Α. Α.

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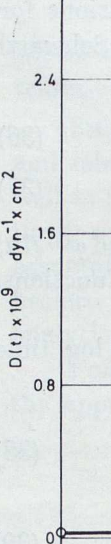

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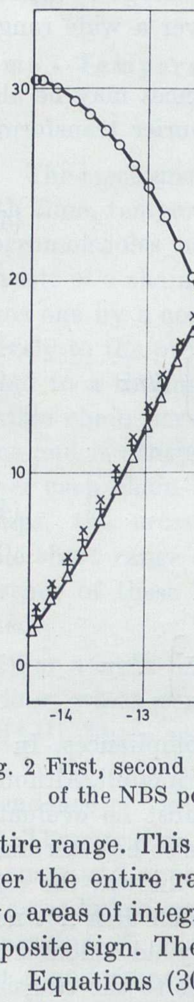

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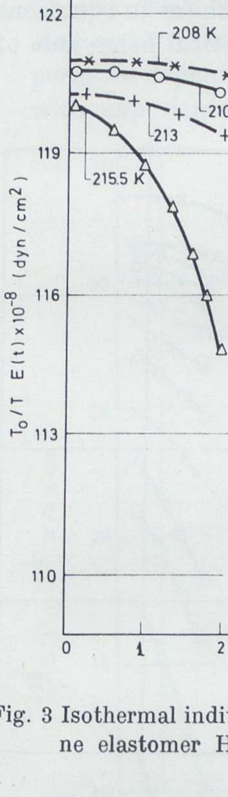

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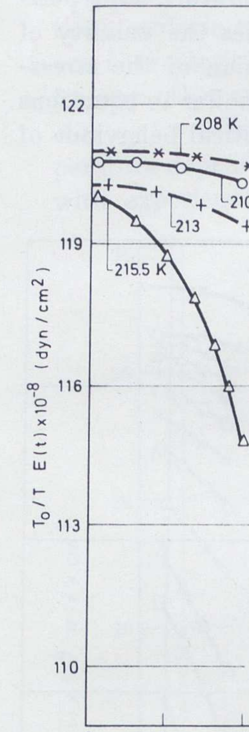

Fig. 3 Isothermal indi
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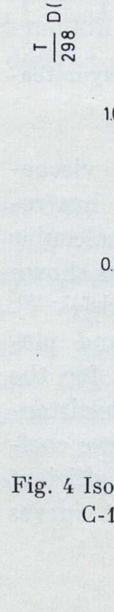

Fig. 4 Iso
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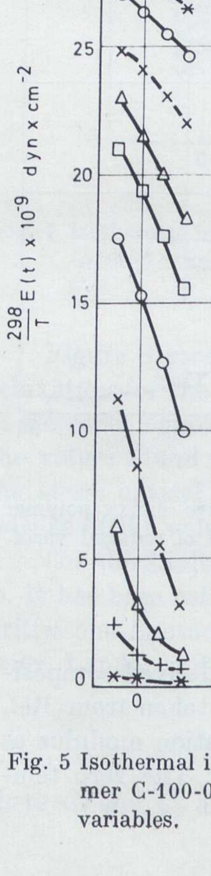

Fig. 5 Isothermal i
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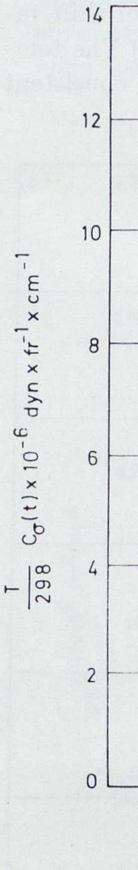

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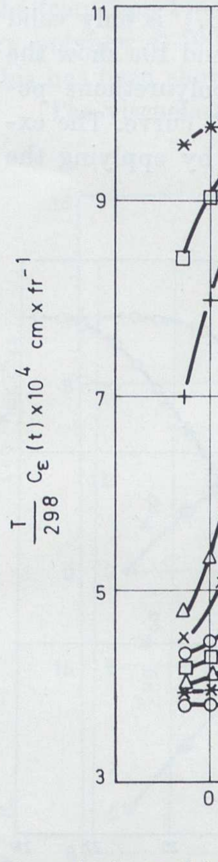

