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(/ / / / / /)

چکیده

واژه‌های کلیدی:

مقدمه

[]

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[]

[] (DRA)

آزمون‌های آزمایشگاهی
روش انجام آزمایش

$$\Delta \varepsilon_{ji}(\sigma) = \varepsilon_j(\sigma) - \varepsilon_i(\sigma) ; j > i \quad (1)$$

$$\varepsilon_j(\sigma) \quad \varepsilon_i(\sigma) \quad \sigma$$

()

[]

(/ KN/m²)
[] ISRM

[]
()

ISRM

تهیه نمونه

()
[]

mm



نتایج آزمون‌ها

[]

[]

() ()

()

() $(\Delta \epsilon_{2,1})$

() $(\Delta \epsilon_{3,2})$

$(\Delta \epsilon_{4,3})$

()

$(\Delta \epsilon_{2,1})$

°	°			(m)
C_1	B_1	A_1		/
			(mm)	
/	/	/	(mm)	/
°	°			
C_2	B_2	A_2		/
			(mm)	
/	/	/	(mm)	/
°	°			
C_3	B_3	A_3		/
			(mm)	
/	/	/	(mm)	

دستگاه آزمایش

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$(\Delta \varepsilon_{2,1})$

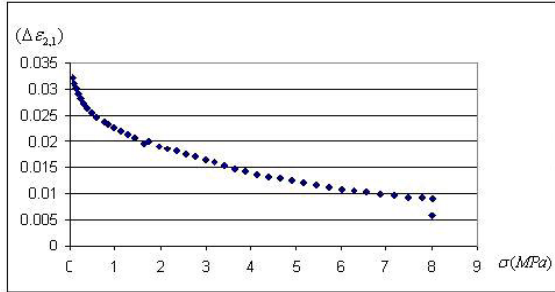
$(\Delta \varepsilon_{3,2})$

()

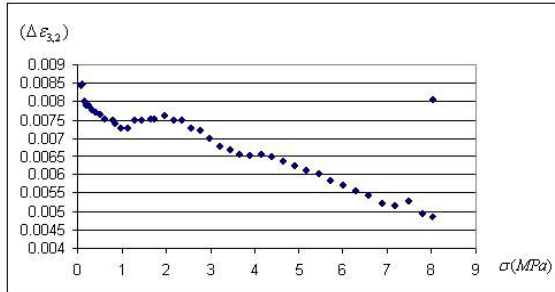
$(\Delta \varepsilon_{4,3})$

$(\Delta \varepsilon_{4,3})$

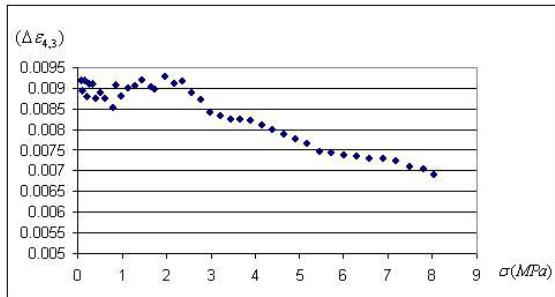
() ()



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.B₁ - :

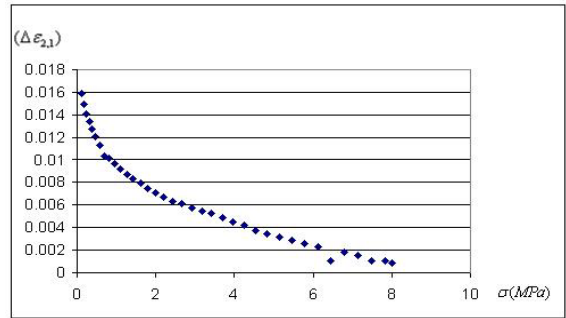
/ :

°	°		
C ₂	B ₂	A ₂	
/	/	/	(MPa)

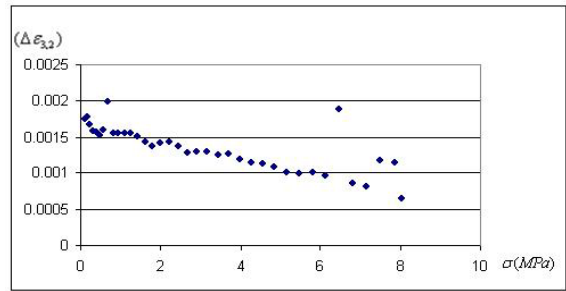
/ :

°	°		
C ₃	B ₃	A ₃	
/	/	/	(MPa)

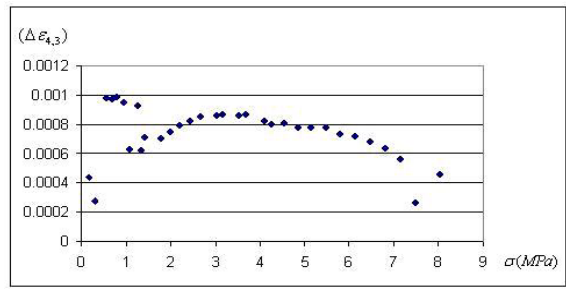
()



