

**PERHITUNGAN KUAT TEKAN RATA-RATA DAN KUAT
TEKAN KARAKTERISTIK BENDA UJI KUBUS**

**1. Kuat Tekan Kubus dengan Faktor Air Semen 0.4
Umur 28 Hari**

➤ Sampel 1

$$\begin{aligned} &\text{Kuat tekan kubus benda uji 1 :} \\ &= \frac{\text{BesarTekanan}}{\text{LuasPenampang}} \\ &= \frac{700KN}{(15 \times 15)cm^2} \\ &= \frac{70000kg}{(15 \times 15)cm^2} \\ &= 311.11 \text{ kg/cm}^2 = 31.11 \text{ MPa} \end{aligned}$$

➤ Sampel 2

$$\begin{aligned} &\text{Kuat tekan kubus benda uji 2 :} \\ &= \frac{\text{BesarTekanan}}{\text{LuasPenampang}} \\ &= \frac{840KN}{(15 \times 15)cm^2} \\ &= \frac{84000kg}{(15 \times 15)cm^2} \\ &= 373.33 \text{ kg/cm}^2 = 37.33 \text{ MPa} \end{aligned}$$

➤ Sampel 3

$$\begin{aligned} &\text{Kuat tekan kubus benda uji 3 :} \\ &= \frac{\text{BesarTekanan}}{\text{LuasPenampang}} \end{aligned}$$

$$\begin{aligned} &= \frac{760KN}{(15 \times 15)cm^2} \\ &= \frac{76000kg}{(15 \times 15)cm^2} \\ &= 337.78 \text{ kg/cm}^2 = 33.78 \text{ MPa} \end{aligned}$$

➤ Sampel 4

Kuat tekan kubus benda uji 4 :

$$\begin{aligned} &= \frac{\text{BesarTekanan}}{\text{LuasPenampang}} \\ &= \frac{800KN}{(15 \times 15)cm^2} \\ &= \frac{80000kg}{(15 \times 15)cm^2} \\ &= 355.56 \text{ kg/cm}^2 = 35.56 \text{ MPa} \end{aligned}$$

➤ Sampel 5

Kuat tekan kubus benda uji 5 :

$$\begin{aligned} &= \frac{\text{BesarTekanan}}{\text{LuasPenampang}} \\ &= \frac{680KN}{(15 \times 15)cm^2} \\ &= \frac{68000kg}{(15 \times 15)cm^2} \\ &= 302.22 \text{ kg/cm}^2 = 30.22 \text{ MPa} \end{aligned}$$

➤ Sampel 6

Kuat tekan kubus benda uji 6 :

$$= \frac{\text{BesarTekanan}}{\text{LuasPenampang}}$$

$$\begin{aligned} &= \frac{740KN}{(15 \times 15)cm^2} \\ &= \frac{74000kg}{(15 \times 15)cm^2} \\ &= 328.89 \text{ kg} / cm^2 = 32.89 \text{ MPa} \end{aligned}$$

➤ Sampel 7

Kuat tekan kubus benda uji 7 :

$$\begin{aligned} &= \frac{\text{BesarTekanan}}{\text{LuasPenampang}} \\ &= \frac{780KN}{(15 \times 15)cm^2} \\ &= \frac{78000kg}{(15 \times 15)cm^2} \\ &= 346.67 \text{ kg} / cm^2 = 34.67 \text{ MPa} \end{aligned}$$

➤ Sampel 8

Kuat tekan kubus benda uji 8 :

$$\begin{aligned} &= \frac{\text{BesarTekanan}}{\text{LuasPenampang}} \\ &= \frac{690KN}{(15 \times 15)cm^2} \\ &= \frac{69000kg}{(15 \times 15)cm^2} \\ &= 306.67 \text{ kg} / cm^2 = 30.67 \text{ MPa} \end{aligned}$$

➤ Sampel 9

Kuat tekan kubus benda uji 9 :

$$= \frac{\text{BesarTekanan}}{\text{LuasPenampang}}$$

$$\begin{aligned} &= \frac{820KN}{(15 \times 15)cm^2} \\ &= \frac{82000kg}{(15 \times 15)cm^2} \\ &= 364.44 \text{ kg} / cm^2 = 36.44 \text{ MPa} \end{aligned}$$