Fig. 7 Isothermal in
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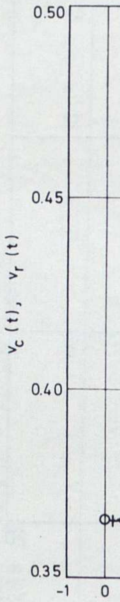

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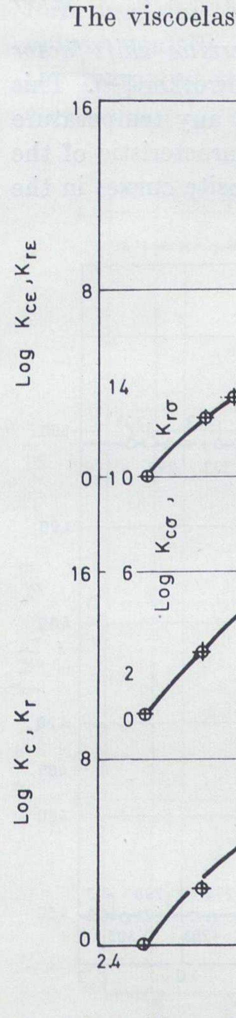

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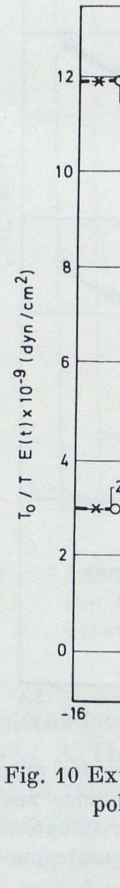

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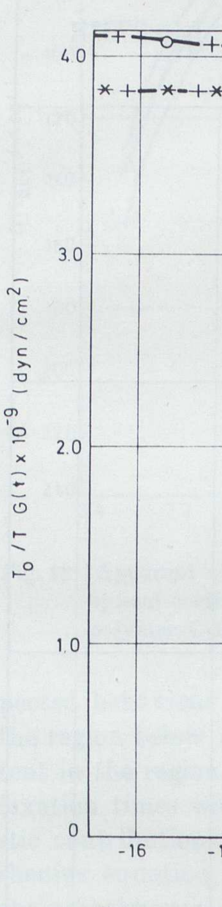

Fig. 10a Shear and b
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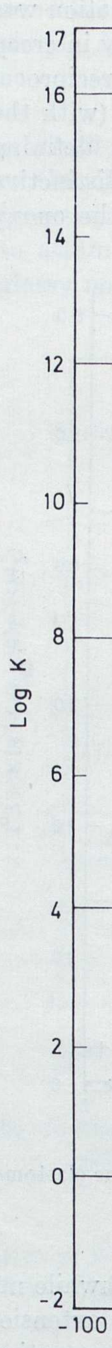

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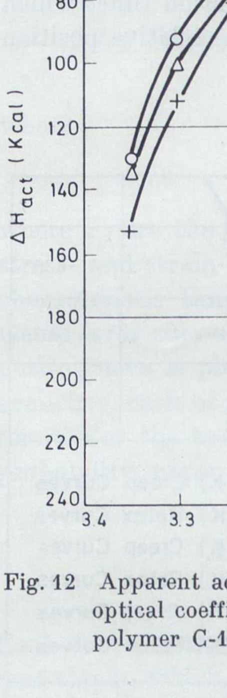

Fig. 12 Apparent a
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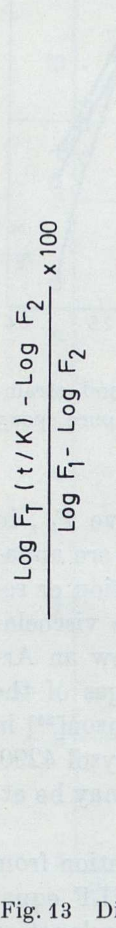

Fig. 13 D
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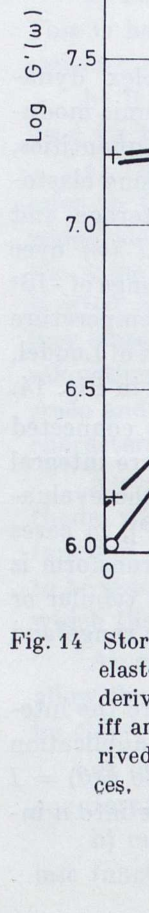

