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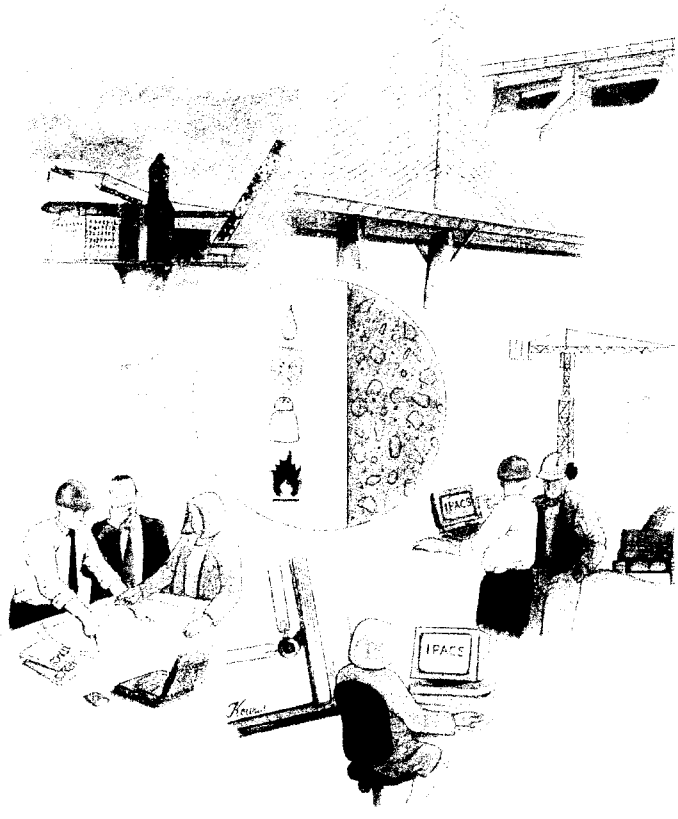
REPORT BE96-3843/2001:13-3

Modelling of Degree of Hydration on Basis of Adiabatic Heat Release



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Notations, Abbreviations, Units

Q_{pot}	maximum heat release of concrete	[kJ/m^3]
Q_{Cpot}	maximum heat release of cement	[kJ/kg]
c_c	heat capacity of concrete	[kJ/(kg·K)]
c_{Ce}	heat capacity of cement	[kJ/(kg·K)]
ρ_c	density of concrete	[kg/m^3]
c_1, t_k	parameters of modified JONASSON model	[-], [h]
a, b	parameters of Danish model	[h], [-]
d, t_{d0}	parameters of Shrinkage Core Model	[1/h], [h]
C, R, FA, SF, W	amount of cement, aggregate, fly ash, silica fume and water in concrete	[kg/m^3]
α	degree of hydration	[-]
meas α	measured degree of hydration	[-]
cal α	calculated value and model of degree of hydration, resp.	[-]
C_3A, C_2S, C_3S, C_4AF	clinker phases	-
measΔT_{ad}	measured adiabatic temperature rise	[K]
maxΔT_{ad}	maximum adiabatic temperature rise	[K]
t_e	effective age	[h]

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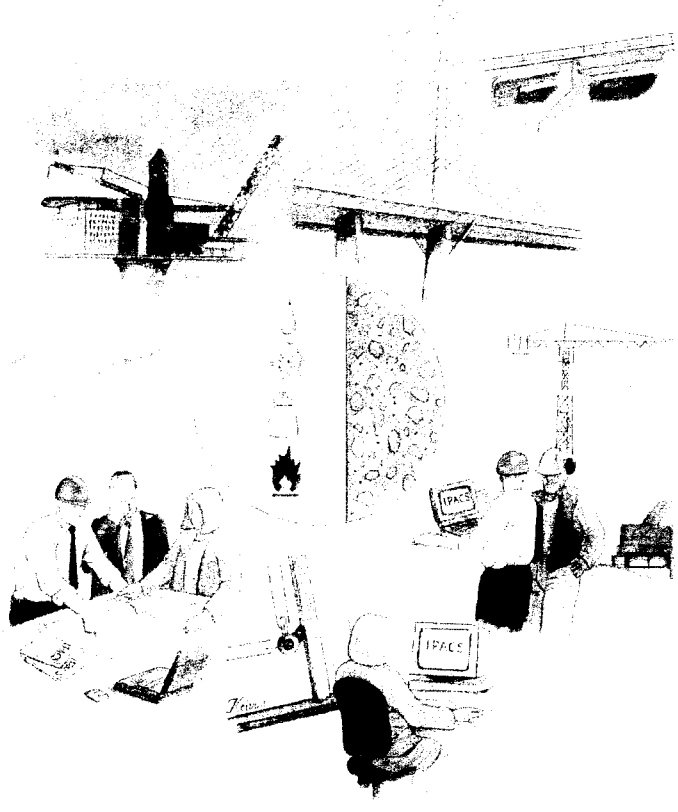
REPORT BE96-3843/2001:12-5

Non-Destructive Assessment of Mechanical Properties of Concrete at Very Early Age by US Techniques – Method, Results and Modelling



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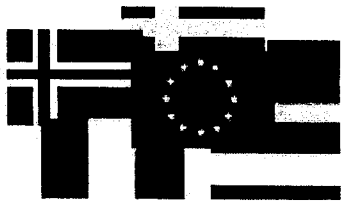
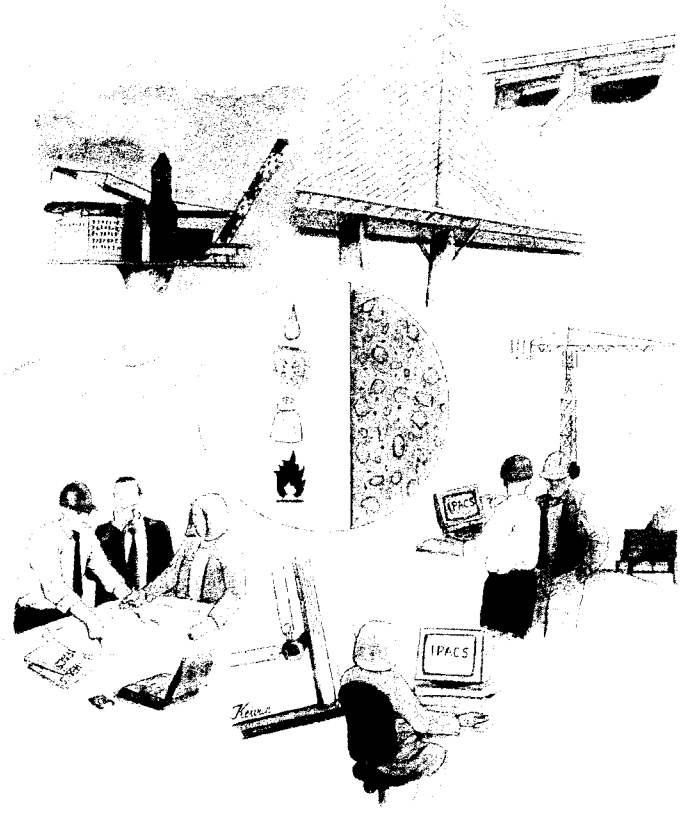


REPORT BE96-3843/2001:36-2

Fracture Mechanics Behaviour of Concrete at Early Age



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