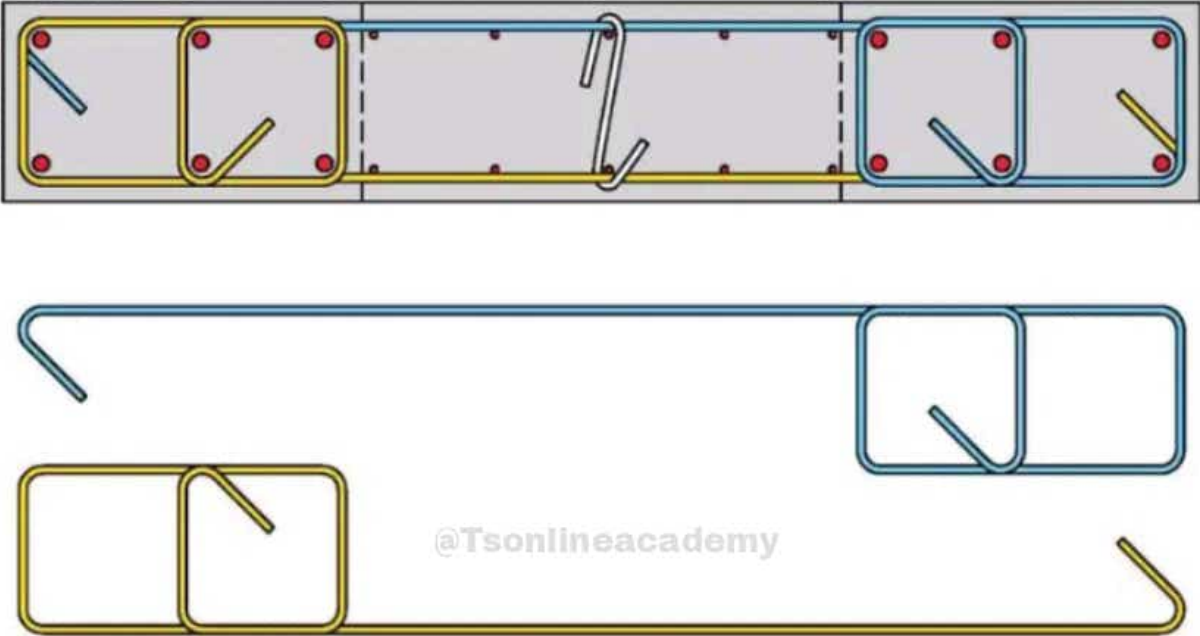
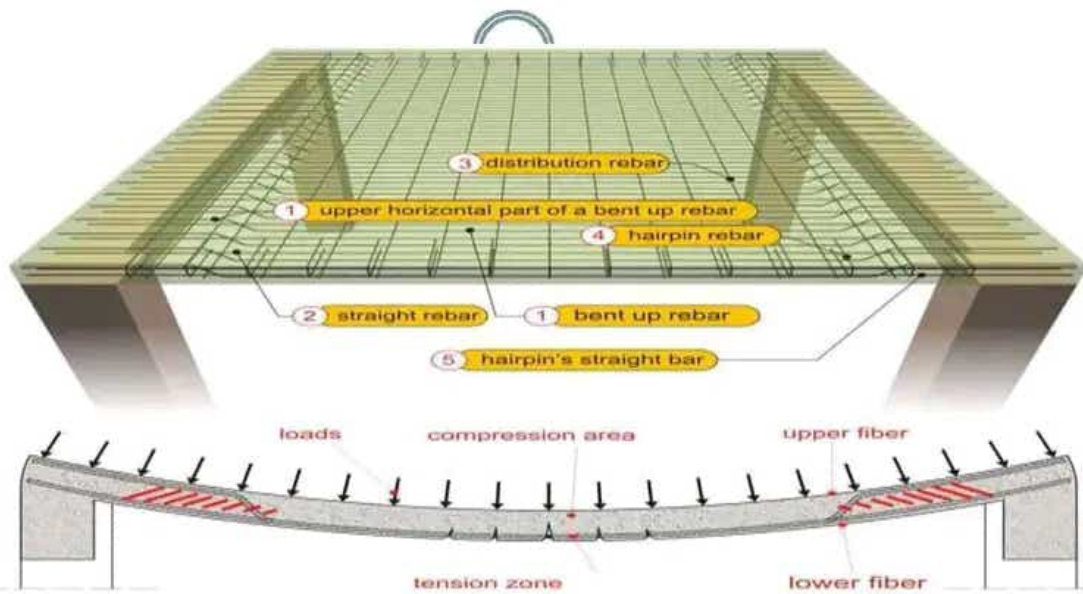


