U ^ 0A Ô PÂ

Ô PÂ = 2 œ

y¦ËWiˆ

01‡ D U ^ 0A œLˆ

f @6

5

12

-$ ‹

œ+U ÔPÂ ¾ O

1.

2.

3.

4.

5.

6.

7.

8.

ÔPÂ 6 +kLq Ê (} Ê ,º µ+^

1.1

GB/T 13992-2010

1.

2. 502 914

3.

4.

5.

6.

7. 6

1.

0.5

2.

45

5

3. 502

502

4.

5. 1

2

3

100M

100M

6.

1.

2.

1.2

GB/T 13992-2010

1/4

1.

2.

3.

4.

1.

ε ε_r ε_i

$$\varepsilon_r = \varepsilon_1 - \varepsilon_2 + \varepsilon_3 - \varepsilon_4$$

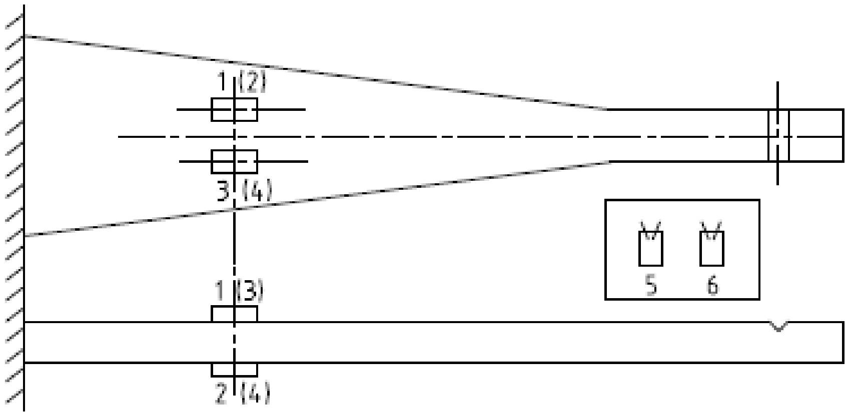
b X

$b=aX$

$$\sigma = \frac{M}{W} = \frac{6PX}{bh^2} = \frac{6P}{ah^2} \tag{0.1}$$

2 (R_1 R_3 R_2 R_4) 2 (R_5 R_6) 1.1

R



1.1

$\varepsilon = \varepsilon_{load} + \varepsilon_t$

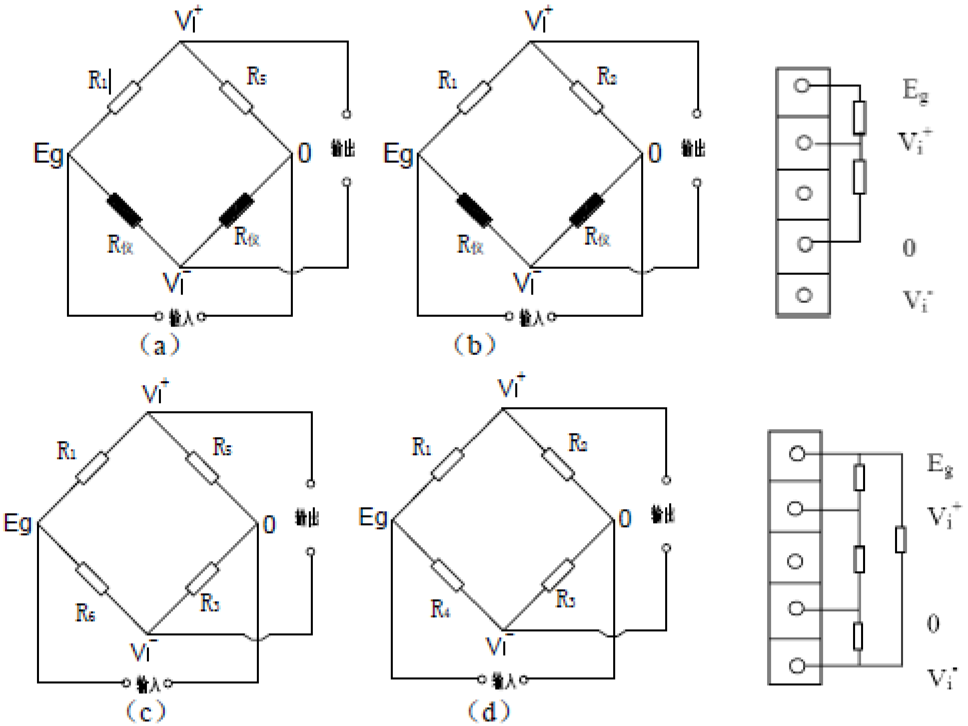
2.

