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/ I I I I I /
(kg/cm²) (kg/cm²)

(c,φ)

(c)
(φ)

(c,φ)

(...) MPa

MPa

/ MPa MPa
[] / [] MPa MPa
/ / MPa [] []

(%) °C °C – hours

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- % °C – hours
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/ ASTM C33
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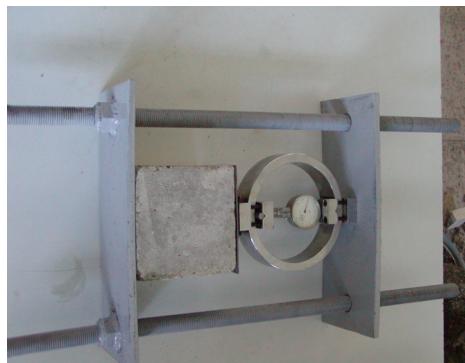
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(kg/cm²) []

°C – h []

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(%)												
SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	MgO	SO ₃	Na ₂ O	K ₂ O	C ₃ S	C ₂ S	C ₃ A	C ₄ AF	
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(%)

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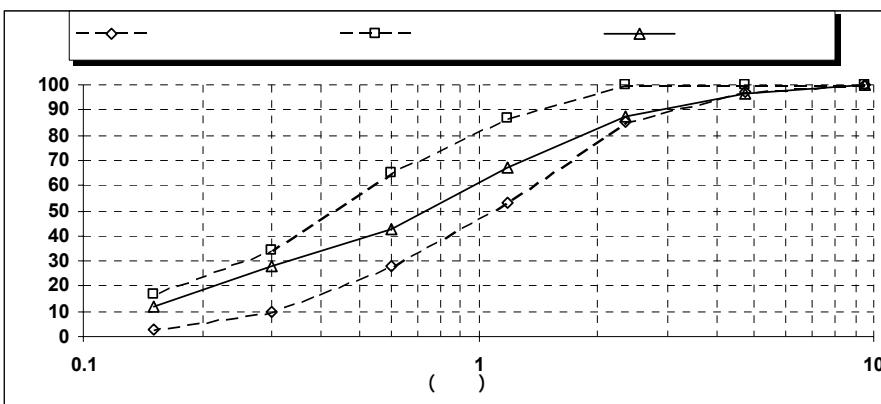
SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	MgO	SO ₃	Na ₂ O	K ₂ O
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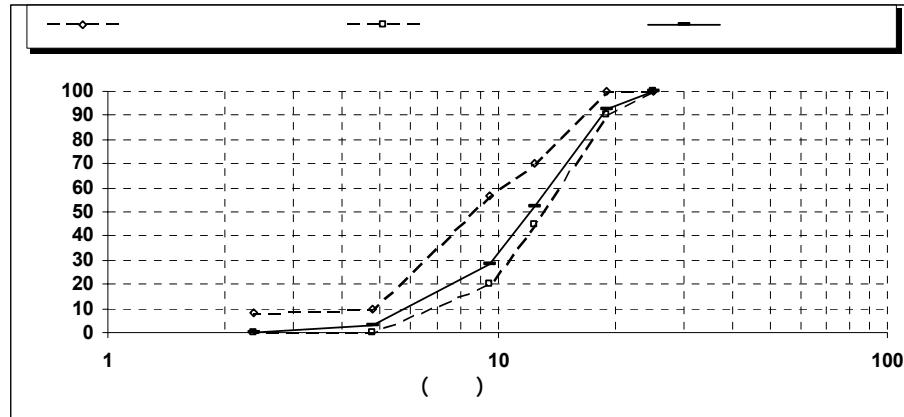
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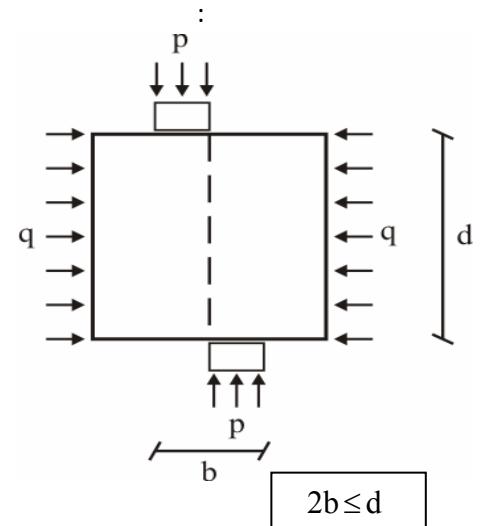


