# Introduction to Connections Bolts and Bolted Connections









Bolted connections possess advantage such as

- a. Less skilled labour required
- b. Fast pace of work
- c. Easy assembling and dissembling
- d. All of the above

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Name the components of bolt in the following diagram



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- a. 1. nut, 2. shank, 3. washer
- b. 1. washer, 2. shank, 3. thread
- c. 1. bolt head, 2. shank, 3. thread
- d. 1. bolt, 2. thread, 3. shank

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Select correct statements about black bolts

- 1. A.k.a. unfinished bolts
- 2. They are low to medium carbon steel made bolts
- 3. Designated as M.d.l

- a. 1 and 2
- b. 2 and 3
- c. 1 and 3
- d. 1, 2 and 3

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When diameter (d) of black bolt is more than 24 mm then bolt hole diameter is taken as

- a. d mm
- b. (d + 1) mm
- c. (d + 2) mm
- d. (d + 3) mm



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Cotter pins are used for \_\_\_\_\_ and washers are used for \_\_\_\_\_

- a. Locking the nut-bolt, inducing tension
- b. Inducing tension, locking the-nut bolt
- c. Identifying bolt size, inducing tension
- d. Inducing tension, identifying bolt size

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For more Civil Engineering Study Material English Channel: <u>Simplified Learning</u> Hindi Channel: <u>Civil Engineering in Hindi Simplified Learning</u> Bolts are graded as x.y which imply

- a. x is nominal tensile strength and y is yield strength
- b. x is nominal tensile strength as [x\*10] and y is yield strength as [y\*10]
- x is nominal tensile strength as [x\*100] and y is yield strength as [y\*100]
- d. x is nominal tensile strength as [x\*100] and y is yield strength as [0.y\*(x\*100)]

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- High strength bolt contains
- a. Medium carbon content
- b. Low carbon content
- c. High
- d. Very high

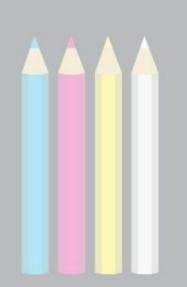
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## 'HSFG' bolt stands for

- a. High Strength Friction Gauge
  b. High Strength Friction Grip
- c. High Shear Friction Grip
- d. High Shear Friction Gauge

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- IS : \_\_\_\_\_ covers HSFG bolts and nuts
- a. 800
  b. 875
  c. 3757
  d. 857



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Select the correct statements regarding HSFG bolts

- Slip is allowed between connected members
- 2. Loads are transferred by friction
- Use of HSFG bolts lead to less size of gusset plate required
- *a.* 1 & 2 *b.* 2 & 3 *c.* 1 & 3 *d.* 1,2 & 3

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# State whether the following statement is true or false

"Precision and semi precision bolts are a.k.a. close tolerance bolts"

- a. True
- b. False

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