1 1.2 a 1/4

R_5 R_6

$\varepsilon_r = \varepsilon_1 - \varepsilon_5 = \left(\varepsilon_{1m} + \varepsilon_{1t}\right) - \left(\varepsilon_{5m} + \varepsilon_{5t}\right)$ $\varepsilon_{1m} = \varepsilon_m$ $\varepsilon_{5m} = 0$ $\varepsilon_{1t} = \varepsilon_{5t}$

$\varepsilon_r = \varepsilon_m$



1.2

2 (1.2b)

r= 1- 2= 1m+ 1t - 2m+ 2t 1m= m 2m=- m

r==2 m

3 (1.2 c)

1m= 3m= m

r= 1- 5 3- 6 m

4 (1.2 d

4

r= 1- 2 3- 4 m

1. >100M

2. 1.2 a 0 49 5 9.8×5 N 0

1 49N 2

3

3. 1.2 b c d 49N
2 3

1. 1 2 2

2 2 (1.2)

$$K\ \varepsilon = K\ \varepsilon \qquad (0.2)$$

K =2 K 2.06

3

4

1 1/4

/N										
	0	9.8	19.6	29.4	39.2	49	39.2	29.4	19.6	9.8	0
/ $\mu\varepsilon$											

2 **49N**

		/ $\mu\varepsilon$			$\mu\varepsilon$	/ $\mu\varepsilon$			
		1	2	3					
	a								
	b								
	c								
	d								

B PÂ Â $- U5 º • ö#• ¶ e

2.1

GB/T 50784-2013 [ ]
JGJ/T23—2011

1. JJG 817-2011
2.1

2.1

1— 2— 3— 4— 5— 6— 7— 8—
9— 10— 11— 12— 13—

1.

1 10 30
m
.3m

2 2m
0.5m 0.2m

3

4

5 0.04m^2 a×a È

6

7

2.

3. 20mm
30mm
16
1

1. 16 3 3
10

$$R_m = \frac{\sum_{i=1}^{10} Ri}{10} \tag{0.3}$$

R_m— 0.1 R_i— i

2.
JGJ/T23—2011
A

2.2

GB/T 50784-2013 [ ]

1.

1. 1

2.

3.

2 1

C1 C2 1mm

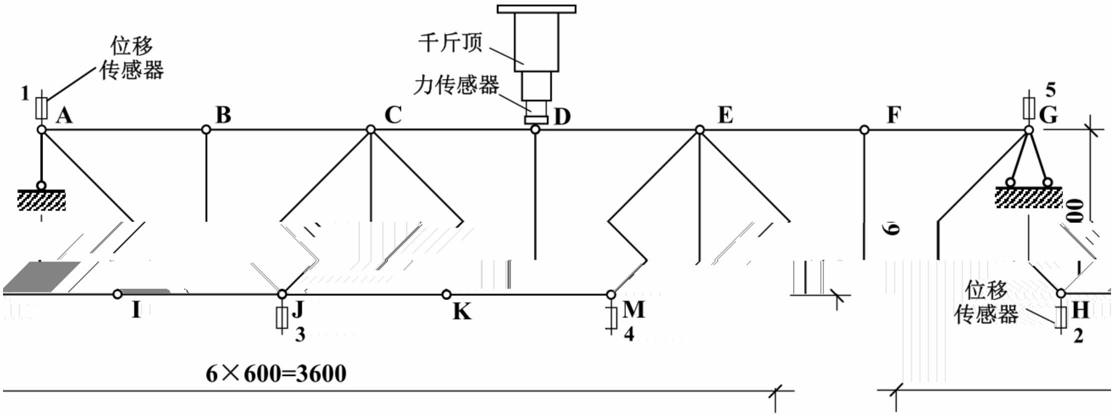
1.

B PÂ ?   JØ w ìM•E³B PÂ

GB/T503442019 T/CECS 1009-2022

1.

1 3.1 Q235B 2L50∗5 8㎜



3.1

2

2.

1 ZI-160 60

2

3

4 PC

5

3.

1 500kN

2 500kN

1. 3.1

2. 1/4

3. 20

4. 2 20kN 5min

5. 5

20kN 5min

6. 5min

7.

1.

1

—

2

2.