ASTM C33



.ASTM C33

صفحه درز
بین لایه ای در
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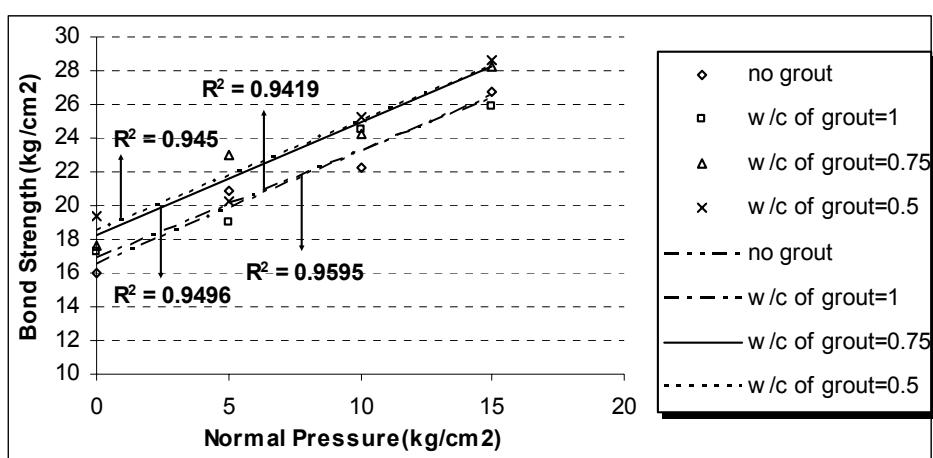
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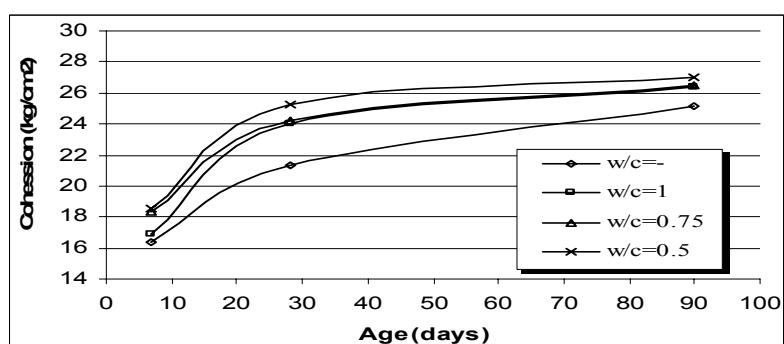
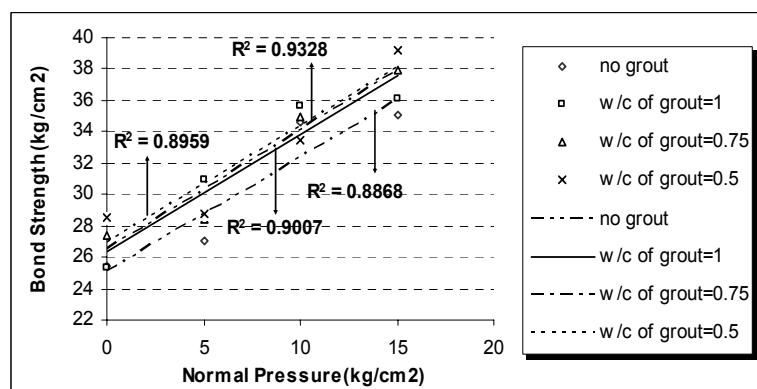
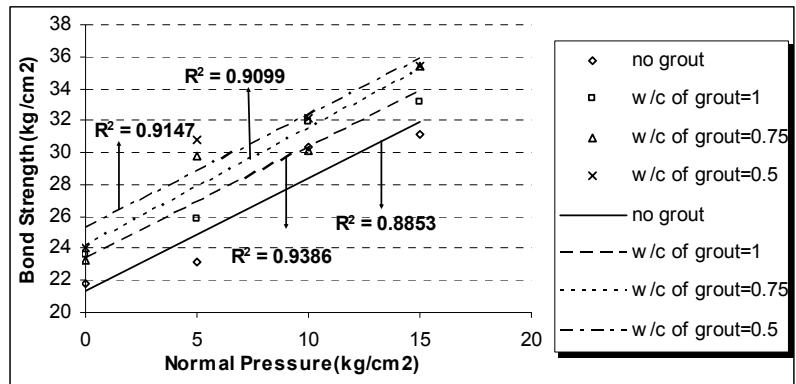
$$\tau_{ijk}$$

