IBRACON Structures and Materials Journal
Revista IBRACON de Estruturas e Materiais
ISSN 1983-4195 ismj.org

ERRATUM

Erratum

In the article **"Ultrasonic measurement and elastic properties of the PbO-SrO-B_2O_3 glass system"**, DOI number https://doi.org/10.1590/S1983-41952020000400015, published in IBRACON Structures and Materials Journal ISSN 1983-4195, v.13, n.4, e13415, 2020, on page 1-7:

2 CHARACTERIZATION TECHNIQUES

2.2 Density and molar volume

Where it reads:

$$\rho = \rho_H \left(\frac{m_a}{m_d} \right) \qquad \text{(Eq. 1.0)}$$

" Where, ρ is the density, ρ_H is the density of the water, m_a and m_d are the mass of the sample in the air and the mass of the submerged sample, respectively."

It should be read:

$$\rho = \rho_H \left(\frac{m_a}{m_d} \right) \text{ or } \rho = \rho_H \left(\frac{m_a}{m_2\text{-}(m_3\text{-}m_1)} \right) \qquad \text{(Eq. 1.0)}$$

Where ρ is the density, ρ_H is the density of the water, m_a is the mass of the sample in the air, m_d is the mass of the submerged sample, m_1 is the solid sample mass, m_2 is the pycnometer mass totally filled with distilled water, and m_3 is the pycnometer mass + remaining distilled water + solid sample mass."

2.3 Ultrasonic measurements

Where it reads:

$$\text{“ } V_{ms} = [\frac{1}{3}\left(\frac{2}{Vs^3} \left(\frac{1}{V_L^3} \right) \right]^3 \qquad \text{(Eq.1.3)”}$$

It should be read:

$$\text{“ } V_{ms} = [\frac{1}{3}\left(\frac{2}{Vs^3} + \frac{1}{V_L^3} \right)]^{-1/3} \qquad \text{(Eq. 1.3)”}$$

3 RESULTS AND DISCUSSION

3.2 Ultrasonic study

Where it reads:

“ $V_L^2 = \sqrt{\frac{k}{\rho}}$ (Eq. 1.4)”

Having k as volumetric modulus of elasticity,

It should be read:

“ $V_L = \sqrt{\frac{L}{\rho}}$ (Eq. 1.4)”

Having L longitudinal module,

Where it reads:

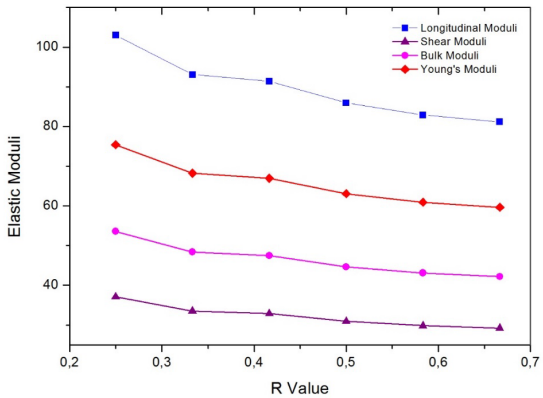

Figure 2. Variation of elastic modules for the BPS glass system. Source: the autors (2018).

It should be read:

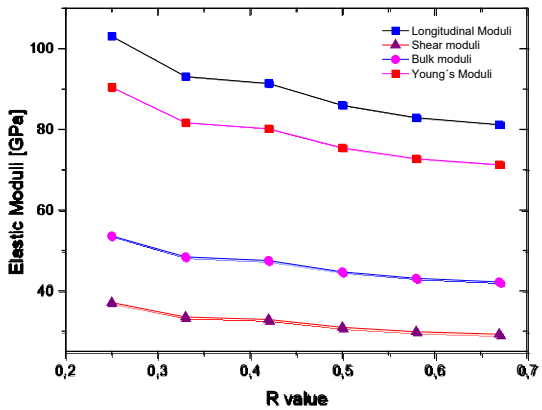

Figure 2. Variation of elastic modules for the BPS glass system. Source: the autors (2018).