1 —

2

B PÂ JØ1•$- U ·!™ `M˜ e]73 ÔPÂ

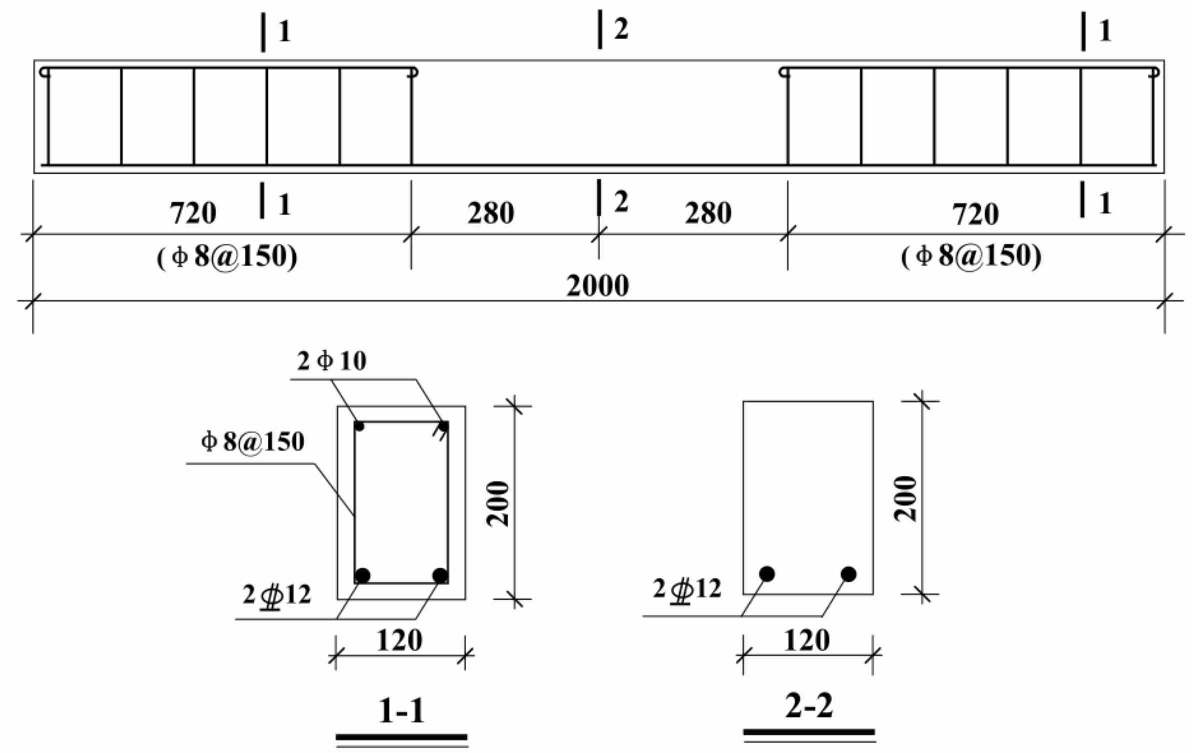
GB/T50344-2019

1.

1 4.1

HPB300 HRB335 C25

20mm



4.1

2 :

2.

1 ZI-160 20+1

2

3

4 PC

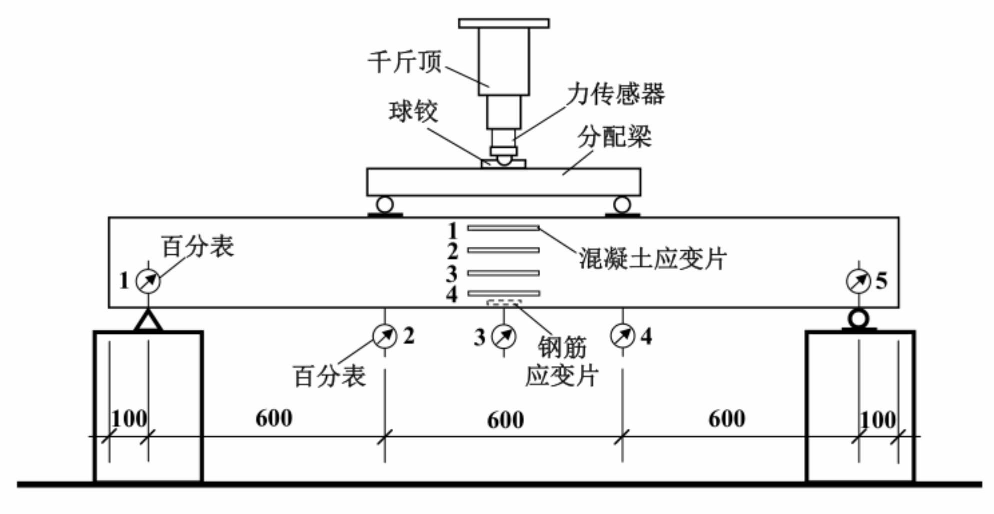
5

3.

1 500kN

2 500kN

1. 4.2



4.2

2. (

)

4.2

3.

P=25KN 20%

(3.5kN) (33kN)

1/2 1/4

4.1

4.

5%

5.

1

1/50

1.5

4.1

2

:

1.5 ;

3

1. 4.2
2. 4.2
3. : 1/4

4. 20

5. : 5

:

6. : 4.1
5

1.
2. -- --
3.