Bar Bending Schedule(BBS)

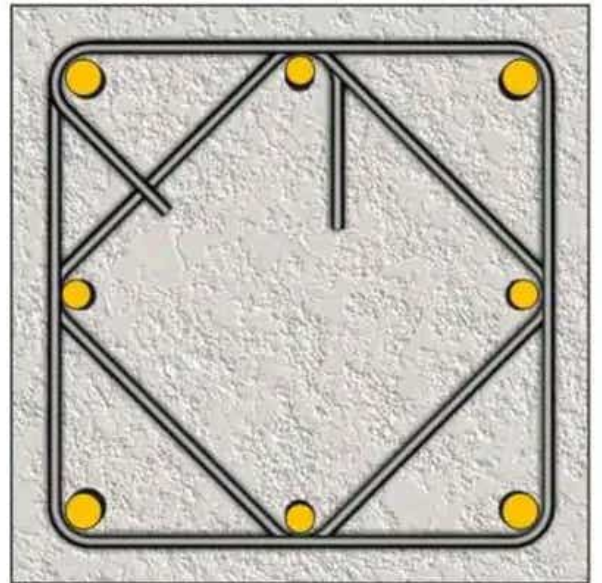
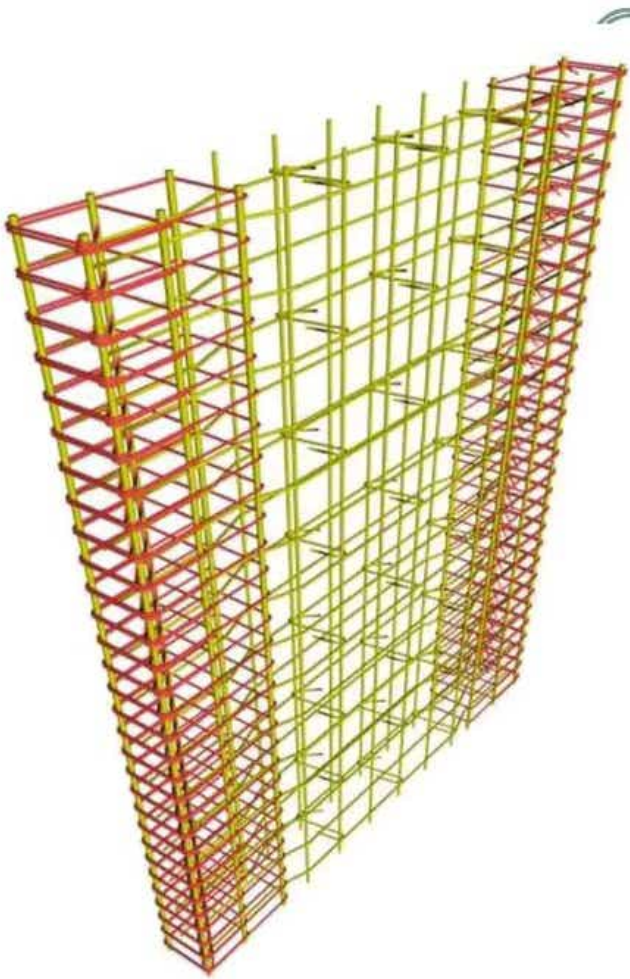