➤ Sampel 10

Kuat tekan kubus benda uji 10 :

$$\begin{aligned} &= \frac{\text{BesarTekanan}}{\text{LuasPenampang}} \\ &= \frac{720KN}{(15 \times 15)cm^2} \\ &= \frac{72000kg}{(15 \times 15)cm^2} \\ &= 320 \text{ kg} / cm^2 = 32 \text{ MPa} \end{aligned}$$

➤ Sampel 11

Kuat tekan kubus benda uji 11 :

$$\begin{aligned} &= \frac{\text{BesarTekanan}}{\text{LuasPenampang}} \\ &= \frac{670KN}{(15 \times 15)cm^2} \\ &= \frac{67000kg}{(15 \times 15)cm^2} \\ &= 297.78 \text{ kg} / cm^2 = 29.78 \text{ MPa} \end{aligned}$$

➤ Sampel 12

Kuat tekan kubus benda uji 12 :

$$= \frac{\text{BesarTekanan}}{\text{LuasPenampang}}$$

$$\begin{aligned} &= \frac{900KN}{(15 \times 15)cm^2} \\ &= \frac{90000kg}{(15 \times 15)cm^2} \\ &= 400 \text{ kg} / cm^2 \quad = \quad 40 \text{ MPa} \end{aligned}$$

➤ Sampel 13

Kuat tekan kubus benda uji 13 :

$$\begin{aligned} &= \frac{\text{BesarTekanan}}{\text{LuasPenampang}} \\ &= \frac{640KN}{(15 \times 15)cm^2} \\ &= \frac{64000kg}{(15 \times 15)cm^2} \\ &= 284.44 \text{ kg} / cm^2 \quad = \quad 28.44 \text{ MPa} \end{aligned}$$

➤ Sampel 14

Kuat tekan kubus benda uji 14 :

$$\begin{aligned} &= \frac{\text{BesarTekanan}}{\text{LuasPenampang}} \\ &= \frac{820KN}{(15 \times 15)cm^2} \\ &= \frac{82000kg}{(15 \times 15)cm^2} \\ &= 364.44 \text{ kg} / cm^2 \quad = \quad 36.44 \text{ MPa} \end{aligned}$$

➤ Sampel 15

Kuat tekan kubus benda uji 15 :

$$= \frac{\text{BesarTekanan}}{\text{LuasPenampang}}$$

$$\begin{aligned} &= \frac{830KN}{(15 \times 15)cm^2} \\ &= \frac{83000kg}{(15 \times 15)cm^2} \\ &= 368.89 \text{ kg} / cm^2 = 36.89 \text{ MPa} \end{aligned}$$

➤ Sampel 16

Kuat tekan kubus benda uji 16 :

$$\begin{aligned} &= \frac{\text{BesarTekanan}}{\text{LuasPenampang}} \\ &= \frac{760KN}{(15 \times 15)cm^2} \\ &= \frac{76000kg}{(15 \times 15)cm^2} \\ &= 337.78 \text{ kg} / cm^2 = 33.78 \text{ MPa} \end{aligned}$$

➤ Sampel 17

Kuat tekan kubus benda uji 17 :

$$\begin{aligned} &= \frac{\text{BesarTekanan}}{\text{LuasPenampang}} \\ &= \frac{760KN}{(15 \times 15)cm^2} \\ &= \frac{76000kg}{(15 \times 15)cm^2} \\ &= 337.78 \text{ kg} / cm^2 = 33.78 \text{ MPa} \end{aligned}$$

➤ Sampel 18

Kuat tekan kubus benda uji 18 :

$$= \frac{\text{BesarTekanan}}{\text{LuasPenampang}}$$

$$\begin{aligned} &= \frac{780KN}{(15 \times 15)cm^2} \\ &= \frac{78000kg}{(15 \times 15)cm^2} \\ &= 346.67 \text{ kg/cm}^2 = 34.67 \text{ MPa} \end{aligned}$$