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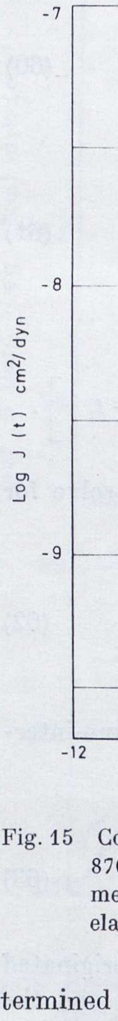

Fig. 15 Co
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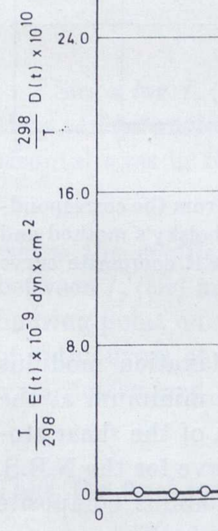

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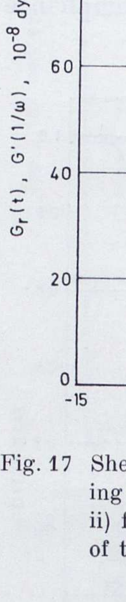

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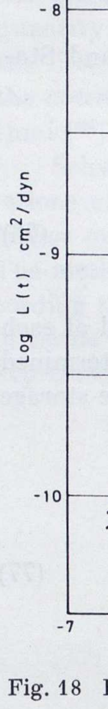

Fig. 18 I
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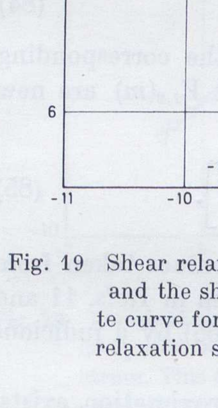

Fig. 19 Shear rela
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relaxation s

$$H_e\,(\tau)=\frac{\quad}{\left\{ D(t)+\right.}$$

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To calculate
use the formulas,

$$L_e(\tau)=$$

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Fig. 19
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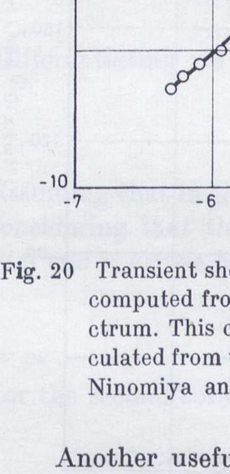

Fig. 20 Transient sh
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ctrum. This c
culated from
Ninomiya an

Another usefu
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relaxation spectra
lations are given b

$$D(t) = D'(1/\omega$$

$$E(t) = E'(1/\omega)$$

A relation sim
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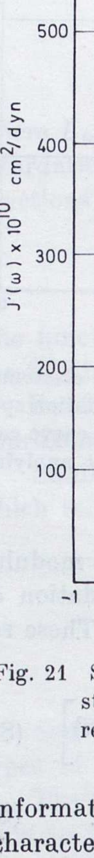

Fig. 21 S
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rial can be approx
provided that an
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not exceeding one
0.30 and 0.50. If
intervals, so that
(shear, extension)
functions (bulk, L
ption made in this
of both weak func
each interval into
sub-interval the o
interval the other
lues of either bulk
among those given
in the right-side v
is valid that:

Differentiating we

Assuming that in t
considering that th
$B(t)$ and $\nu_c\,(t)$ we h

For the second sub

Equating the two
found that:

where B_o and ν_{co} ar
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For the corres
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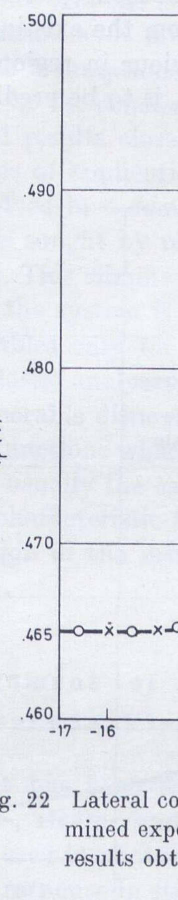

Fig. 22 Lateral co
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evaluation of th
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and Landel's da