BBS for RC Slabs



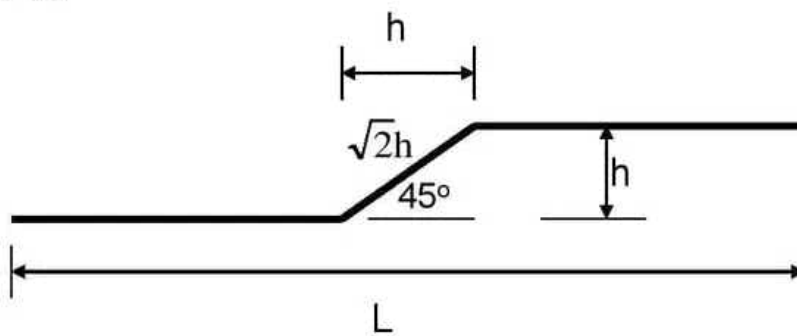
$\ell_1=4.42$ m	bend up rebars ($\varnothing 10/200$)	2650	①
730			730
$\ell_2=4.33$ m	straight rebars ($\varnothing 10/200$)	4330	②
$\ell_3=4.93$ m	distribution rebars ($\varnothing 8/240$)	4930	③
$\ell_4=0.81$ m	hairpin rebars ($\varnothing 8/240$)	$\frac{360}{360}$	④
$\ell_5=4.33$ m	hairpin's straight rebars ($2\varnothing 100$)	4330	⑤

BBS for Columns and walls



Measurement of bending dimensions

Bent-up Bar



Additional Length = $0.414 h$

Total Length = $L + 0.414 h$



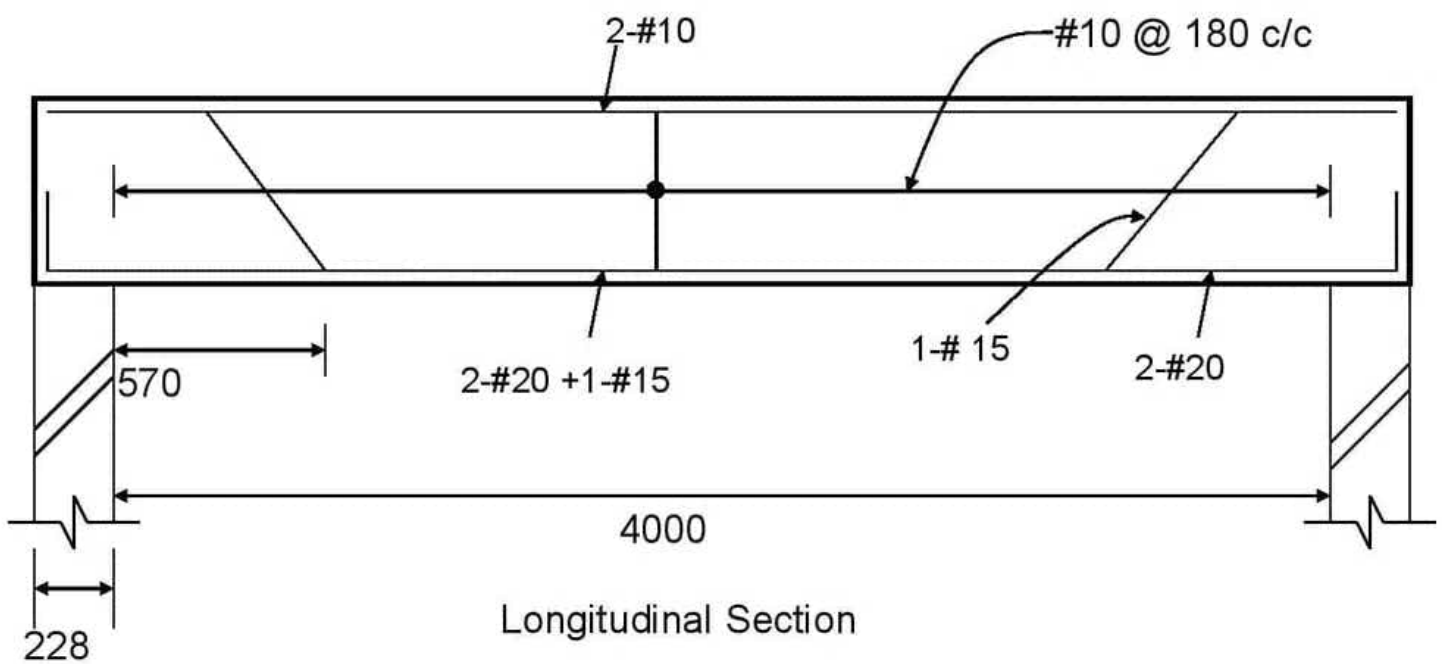


Do's and Don'ts

- Proper accuracy
- Provide cover to rein
- Location of holes
- Bars $>36\text{mm}$ shall not be bundled
- Welding is not permitted at bends