➤ Sampel 19

Kuat tekan kubus benda uji 19 :

$$\begin{aligned} &= \frac{\text{BesarTekanan}}{\text{LuasPenampang}} \\ &= \frac{800KN}{(15 \times 15)cm^2} \\ &= \frac{80000kg}{(15 \times 15)cm^2} \\ &= 355.56 \text{ kg/cm}^2 = 35.56 \text{ MPa} \end{aligned}$$

➤ Sampel 20

Kuat tekan kubus benda uji 20 :

$$\begin{aligned} &= \frac{\text{BesarTekanan}}{\text{LuasPenampang}} \\ &= \frac{720KN}{(15 \times 15)cm^2} \\ &= \frac{72000kg}{(15 \times 15)cm^2} \\ &= 320 \text{ kg/cm}^2 = 32 \text{ Mpa} \end{aligned}$$

🌀 **Kuat tekan rata – rata dan kuat tekan karakteristik pada FAS 0.4 :**

$$\sigma'_{bm} = (31.11 + 37.33 + 33.78 + 35.56 + 30.22 + 32.89 + 34.67 + 30.67 + 36.44 + 32 + 29.78 + 40 + 28.44 + 36.44 + 36.89 + 33.78 + 33.78 + 34.67 + 35.56 + 32) / 20$$

$$\sigma'_{bm} = 33.8 \text{ Mpa} = 338 \text{ kg/cm}^2$$

$$\sigma'_{bk} = \sigma'_{bm} - 1.64 \times S$$

$$\sigma'_{bk} = 338 - 1.64 \times 29.3 = 289.9 \text{ kg/cm}^2$$

2. Kuat Tekan Kubus dengan Faktor Air Semen 0.5 Umur 28 Hari

➤ Sampel 1

Kuat tekan kubus benda uji 1 :

$$\begin{aligned} &= \frac{\text{BesarTekanan}}{\text{LuasPenampang}} \\ &= \frac{480KN}{(15 \times 15)cm^2} \\ &= \frac{48000kg}{(15 \times 15)cm^2} \\ &= 213.33 \text{ kg} / cm^2 \quad = \quad 21.33 \text{ MPa} \end{aligned}$$

➤ Sampel 2

Kuat tekan kubus benda uji 2 :

$$\begin{aligned} &= \frac{\text{BesarTekanan}}{\text{LuasPenampang}} \\ &= \frac{500KN}{(15 \times 15)cm^2} \\ &= \frac{50000kg}{(15 \times 15)cm^2} \\ &= 222.22 \text{ kg} / cm^2 \quad = \quad 22.22 \text{ MPa} \end{aligned}$$

➤ Sampel 3

Kuat tekan kubus benda uji 3 :

$$= \frac{\text{BesarTekanan}}{\text{LuasPenampang}}$$

$$\begin{aligned} &= \frac{470KN}{(15 \times 15)cm^2} \\ &= \frac{47000kg}{(15 \times 15)cm^2} \\ &= 208.89 \text{ kg / cm}^2 = 20.89 \text{ MPa} \end{aligned}$$

➤ Sampel 4

Kuat tekan kubus benda uji 4 :

$$\begin{aligned} &= \frac{\text{BesarTekanan}}{\text{LuasPenampang}} \\ &= \frac{520KN}{(15 \times 15)cm^2} \\ &= \frac{52000kg}{(15 \times 15)cm^2} \\ &= 231.11 \text{ kg / cm}^2 = 23.11 \text{ MPa} \end{aligned}$$

➤ Sampel 5

Kuat tekan kubus benda uji 5 :

$$\begin{aligned} &= \frac{\text{BesarTekanan}}{\text{LuasPenampang}} \\ &= \frac{500KN}{(15 \times 15)cm^2} \\ &= \frac{50000kg}{(15 \times 15)cm^2} \\ &= 222.22 \text{ kg / cm}^2 = 22.22 \text{ MPa} \end{aligned}$$

➤ Sampel 6

Kuat tekan kubus benda uji 6 :

$$= \frac{\text{BesarTekanan}}{\text{LuasPenampang}}$$

$$\begin{aligned} &= \frac{490KN}{(15 \times 15)cm^2} \\ &= \frac{49000kg}{(15 \times 15)cm^2} \\ &= 217.78 \text{ kg} / cm^2 = 21.78 \text{ MPa} \end{aligned}$$