i k j

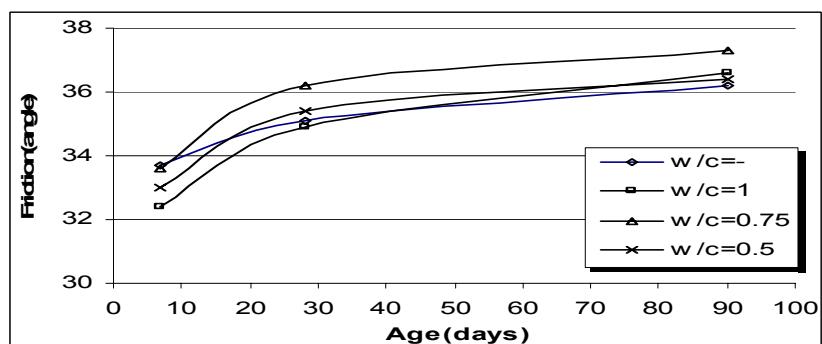
$$(\quad \quad)$$

$$\begin{aligned}
 & \dots \\
 & / \quad / \quad (I_{ijk}) \\
 & \quad / \quad / \quad I_{ijk} = [[\tau_{ijk} - \tau_{0jk}] / \tau_{0jk}] * 100 \\
 & \quad .(\quad) \quad / \quad / \\
 & (\quad + \quad) \quad / \quad / \quad / \quad / \\
 & \quad .[\quad] \quad (c, \varphi) \\
 & \quad / \quad / \quad \text{Kg/cm}^2 \\
 & \quad / \quad / \\
 & \quad . \\
 & (\quad) \quad . \quad \dots \\
 & \quad) \quad w/c = / \\
 & \quad (\quad) \quad (\quad) \\
 & \quad : \quad w/c = / \quad w/c = / \\
 & \quad .(\quad) \quad .(\quad) \\
 & \quad (kg/cm^2 : kg/m^3) \\
 & \quad | \quad | \quad | \\
 & | \quad | \quad | \\
 & / \quad / \quad /
 \end{aligned}$$





(c)



(φ)

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(%)				
$\sigma = 15$ kg/cm^2	$\sigma = 10$ kg/cm^2	$\sigma = 5$ kg/cm^2	$\sigma = 0$ kg/cm^2	
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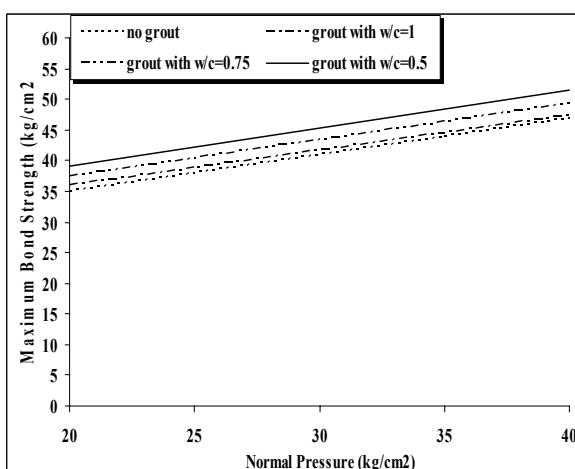
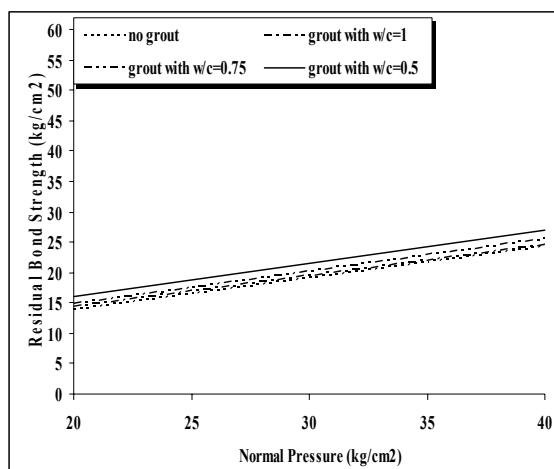
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w/c = /