Where it reads:

Table 2 Longitudinal Velocity (V_L), Transverse velocity (V_s), Average sound velocity (V_{ms}), Longitudinal Module (L), Transversal Modulus (G), Bulk Module (K) e Young's Module (E).

Glasses	V_L	V_S	Vms	L	G	K	E
	(m/s)	(m/s)	(m/s)	(10^10 N/m^2)	(10^10 N/m^2)	(GPa)	
BPS-1	4918,67	2951,202	3264,75	103,06	37,10	53,59	75,42
BPS-2	4626,00	2775,6	3070,49	93,09	33,51	48,41	68,24
BPS-3	4541,33	2724,798	3014,29	91,36	32,89	47,51	66,99
BPS-4	4361,00	2616,6	2894,60	85,96	30,95	44,69	63,12
BPS-5	4209,00	2525,4	2793,71	82,91	29,85	43,11	60,92
BPS-6	4104,00	2462,4	2724,01	81,18	29,23	42,21	59,68

It should be read:

Table 2 Longitudinal Velocity (V_L), Transverse velocity (V_s), Average sound velocity (V_{ms}), Longitudinal Module (L), Transversal Modulus (G), Bulk Module (K) e Young's Module (E).

Glasses	V_L	V_S	Vms	L	G	K	E
	(m/s)	(m/s)	(m/s)	(GPa)	(GPa)	(GPa)	(GPa)
BPS-1	4918,67	2951,202	3264,75	103,06	37,10	53,59	90,44
BPS-2	4626,00	2775,6	3070,49	93,09	33,51	48,41	81,69
BPS-3	4541,33	2724,798	3014,29	91,36	32,89	47,51	80,17
BPS-4	4361,00	2616,6	2894,60	85,96	30,95	44,69	75,43
BPS-5	4209,00	2525,4	2793,71	82,91	29,85	43,11	72,75
BPS-6	4104,00	2462,4	2724,01	81,18	29,23	42,21	71,26

Where it reads:

Table 3 Debye Temperature (θ_d), Poisson Coefficient (σ), Acoustic Impedance (Z) and Coefficient of Thermal Expansion (A).

Glasses	θ_d	σ	Z	A
			(10^{-7} kg / m^2.s)	
BPS-1	411,7409	0,21879	2,09	114099,81
BPS-2	382,5736	0,21878	2,01	107309,87
BPS-3	371,1051	0,21874	2,01	105345,53
BPS-4	352,6334	0,21869	1,97	101161,87
BPS-5	338,7643	0,21872	1,96	97635,47
BPS-6	328,3990	0,21867	1,98	95199,47

It should be read:

Table 3 Debye Temperature (θ_d), Poisson Coefficient (σ), Acoustic Impedance (Z) and Coefficient of Thermal Expansion (A).

Glasses	θ_d	σ	Z	A
	K		(10^7 kg / m^2.s)	10^{-6} K^{-1}
BPS-1	411,7409	0,21879	2,09	11,41
BPS-2	382,5736	0,21878	2,01	10,73
BPS-3	371,1051	0,21874	2,01	10,53
BPS-4	352,6334	0,21869	1,97	10,12
BPS-5	338,7643	0,21872	1,96	9,76
BPS-6	328,3990	0,21867	1,98	9,52

3.3 FTIR infrared spectroscopy

Where it reads:

The spectrum in region (I) has bands close to 2300-2350 cm^{-1}, the vibrations of different C-O bonds or ambient CO2 concentrations in the Infrared [14] are attributed, these are not part of the glass structures.

It should be read:

The spectrum in region (I) has bands close to 2300-2350 cm^{-1}, the vibrations of different C=O bonds of ambient CO_2 concentrations in the Infrared [14] are attributed, these are not part of the glass structures.

ACKNOWLEDGEMENTS

To Prof. Salmon Landi Jr. for contributing the information that resulted this errata document.