➤ Sampel 7

Kuat tekan kubus benda uji 7 :

$$\begin{aligned} &= \frac{\text{BesarTekanan}}{\text{LuasPenampang}} \\ &= \frac{460KN}{(15 \times 15)cm^2} \\ &= \frac{46000kg}{(15 \times 15)cm^2} \\ &= 204.44 \text{ kg} / cm^2 = 20.44 \text{ MPa} \end{aligned}$$

➤ Sampel 8

Kuat tekan kubus benda uji 8 :

$$\begin{aligned} &= \frac{\text{BesarTekanan}}{\text{LuasPenampang}} \\ &= \frac{510KN}{(15 \times 15)cm^2} \\ &= \frac{51000kg}{(15 \times 15)cm^2} \\ &= 226.67 \text{ kg} / cm^2 = 22.67 \text{ MPa} \end{aligned}$$

➤ Sampel 9

Kuat tekan kubus benda uji 9 :

$$= \frac{\text{BesarTekanan}}{\text{LuasPenampang}}$$

$$\begin{aligned} &= \frac{480KN}{(15 \times 15)cm^2} \\ &= \frac{48000kg}{(15 \times 15)cm^2} \\ &= 213.33 \text{ kg} / cm^2 = 21.33 \text{ MPa} \end{aligned}$$

➤ Sampel 10

Kuat tekan kubus benda uji 10 :

$$\begin{aligned} &= \frac{\text{BesarTekanan}}{\text{LuasPenampang}} \\ &= \frac{470KN}{(15 \times 15)cm^2} \\ &= \frac{47000kg}{(15 \times 15)cm^2} \\ &= 208.89 \text{ kg} / cm^2 = 20.89 \text{ MPa} \end{aligned}$$

➤ Sampel 11

Kuat tekan kubus benda uji 11 :

$$\begin{aligned} &= \frac{\text{BesarTekanan}}{\text{LuasPenampang}} \\ &= \frac{500KN}{(15 \times 15)cm^2} \\ &= \frac{50000kg}{(15 \times 15)cm^2} \\ &= 222.22 \text{ kg} / cm^2 = 22.22 \text{ MPa} \end{aligned}$$

➤ Sampel 12

Kuat tekan kubus benda uji 12 :

$$= \frac{\text{BesarTekanan}}{\text{LuasPenampang}}$$

$$\begin{aligned} &= \frac{490KN}{(15 \times 15)cm^2} \\ &= \frac{49000kg}{(15 \times 15)cm^2} \\ &= 217.78 \text{ kg} / cm^2 = 21.78 \text{ MPa} \end{aligned}$$

➤ Sampel 13

Kuat tekan kubus benda uji 13 :

$$\begin{aligned} &= \frac{\text{BesarTekanan}}{\text{LuasPenampang}} \\ &= \frac{440KN}{(15 \times 15)cm^2} \\ &= \frac{44000kg}{(15 \times 15)cm^2} \\ &= 195.6 \text{ kg} / cm^2 = 19.56 \text{ MPa} \end{aligned}$$

➤ Sampel 14

Kuat tekan kubus benda uji 14 :

$$\begin{aligned} &= \frac{\text{BesarTekanan}}{\text{LuasPenampang}} \\ &= \frac{510KN}{(15 \times 15)cm^2} \\ &= \frac{51000kg}{(15 \times 15)cm^2} \\ &= 226.7 \text{ kg} / cm^2 = 22.67 \text{ MPa} \end{aligned}$$

➤ Sampel 15

Kuat tekan kubus benda uji 15 :

$$= \frac{\text{BesarTekanan}}{\text{LuasPenampang}}$$

$$\begin{aligned} &= \frac{550KN}{(15 \times 15)cm^2} \\ &= \frac{55000kg}{(15 \times 15)cm^2} \\ &= 244.44 \text{ kg / cm}^2 = 24.44 \text{ MPa} \end{aligned}$$