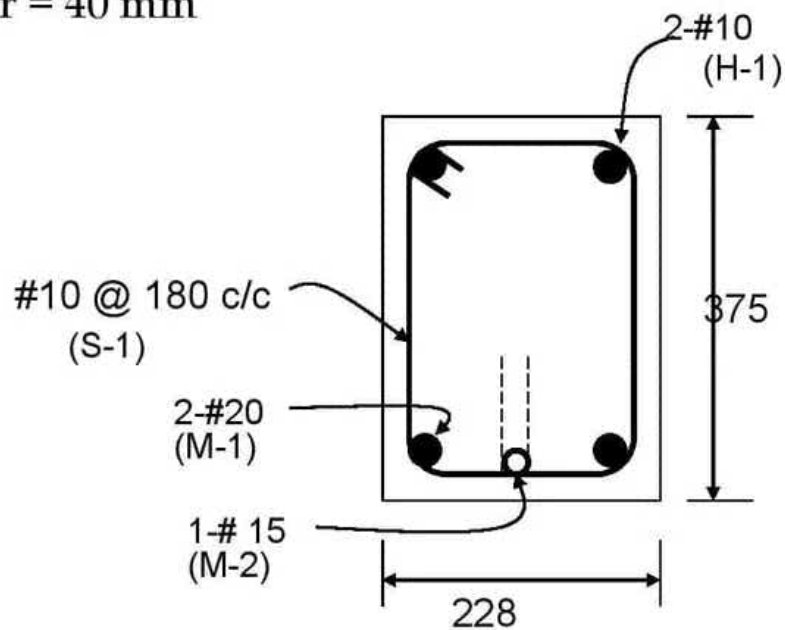
Typical BBS Calculation

Example: Prepare bar bending schedule for the given beam. Clear cover = 40 mm



Bar Bending Schedule (contd...)

Example: Prepare bar bending schedule for the given beam. Clear cover = 40 mm



Cross Section

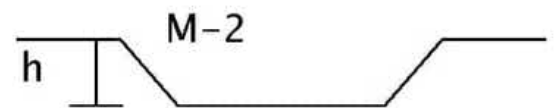
Bar Bending Schedule (contd...)

Example:

$$\begin{aligned} M-1 &= 4000 + 2 \times 228 - 2 \times 40 + 2 \times (18 \times 20) \\ &= 5096 \end{aligned}$$

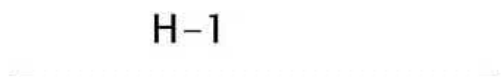


$$\begin{aligned} h &= 375 - 2 \times 40 - 2 \times 10 - 2 (15/2) = \\ &260 \end{aligned}$$

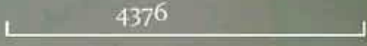
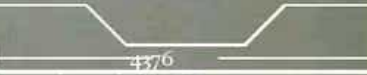




$$\begin{aligned} M-2 &= 4000 + 2 \times 228 - 2 \times 40 + (0.414 \times 260) \times 2 \\ &= 5091 \end{aligned}$$

$$\begin{aligned} H-1 &= 4000 + 2 \times 228 - 2 \times 40 \\ &= 4376 \end{aligned}$$



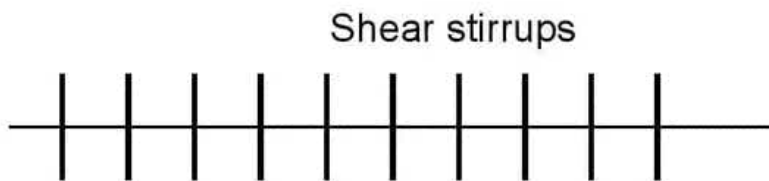
Bar Bending Schedule

Serial #	Bar Designation	Number of Bars	Length of one Bar (m)	Dia of bar	Weight of Steel Bars			Shape of Bar
					#10	#15	#20	
1	M-1	2	5.096	20			24	
2	M-2	1	4.591	15		7.2		
3	H-1	2	4.376	10	6.9			
4	S-1	24	1.206	10	22.7			
1.05 Σ					31.1	7.6	25.2	

Total Weight = 64 kg

Bar Bending Schedule (contd...)

