products, Interstate Technical Committee "Glass" (МТК «Стекло»/ITC "Glass") are forming now. This Interstate Technical Committee will have to coordinate development, discussion and approval of indicated standards. Today we already have project of ITC "Glass" Order which is already in discussion among specialists. Azerbaijan, Armenia, Kirgizstan, Moldova, Ukraine expressed wishes to participate in the ITC "Glass" work on the state level. Specialists from Belorussia, Kazakhstan and Russia are ready to work on the organizations level. There is a plan to adopt ITC "Glass" by Interstate Council for Standardization, Metrology and Certification of the Commonwealth of Independent States (CIS) in 2013 and to start its work immediately after that.

Conclusions

As you can see from presented materials, standardization of building and technical glass products in Russia and CIS countries is in active development phase. Substantial effort is being made for harmonization of CIS interstate standards with ISO and CEN standards and to eliminate backlog of Interstate standards from ISO and CEN standards in quantity and quality.

References

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