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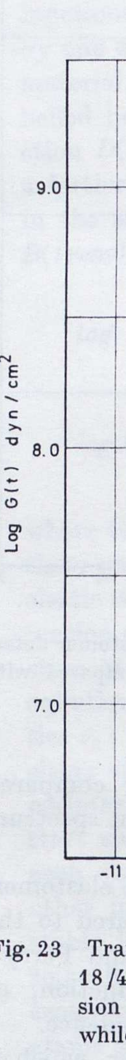

Fig. 23 Tra
18/4
sion
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It is a
bulk modu
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The linear an
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yield results close
blems of applicati
involved in a com
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time. This elimina
and the system is
variables only for
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ted function, wher
as is usually the ca
two characteristic
solution of the inv
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Alignment of
Tensors in Vis

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state for stress, str
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of disturbance in
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For the case o
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Ho
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cal and optical
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of references in
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In order to
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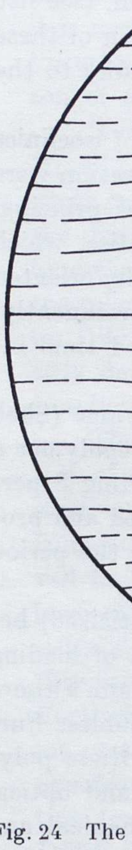

Fig. 24 The
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of viscoelastic
and strain-isocli

For the stud
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first application

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the two load sta
loading configur
birefringence iso
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necessary for rea
loads P_y was rele
We call the first
second time inte

For the case
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a pair of isotropi
to the centre O
S_1 and S_2 norm
lation[48]:

Fig. 25 pres
and S_2, as the ra

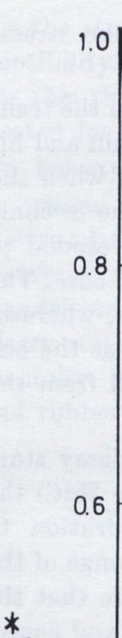

Fig. 25 Va
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For a
a suppress

$$\sigma_{yc} = -\frac{2P}{\pi}$$

where d is the thic

For the recov

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$$\sigma_{x_e} =$$

$$\sigma_{y_e} = \Big\{ -\frac{2P_y}{\pi d} -$$

In these relations

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In order to o

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The componen

$$\varepsilon_{x_e} = D_c\,(t_c$$

$$\Big\{ -\frac{2P_y}{\pi d} \Big[$$

$$+ D_c\,(t) \Big[\Big\{ -$$

$$\varepsilon_{y_e} = D_c\,(t_c + t) \Big[$$

$$-\nu_c\,(t$$

$$+ D_c\,(t) \Big[\Big\{ \frac{2P}{\pi}$$

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Fig. 26

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In order to
for $P_x = P_y$ and
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and subsequent

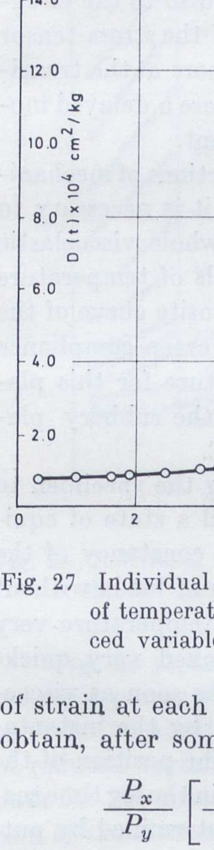

Fig. 27 Individual
of temperat
ced variabl

of strain at each
obtain, after som

$$\frac{P_x}{P_y}\Bigg[$$

In the case
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Solving relat
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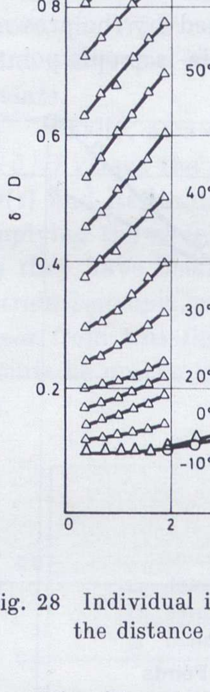

Fig. 28 Individual i
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Fig. 28 prese
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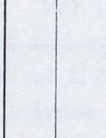