Example: Prepare bar bending schedule for the given beam. Clear cover = 40 mm



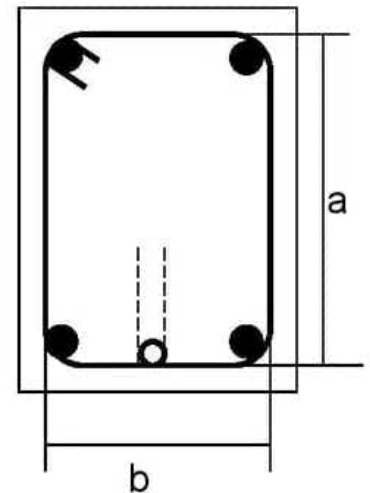
$$\text{Number of Bars} = 4000 / 180 + 1 = 24$$

Round-up

$$a = 375 - 2 \times 40 - 10 = 285 \text{ mm}$$

$$b = 228 - 2 \times 40 - 10 = 138 \text{ mm}$$

$$\text{Total length of S-1} = 2 (138 + 285 + 18 \times 10) = 1206 \text{ mm}$$



CODES , SPECIFICATIONS & STANDARDS

- IS:2502-1963
- IS:1893-2000
- SP:34
- IS:456
- International standard
ISO:4066-1977

some websites which are providing Bar Bending Schedule Software.

1. www.eigen-tech.com/cs.html
2. www.rgsrebar.com/rebar.aspx
3. www.ensoftindia.com/prod_barbeque.htm
4. www.steelpac.co.uk/design/steelpac_rdm...
5. www.cadsglobal.com
6. www.supercivilcd.com
7. www.technocad.co.za
8. www.BendingSchedule.com
9. www.structural-engineering.fsnet.co.uk...
10. www.continuousbeamanalysis.com



BBS COURSE PACKAGE

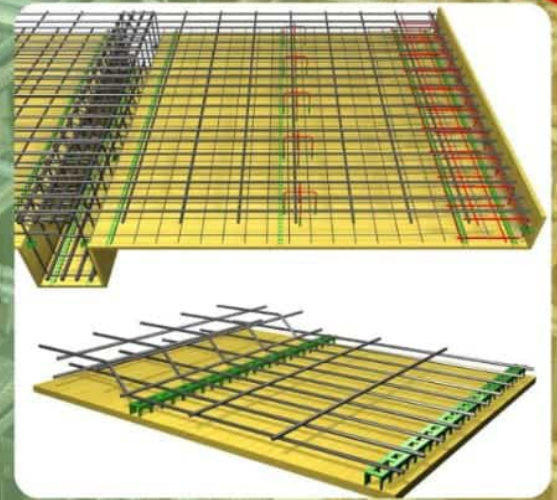
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Videos Modules Course

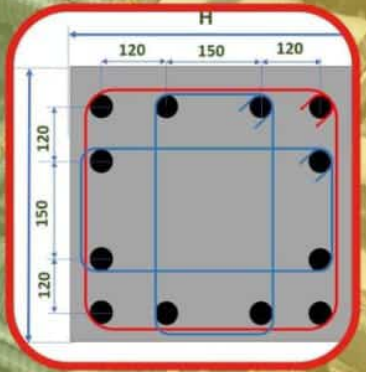
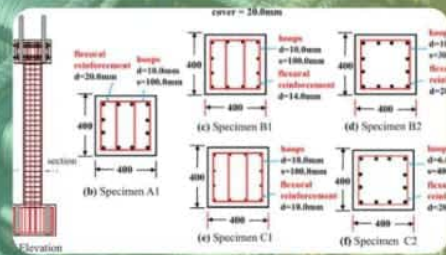


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