➤ Sampel 16

Kuat tekan kubus benda uji 16 :

$$\begin{aligned} &= \frac{\text{BesarTekanan}}{\text{LuasPenampang}} \\ &= \frac{500KN}{(15 \times 15)cm^2} \\ &= \frac{50000kg}{(15 \times 15)cm^2} \\ &= 222.22 \text{ kg / cm}^2 = 22.22 \text{ MPa} \end{aligned}$$

➤ Sampel 17

Kuat tekan kubus benda uji 17 :

$$\begin{aligned} &= \frac{\text{BesarTekanan}}{\text{LuasPenampang}} \\ &= \frac{480KN}{(15 \times 15)cm^2} \\ &= \frac{48000kg}{(15 \times 15)cm^2} \\ &= 213.33 \text{ kg / cm}^2 = 21.33 \text{ MPa} \end{aligned}$$

➤ Sampel 18

Kuat tekan kubus benda uji 18 :

$$= \frac{\text{BesarTekanan}}{\text{LuasPenampang}}$$

$$\begin{aligned} &= \frac{480KN}{(15 \times 15)cm^2} \\ &= \frac{48000kg}{(15 \times 15)cm^2} \\ &= 213.33 \text{ kg/cm}^2 = 21.33 \text{ MPa} \end{aligned}$$

➤ Sampel 19

Kuat tekan kubus benda uji 19 :

$$\begin{aligned} &= \frac{\text{BesarTekanan}}{\text{LuasPenampang}} \\ &= \frac{450KN}{(15 \times 15)cm^2} \\ &= \frac{45000kg}{(15 \times 15)cm^2} \\ &= 200 \text{ kg/cm}^2 = 20 \text{ MPa} \end{aligned}$$

➤ Sampel 20

Kuat tekan kubus benda uji 20 :

$$\begin{aligned} &= \frac{\text{BesarTekanan}}{\text{LuasPenampang}} \\ &= \frac{450KN}{(15 \times 15)cm^2} \\ &= \frac{45000kg}{(15 \times 15)cm^2} \\ &= 200 \text{ kg/cm}^2 = 20 \text{ Mpa} \end{aligned}$$

🌀 **Kuat tekan rata – rata dan kuat tekan karakteristik pada FAS 0.5 :**

$$\begin{aligned} \sigma' \text{ bm} &= (21.33 + 22.22 + 20.89 + 23.11 + 22.22 + 21.78 + 20.44 + 22.67 + 21.33 + 20.89 \\ &\quad + 22.22 + 21.78 + 19.56 + 22.67 + 24.44 + 22.22 + 21.33 + 21.33 + 20 + 20) / 20 \end{aligned}$$

$$\sigma' \text{ bm} = 21.62 \text{ Mpa} = 216.2 \text{ kg/cm}^2$$

$$\sigma' \text{ bk} = \sigma' \text{ bm} - 1.64 \times S$$

$$\sigma' \text{ bk} = 216.2 - 1.64 \times 19 = 185 \text{ kg/cm}^2$$

3. Kuat Tekan Kubus dengan Faktor Air Semen 0.6 Umur 28 Hari

➤ Sampel 1

Kuat tekan kubus benda uji 1 :

$$\begin{aligned} &= \frac{\text{BesarTekanan}}{\text{LuasPenampang}} \\ &= \frac{420KN}{(15 \times 15)cm^2} \\ &= \frac{42000kg}{(15 \times 15)cm^2} \\ &= 186.7 \text{ kg/cm}^2 \quad = \quad 18.67 \text{ MPa} \end{aligned}$$

➤ Sampel 2

Kuat tekan kubus benda uji 2 :

$$\begin{aligned} &= \frac{\text{BesarTekanan}}{\text{LuasPenampang}} \\ &= \frac{420KN}{(15 \times 15)cm^2} \\ &= \frac{42000kg}{(15 \times 15)cm^2} \\ &= 186.7 \text{ kg/cm}^2 \quad = \quad 18.67 \text{ MPa} \end{aligned}$$

➤ Sampel 3

Kuat tekan kubus benda uji 3 :

$$= \frac{\text{BesarTekanan}}{\text{LuasPenampang}}$$

$$\begin{aligned} &= \frac{370KN}{(15 \times 15)cm^2} \\ &= \frac{37000kg}{(15 \times 15)cm^2} \\ &= 164.44 \text{ kg/cm}^2 = 16.44 \text{ MPa} \end{aligned}$$

