Laboratory Test Sheet
Compressive Strength of Concrete Cores

Client : Alfred McAlpine Civil Engineering   Site : Stanton North Phase II

Client Ref : 12345   Lab. Ref : 10073   Job No : B4240/96V   Date Received : 04/09/1996

Supplier :   Source :

Material Type : Sub-base   Specification : Type 1 Sub-base

Material Name : Type 1 Sub-base   Stone Type : Not Known

Type of Rig .... Operator .... Location of Core ....

Photograph (tick)   Core .... Hole .... Date Sampled .... Date Tested ....

Adjusted compressive strength (C = AxB)					
Estimated in situ Cube Strength (MN/m2)					
Adjusted estimated cube strength for reinforcement (MN/m2)					

CALCULATION OF ESTIMATED CUBE STRENGTH

Estimated Cube Strength =   D / (1.5 + (1/a)) x Measured Compressive Strength of Core where   D = 2.5   (Horizontal Cores)   D = 2.3   (Vertical Cores)   a = L/D   (after end preparation)

REINFORCED ADJUSTMENT   Adjusted Estimated Cube Strength = Estimated Cube Strength x Factor

Factor   (a)   for Cores containing singlt bar = 1.0 + 1.5 ((Ør d) / (Øc l))

(b)   for Cores containing two bars no further apart than the diameter for the larger bar, only the bar corresponding to the higher value of Ø.r d
need be considered. If the bars are further apart, their combined effect should be assessed using the factor = 1.0 + 1.5 ((Ør d) / (Øc l))

l = length of uncapped core,   where,   Ør = diam. of reinforcement; Øc = diam. of core; d = distance of axis bar from nearer end of core

FACTORS FOR EXCESS VOIDAGE

Excess Voidage %	Strength Multiplying Factor
0	1.00
0.5	1.04
1.0	1.08
1.5	1.13
2.0	1.18
2.5	1.23
3.0	1.28
3.5	1.33
4.0	1.39
4.5	1.45
5.0	1.51

CHECK LIST

Diameter		150mm		100mm	
Diameter:	Aggregate Size Ratio	> 3 : 1		< 3 : 1	
Length:	Diameter Ratio	1 - 2		Other	
Calibration Check					

End Capping Inspection: _____

Shrinkage   Y/N   Cracks   Y/N   Voids Y/N

Direction of drilling (tick box)		Method of flush (tick box)		Dia. of drill bit
Vertical up		Water flush		
Vertical down	Approx Angle + a	Air flush		
Horizontal	- a	Dry		
Inclined		Antifreeze		

Depth of carbonation		Number of Pieces		Reinforcement size
Max	Min			Distance to reinforcement
		Assembled	Max	Condition
		length	Min	Vertical or horizontal

Operators comments on CORE SAMPLE (condition of concrete and steel, cracks, delamination)   Sketch of core hole location

Operators comments on CORE HOLE (cracks, voids, poor compaction, reiforcement, loss of water)

Notes: 1.   Mark core with site reference no.   4.   If outside of core is destroyed by coring, mark core with estimate of depth of new surface

2.   All core locations to be photographed or sketcked   5.   Samples to be dried, wrapped in cling film and sealed in polythene bag.

3.   All cores to be labelled

Lab. Sample Number.					
Orientation horiz/vertical					
Site curing conditions					
Date drilled/received					
Condition on receipt					
Date cast					
Date Tested					
Age at last					
Laboratory curing Date/Time In					
< 48 hours Date/Time Out					
Max Length as received (mm)					
Min Length as received (mm)					
Wt in air (g) BS 1881 Part 114					
Wt in water (g) BS 1881 Part 114					
Density by displacement (kg/m3)					
Excess voidage by inspection (%)					
Excess voidage by density (%)					
Average excess voidage (%)					
Factor for excess voidage (B)					
Length after trimming (mm)					
Length after capping (mm)					
Average Diameter (mm)					
Length/Diameter ratio (after capping)					
Capping Material					
Reiuforcement (diam) (mm)					
Load at Failure (kN)					
Compressive Strength (MN/m2) (A)					
Strength of Mortar Cube					

Tested By : _____   Date : _____   Checked By : _____   Date : _____