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.A₁ - :

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/

°	°			(m)
C ₁	B ₁	A ₁		/
	/	/	(MPa)	

/ /

/

() ()

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$$\sigma_P = \frac{1}{2}(\sigma_1 + \sigma_2) + \frac{1}{2}(\sigma_1 - \sigma_2) \cos 2\theta \quad ()$$

$$\sigma_Q = \frac{1}{2}(\sigma_1 + \sigma_2) + \frac{1}{2}(\sigma_1 - \sigma_2) \cos 2(\theta + \alpha) \quad ()$$

$$\sigma_R = \frac{1}{2}(\sigma_1 + \sigma_2) + \frac{1}{2}(\sigma_1 - \sigma_2) \cos 2(\theta + \alpha + \beta) \quad ()$$

:

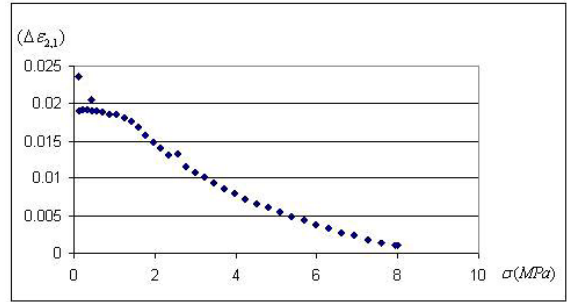
σ_2 (MPa)	σ_1 (MPa)	(m)
/	/	/
/	/	/
/	/	/

[] / ()

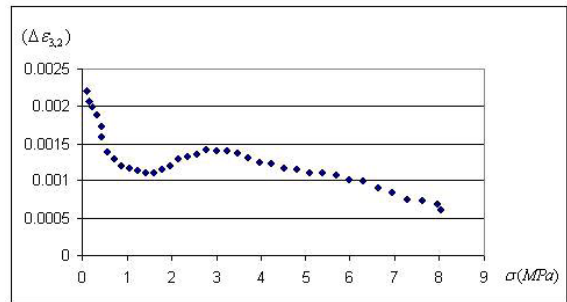
[] :

R ² (%)	σ_2 (MPa)	σ_1 (MPa)	α' (°)	(m)
/	/	/	/	/
/	/	/	/	/
/	/	/	/	/

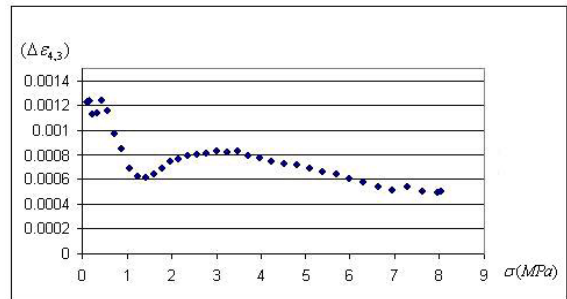
σ_1, σ_2 σ_1 α



()

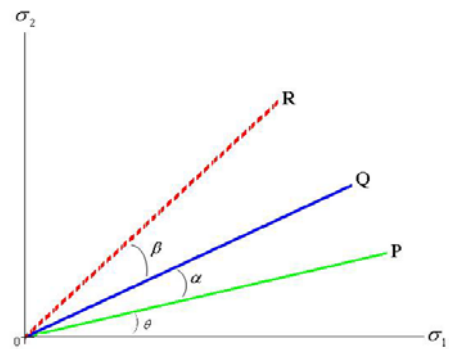


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C₁ - :



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تجزیه و تحلیل

R Q P

σ_2 σ_1 () () $\sigma_R, \sigma_Q, \sigma_P$

[]

$$\nu = / \quad E = \text{GPa}$$

$$\Delta \varepsilon_{2,1}$$

(%)	(MPa)			(MPa)
	/	/	/	σ_1
	/	/	/	σ_2

نتیجه گیری

فهرست علائم

(MPa)		σ_1	:
(MPa)		σ_2	-
(MPa)	Q	σ_Q	
(MPa)	R	σ_R	
()	σ_1 P	θ	
()	P Q	α)
()	Q R	β	(/
()	σ_1	α	(/)
			(/)
(GPa)		E	
(--)		σ	
(MPa)		σ	-
(MPa)	i	$\varepsilon_i(\sigma)$	
(MPa)	P	σ_P	

مراجع

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واژه های انگلیسی به ترتیب استفاده در متن

- 1 - Anelastic Strain Recovery (ASR)
 - 2 - Differential Strain Curve Analysis (DSCA)
 - 3 - Acoustic Emission (AE)
 - 4 - Deformation Rate Analysis (DRA)
 - 5 - Borhole
 - 6 - Coring
 - 7 - Instron
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