➤ Sampel 4

Kuat tekan kubus benda uji 4 :

$$\begin{aligned} &= \frac{\text{BesarTekanan}}{\text{LuasPenampang}} \\ &= \frac{460KN}{(15 \times 15)cm^2} \\ &= \frac{46000kg}{(15 \times 15)cm^2} \\ &= 204.44 \text{ kg/cm}^2 = 20.44 \text{ MPa} \end{aligned}$$

➤ Sampel 5

Kuat tekan kubus benda uji 5 :

$$\begin{aligned} &= \frac{\text{BesarTekanan}}{\text{LuasPenampang}} \\ &= \frac{420KN}{(15 \times 15)cm^2} \\ &= \frac{42000kg}{(15 \times 15)cm^2} \\ &= 186.7 \text{ kg/cm}^2 = 18.67 \text{ MPa} \end{aligned}$$

➤ Sampel 6

Kuat tekan kubus benda uji 6 :

$$= \frac{\text{BesarTekanan}}{\text{LuasPenampang}}$$

$$\begin{aligned} &= \frac{490KN}{(15 \times 15)cm^2} \\ &= \frac{49000kg}{(15 \times 15)cm^2} \\ &= 217.78 \text{ kg/cm}^2 = 21.78 \text{ MPa} \end{aligned}$$

➤ Sampel 7

Kuat tekan kubus benda uji 7 :

$$\begin{aligned} &= \frac{\text{BesarTekanan}}{\text{LuasPenampang}} \\ &= \frac{470KN}{(15 \times 15)cm^2} \\ &= \frac{47000kg}{(15 \times 15)cm^2} \\ &= 208.89 \text{ kg/cm}^2 = 20.89 \text{ MPa} \end{aligned}$$

➤ Sampel 8

Kuat tekan kubus benda uji 8 :

$$\begin{aligned} &= \frac{\text{BesarTekanan}}{\text{LuasPenampang}} \\ &= \frac{400KN}{(15 \times 15)cm^2} \\ &= \frac{40000kg}{(15 \times 15)cm^2} \\ &= 177.78 \text{ kg/cm}^2 = 17.78 \text{ MPa} \end{aligned}$$

➤ Sampel 9

Kuat tekan kubus benda uji 9 :

$$= \frac{\text{BesarTekanan}}{\text{LuasPenampang}}$$

$$\begin{aligned} &= \frac{460KN}{(15 \times 15)cm^2} \\ &= \frac{46000kg}{(15 \times 15)cm^2} \\ &= 204.44 \text{ kg} / cm^2 = 20.44 \text{ MPa} \end{aligned}$$

➤ Sampel 10

Kuat tekan kubus benda uji 10 :

$$\begin{aligned} &= \frac{\text{BesarTekanan}}{\text{LuasPenampang}} \\ &= \frac{470KN}{(15 \times 15)cm^2} \\ &= \frac{47000kg}{(15 \times 15)cm^2} \\ &= 208.89 \text{ kg} / cm^2 = 20.89 \text{ MPa} \end{aligned}$$

➤ Sampel 11

Kuat tekan kubus benda uji 11 :

$$\begin{aligned} &= \frac{\text{Besar.tekanan}}{\text{Luas.penampang}} \\ &= \frac{370KN}{(15 \times 15)cm^2} \\ &= \frac{37000kg}{(15 \times 15)cm^2} \\ &= 164.44 \text{ kg} / cm^2 = 16.44 \text{ MPa} \end{aligned}$$

➤ Sampel 12

Kuat tekan kubus benda uji 12 :

$$= \frac{\text{BesarTekanan}}{\text{LuasPenampang}}$$

$$\begin{aligned} &= \frac{360KN}{(15 \times 15)cm^2} \\ &= \frac{36000kg}{(15 \times 15)cm^2} \\ &= 160 \text{ kg} / cm^2 \quad = \quad 16 \text{ MPa} \end{aligned}$$

