EXPULATORY PROPERTIES OF GLASS MATERIALS.

Ergashev Dilshodbek Mamasidiqovich
Andijan Mechanical Engineering Institute, Andijan
Dexqonov Shoxjaxon Odiljon o`g`li
Andijan Mechanical Engineering Institute, Andijan

Annotation. *Glass is an amorphous material. In the area of the crack, there are solid bodies where no sign of crystals can be seen. If ordinary glass is broken by impact, its fracture is distinguished by flat and rough, oval planes compared to the cracks of crystals [1].*

Key words: *properties of glasses, elasticity, chemical composition, deformation. Properties of glass.*

Additivity property. The properties of glass depend on its chemical composition. They can be calculated according to the rule of additivity or addition. It affects the individual properties of glasses, where individual oxides and dioxides are represented by some numerical coefficients. The higher the level of dioxide and oxide, the greater its share in the glass. If we denote the amount of individual dioxides and oxides in the glass by R_1, R_2, R_3, ..., Rn in %, and the corresponding property coefficients (factors) by C1, C2, C3, ..., Cn, then the glass property S is as follows can be expressed by the equation:

$$C = C_1 \cdot \frac{P_1}{100} + C_2 \cdot \frac{P_2}{100} + C_3 \cdot \frac{P_3}{100} + \dots + C_n \cdot \frac{P_n}{100}$$

Glass density is from 2.2 to 8 g·sm³ around will change. Most heavy bottles in the composition a lot of lead oxides, light in bottles while to a small atomic weight have oxides (lithium, beryllium, boron) are present. The density of quartz glass is 2.2 g·cm³.

Elasticity . Hard bottles are not plastic . Elasticity property elastic modulus E value with is expressed . How much is E ? a lot if , of the body deformation that's all small will be :

$$\Delta l = \frac{Pl}{ES},$$

this on the ground Δl - l in length and S surface , R force effect under of the stern elongation (deformation). Various The modulus of elasticity of the glass composition E is around 45-98 GPa will be

Bottle in stretching consistency limit $P_ч$ is equal to 35-100 MPa is in compression P_s 10-15 times from 588-1176 MPa less _

Fragility . Glass elasticity to the limit of deformation reach as soon as breaks _ Glass brittleness him one in the moment to the blow resistance with is expressed .

Fragility bottle shape , dimensions and especially the thickness depends will be Thickness increase with blow resistance increases . Also to the shock resistance An increase of Rs with too increases , the bottle find it 5-6 times increases . To fragility bottle the surface and one sexuality , exactly in it unusual - hard of additives existence big effect shows .

Heat expansion linear coefficient The value is mainly the temperature sharp to change depends will be From this except , most of the time in technique the bottle another with composition glass , ceramics and metals with to quarrel right will come If to each other quarreling materials different heat _ expansion have if , then strong capricorn _ _ place). take will not : item when cooled a lot out of place cracked goes _ Heat expansion linear coefficient is between 5·10-7 °S-1 (quartz glass) and 200·10-7 °S-1 changes , his the value of the glass content depend _

Thermal stability , that is bottle of temperature sharp to change without breaking against stand up opportunity usually small _ Glassware _ to the heat tolerance bottle from the composition except bottle shape , dimensions and thickness effect does _ Most thermal stable into bottles quartz , boron silicate and non-alkali bottles enters _ Various glass samples endure giving temperature the difference is from 80°C (simple industry bottles) in the range of 1000°C (quartz) . changed stands _ Equal distributed compressive stress _ _ _ of the item to the heat tolerance by 1.5-2 times increases . On the surface of the glass defects loser fiery polishing and chemical processing to give to the heat tolerance strengthens _

Optical properties . Ordinary silicate glasses of the spectrum all to see part good passes and almost ultraviolet and infrared _ the rays does not pass . Bottle chemical composition and its color _ change through this in the fields bottle light transfer property adjust can _ Optical properties according to transparent , painted , colorless and distributor into bottles is separated .

Chemical stability . Bottle chemical stability his chemical composition and effect to the nature of the reagent being used depend _ For example , silicate glass engraving characteristic and from phosphoric acid another many to reagents relatively high tolerance have _ Window windows as used a glass with leaves how many ten years during full satisfactory service does _ Alkaline oxides content increase Listed bottle chemical stability reduces , introducing Al_2O_3 while him increases .

Mechanical processing of glass of giving main from the type one is abrasive grinding [2,3].

REFERENCES:

1. Kazennova E.P. General technology of glass and glass products. M.: Stroyizdat, 1983, 114 S.

2. Kalafatova L. P. Prediction of the quality of the surface layer when processing products from technical glass ceramics // Handbook. Engineering magazine. Application. 2002. No. 9 P.5-8.

3. Kalafatova L. P. Technological bases for increasing the efficiency of processing and ensuring the quality of products made of technical glass and glass ceramics // Author's abstract. dis. ...doc. tech. Sci. Kharkov: 2001. 44 p.

4. Мамаджанов, А. М., & Султонов, С. (2023). ЛЬГОТЫ ВОЕННОСЛУЖАЩИМ И ЧЛЕНАМ ИХ СЕМЕЙ. THEORY AND ANALYTICAL ASPECTS OF RECENT RESEARCH, 2(14), 156-164.

5. Мамаджанов, А. М., & Султонов, С. (2023). ЛЬГОТЫ ВОЕННОСЛУЖАЩИМ И ЧЛЕНАМ ИХ СЕМЕЙ. THEORY AND ANALYTICAL ASPECTS OF RECENT RESEARCH, 2(14), 156-164.

6. Мамаджанов, А. М. (2023). Изучение Проблемы Информационной Безопасности В Контексте Национальной Безопасности. Miasto Przyszłości, 36, 254-257.

7. Мамаджанов, А. М. (2023). Изучение Проблемы Информационной Безопасности В Контексте Национальной Безопасности. Miasto Przyszłości, 36, 254-257.