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w/c = / w/c = /

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(c, ϕ)

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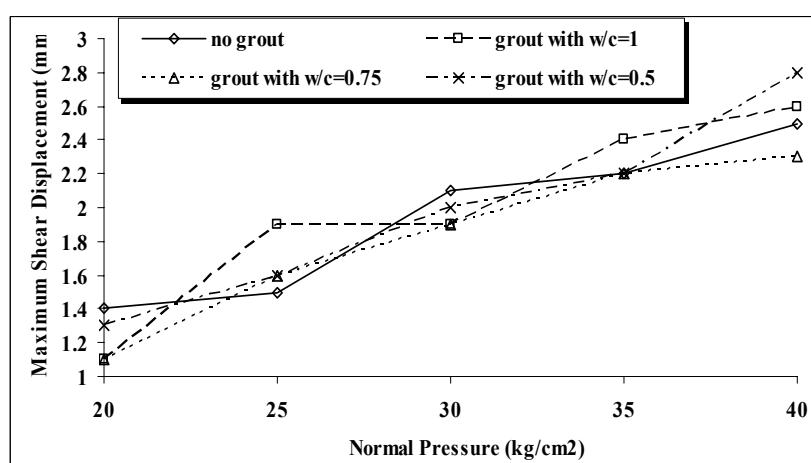
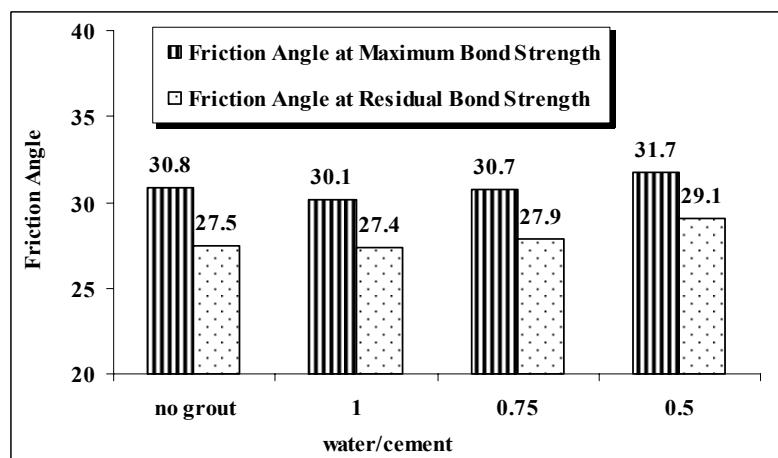
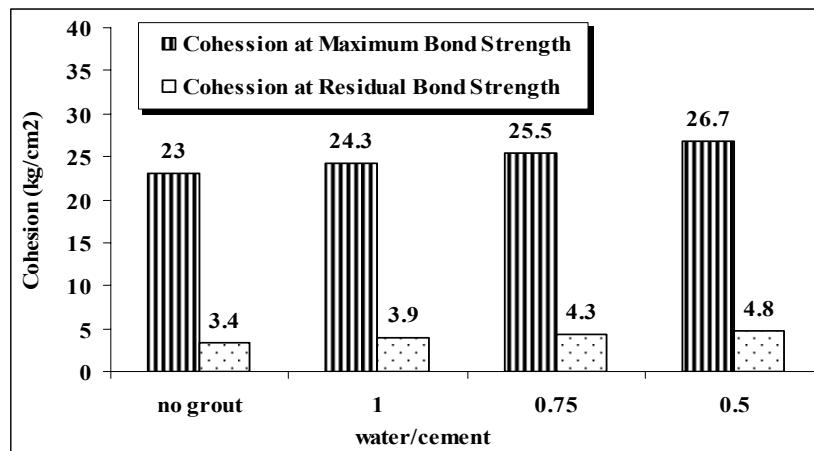
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- 1 - Mix Efficiency
 - 2 - Residual Shear Strength