➤ Sampel 13

Kuat tekan kubus benda uji 13 :

$$\begin{aligned} &= \frac{\text{BesarTekanan}}{\text{LuasPenampang}} \\ &= \frac{460KN}{(15 \times 15)cm^2} \\ &= \frac{46000kg}{(15 \times 15)cm^2} \\ &= 204.44 \text{ kg} / cm^2 \quad = \quad 20.44 \text{ MPa} \end{aligned}$$

➤ Sampel 14

Kuat tekan kubus benda uji 14 :

$$\begin{aligned} &= \frac{\text{BesarTekanan}}{\text{LuasPenampang}} \\ &= \frac{400KN}{(15 \times 15)cm^2} \\ &= \frac{40000kg}{(15 \times 15)cm^2} \\ &= 177.78 \text{ kg} / cm^2 \quad = \quad 17.78 \text{ MPa} \end{aligned}$$

➤ Sampel 15

Kuat tekan kubus benda uji 15 :

$$= \frac{\text{BesarTekanan}}{\text{LuasPenampang}}$$

$$\begin{aligned} &= \frac{380KN}{(15 \times 15)cm^2} \\ &= \frac{38000kg}{(15 \times 15)cm^2} \\ &= 168.89 \text{ kg} / cm^2 = 16.89 \text{ MPa} \end{aligned}$$

➤ Sampel 16

Kuat tekan kubus benda uji 16 :

$$\begin{aligned} &= \frac{\textit{BesarTekanan}}{\textit{LuasPenampang}} \\ &= \frac{400KN}{(15 \times 15)cm^2} \\ &= \frac{40000kg}{(15 \times 15)cm^2} \\ &= 177.78 \text{ kg} / cm^2 = 17.78 \text{ MPa} \end{aligned}$$

➤ Sampel 17

Kuat tekan kubus benda uji 17 :

$$\begin{aligned} &= \frac{\textit{BesarTekanan}}{\textit{LuasPenampang}} \\ &= \frac{440KN}{(15 \times 15)cm^2} \\ &= \frac{44000kg}{(15 \times 15)cm^2} \\ &= 195.6 \text{ kg} / cm^2 = 19.56 \text{ MPa} \end{aligned}$$

➤ Sampel 18

Kuat tekan kubus benda uji 18 :

$$= \frac{\textit{BesarTekanan}}{\textit{LuasPenampang}}$$

$$\begin{aligned} &= \frac{500KN}{(15 \times 15)cm^2} \\ &= \frac{50000kg}{(15 \times 15)cm^2} \\ &= 222.2 \text{ kg/cm}^2 = 22.22 \text{ MPa} \end{aligned}$$

➤ Sampel 19

Kuat tekan kubus benda uji 19 :

$$\begin{aligned} &= \frac{\text{BesarTekanan}}{\text{LuasPenampang}} \\ &= \frac{480KN}{(15 \times 15)cm^2} \\ &= \frac{48000kg}{(15 \times 15)cm^2} \\ &= 213.33 \text{ kg/cm}^2 = 21.33 \text{ MPa} \end{aligned}$$

➤ Sampel 20

Kuat tekan kubus benda uji 20 :

$$\begin{aligned} &= \frac{\text{BesarTekanan}}{\text{LuasPenampang}} \\ &= \frac{430KN}{(15 \times 15)cm^2} \\ &= \frac{43000kg}{(15 \times 15)cm^2} \\ &= 191.11 \text{ kg/cm}^2 = 19.11 \text{ Mpa} \end{aligned}$$

🌀 **Kuat tekan rata – rata dan kuat tekan karakteristik pada FAS 0.6 :**

$$\sigma'_{bm} = (18.67 + 18.67 + 16.44 + 20.44 + 18.67 + 21.78 + 20.89 + 17.78 + 20.44 + 20.89 + 16.44 + 16 + 20.44 + 17.78 + 16.89 + 17.78 + 19.56 + 22.22 + 21.33 + 19.11) / 20$$

$$\sigma'_{bm} = 19.11 \text{ Mpa} = 191.1 \text{ kg/cm}^2$$

$$\sigma'_{bk} = \sigma'_{bm} - 1.64 \times S$$

$$\sigma'_{bk} = 191.1 - 1.64 \times 18.9 = 160.1 \text{ kg/cm}^2$$