

based on 15 to 29 consecutive tests, a sample standard deviation S_s shall be established as the product of the calculated sample standard deviation and modification factor of Table 6.2

Table 6.2

Modification Factor for Sample Standard Deviation When Less Than 30 Tests Are Available

No. of tests	Modification factor for sample standard deviation
Less than 15	Use para 7. Below
15	1.16
20	1.08
25	1.03
30	1.00
1- Interpolate for intermediate number of tests 2- Modified sample standard deviation, S_s , to be used to determine required average strength f'_{cr}	

- 5 To determine the correction factor between cube strength and cylinder strength, the contractor shall establish at least 30 consecutive strength tests from each proposed mix design. This correction will remain valid thru the project providing that no change in the properties of the materials and no change in source occurred.
- 6 Required average compressive strength (Target Mean Strength) f'_{cr} used as the basis for selection of concrete proportions shall be determined from Table 6.3 using the sample standard deviation, S_s

Table 6.3: Required Average Compressive Strength (Target Mean Strength) When Data Are Available To Establish A Sample Standard Deviation

Specified compressive strength, N/mm ² or MPa	Required average compressive strength, Target Mean Strength, N/mm ² or MPa
$f'_c \leq 35$ MPa --- see footnote	$F'_{cr} = f'_c + 1.34S_s$ ----- Eq. 1
	$F'_{cr} = f'_c + 2.33S_s - 3.5$ ----- Eq. 2
$f'_c > 35$ MPa --- see footnote	$F'_{cr} = f'_c + 1.34S_s$ ----- Eq. 1
	$F'_{cr} = 0.90f'_c + 2.33S_s$ ----- Eq. 3

Note: Use the larger value computed from any equation

- 7 When a concrete production facility does not have field strength test records for calculation of S_s , Required average strength (Target Mean Strength) f'_{cr} shall be determined as follow:
 - (a) $F'_{cr} = f'_c + 8.5$ MPa when $20 < f'_c \leq 35$ MPa
 - (b) $F'_{cr} = 1.10f'_c + 5$ MPa when $f'_c > 35$ MPa