Fig. 29 Th
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were determined a
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for birefringence a
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lie in a different
log $a_T = f(T)$ alon
ponding curve tra
and $C_2 = 56$[11].
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more, the WLF cu
strain-isotropic po
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Finally, as a
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$D(t)$ and its limit
applying the simp
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clear from this fig
points lie on the t
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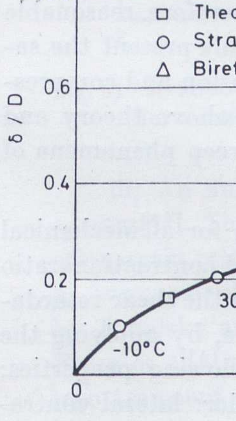

Fig. 30 Variation of
versus the ra
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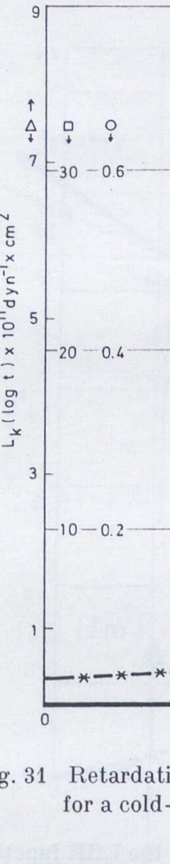

Fig. 31 Retardati
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iii) An ana
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ction ratio relax
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Ferry et al[51] a
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proximation of
49. From this fi
shear modulus
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Furtherm
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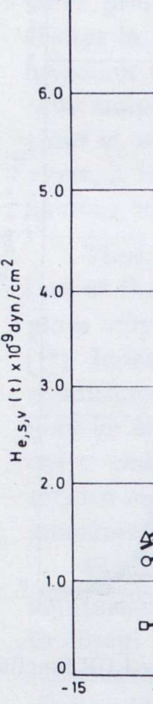

Fig. 32 Relaxa
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mechanisms. Abov
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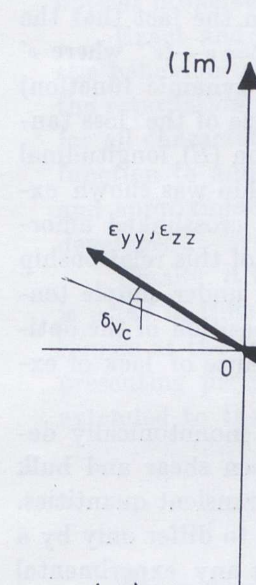

Fig. 33 Typical creep
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54) Tobolsk
Polyme

55) Theocar
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dence o
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ΦΑΙΝΟΜΕΝ
ΣΥ

Ἔχει γίνει γ
μοποιούμενα εἰς τ
καὶ τῆς διηλεκτρι
μένου ὅτι ὑπάρχει
τῶν ἀναπτυσσομέ
ἐπιβαλλόμενα ἔξω
μενον ἀπολύτως ἐ
σεις καὶ τὴν διπλ
λόμενον φορτίον

Ἡ φωτοτασε
τὴν μελέτην ἐλασ
πλοδιαθλάσεως τῆ
μὲ τὴν ὑπὸ μελέτ
τοπίσεων ὁμοίων
φώνως πρὸς τὸν νό
τερικῶς ἐπιβαλλο
ὑλικὰ αἱ οἰκογένει
συγχέονται εἰς μία

Ἐξ ἄλλου, ἔχ
σιῶν τῶν χρησιμο
ὑαλώδη αὐτῶν κα
τιμαὶ διὰ πάσας τ
διὰ τὴν περιοχὴν
διὰ τὴν ὑαλώδη κα
τῆς θερμοκρασίας
ἡ γενικὴ παραδοχ
σεις, ἀλλὰ καὶ καλ

Εἰς τὰ πολυμ
τῶν βισκοελαστικῶ
μοριακὰς διευθετήσ
νικὴν παραμόρφωσ
λαμβάνει ὄγκον πο
εἰς κατάστασιν δια
περιστρέφεται καὶ
ρει τὰς ἐν τῷ χώρ

εἰς μεγ
ἅλυσιν
πηδήσει
σεις) εἰ
εἶναι τ
ἀπεικον
βαθμίδ
τοπικῶν
σεως τ

Ἐ
μαζομέν
κατωτέρ
σιαστικ
πικῆς μ
σημαντι
ὄντος εἰ
στάσεω
παραμορ
διὰ θερμ
πολυμερ
τούτου

Ἀν
λυμερῶν
μεταβατ
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κῶς κατ
δευτερο
δοελαστ
ἢ ὀπτικ
στοιχον
νὰ εἶναι
περιφορ

Πα
δὲν ἀπο
μερῶν τ
μερικαὶ
πτύσσον
ἁπλοῦν
σιακὴν
Τοὐναντ
νὰ αὐξά
μηχανικ

Μόνον φαινομενολ
τὴν σχέσιν τὴν σ
σχέσις αὕτη δύνατ

Περαιτέρω, δ
σαν μορφὴν φορτίσ
παραμορφώσεων κ
οὔτε εἶναι ἁπλῆς
Ἀκόμη διὰ τὰ ρε
δὲν εἶναι πολὺ ἁπ
ὑπεράνω τῆς μετ
ἰσχυραὶ μεταβολαὶ
τοῦ χρόνου.

Εἰς τὴν ἐργασ
φραζόντων τὴν μ
ὑλικῶν. Δεδομένου
φωτοτασεομετρίαν
ἰδιοτήτων τῶν πο
καιολογεῖται ἐξ ἄλ
μορφοῦνται μὲ τοὺ
κῶν, παρουσιάζουν
οὐσίαν, καὶ κατὰ
κοὶ νόμοι τῆς βισκ
δα ὑλικῶν.

Ἐν τῇ ἐργασ
τὰς μηχανικὰς ἰδιό
κῶν εἶναι συναρτή
ματος (T) καὶ τῆς
σιν δοκιμῶν ἑρπυσ
($J(t)$) καὶ μεταβ
ἀντίστοιχα *μέτρα*
ὄγκου ($K(t)$) ὁρί
ἐξισώσεων (σχέσει
τρων ἐνδόσεως καὶ
μονάδα, εἰς τὴν μ
εἶναι μικροτέρα τῆ

Ὁρίζεται ἐν σ
εἶναι ἡ αὐτὴ συνάρ
μηδενὸς καὶ τῆς τι

Βάσει τῆς ἀρχ
μεταβολῆς τῶν χα
αἱ ἐκφράζουσαι τὰ
ἀντιστοίχων μέτρω
δέουσαι μεταξύ τω

μεταβολ
ως κυκλ

Τέλ
τῶν συνδ
κοῦ ἐπιπ
ὅτι πᾶσα
στικότητ
κῶν φαιν

Ἐν
ἀρχῇ οἱ
λάρωσιν)
κῶν συν
συχνότητ
συνδεούσ
ζουν δια
στοίχων
ἐνδόσεως
σμάτων

Τὸ
Ἀρχὴ τ
ὁποίαν β
ἑτέρας θ
τῶν χρόν
χαρακτη
ἀναγκαία
φῆς ἐξελ
πισιν τῆς
ἡ ὁποία
τῆς κινη

Οὕτ
φάσματα
τοῦ λογα
βισκοελα
κύρια μέ
βισκοελα
βισκοελα
τήσεις εἶ
τελείως
ριοχήν,
κτηριστι
σίας, ἢ τ
χῆς.

Ἀπ

ριαι αὗται καμπ
ἢ φθίνουσαν (διὰ
ἔχουν καὶ αἱ κύρι
τελεστοῦ. αἱ ὁπ
τῶν πολυμερῶν.

Στηριζόμενο
χαρακτηριστικὰς
ἐν τῷ ἐδαφίῳ μὲ
ρὰν ἁπλῶν ἀριθμ
μένων συνδυαζομ

Δίδονται χα
καὶ φασμάτων δ
πολυμερῶν καὶ σ

'Εν τῷ τελε
τάσεων, παραμορ
μελετᾶται ἡ σχε
διπλοδιαθλάσεως

Οὕτω, εἰς δ
ριαίως ὑπὸ δύο ἴ
νίαν 90^0, τὸ ἓν ζ
ἰσορροπίας διὰ τ
στασιν διὰ δύο φ

Διὰ μελέτης
ἑνὸς ἰσοτρόπου σ
περὶ τὸ κέντρον ἰ
συσχέτισις τῶν τ
τοῦτο πρόβλημα.
τοῦ ὑλικοῦ καὶ ἐχ
σημείων συναρτή
ἀκόμη καὶ διὰ τ
τῆς μηχανικῆς κα
Κατὰ συνέπειαν,
ἐμφανίζῃ ἐντονωτ