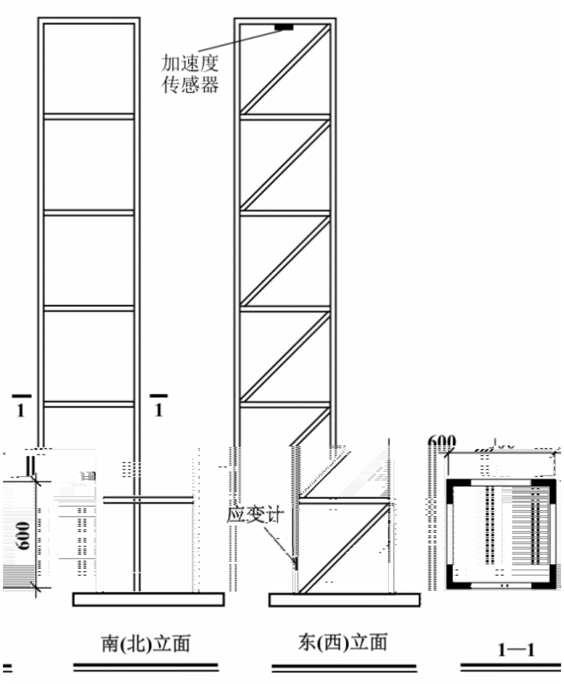
B PÂ Ê JØ | ì ´ Þ Ñ(¯] µ ÞE³ ÔPÂ

GB/T503442019 T/CECS 1009-2022

1.
L50x5 Q235B
600mmx600mm 600mm
3.6m 5.1
2.
(1) :
(2) :

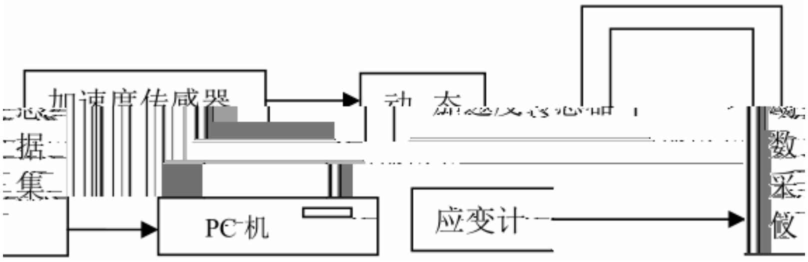
(3)ZIDY04 (4
)
(4)

(5)PC



5.1

1. 5.2



5.2

2.

(1)

( ) (
)

jpg word

(2)

( ) (
)

( )

jpg , word ,

(3)

( ) (
)

jpg , word

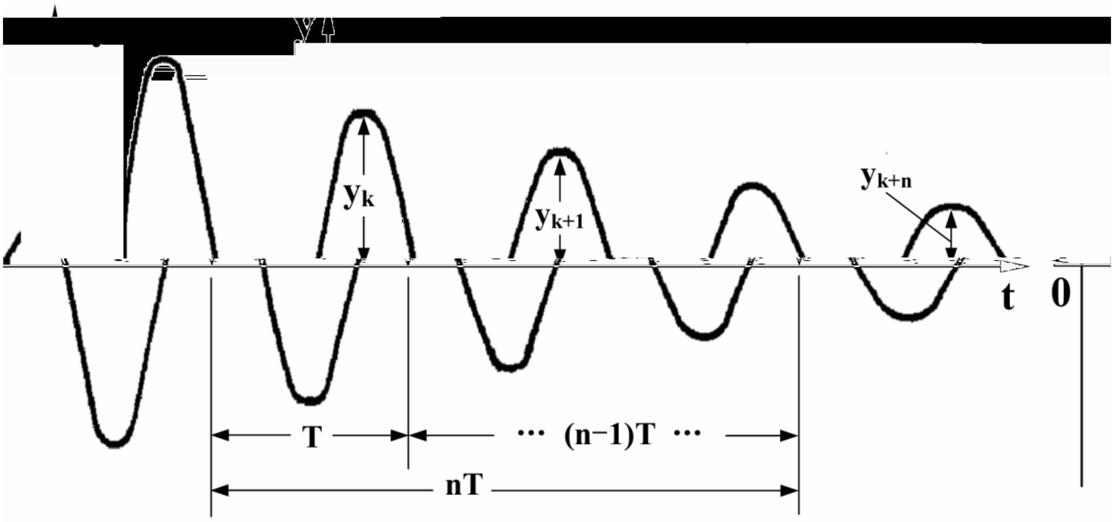
1. (5.1) (3.2)

$$f_n = \frac{1}{T} \tag{0.4}$$

$$\xi = \frac{1}{2\pi}\ln\frac{y_k}{y_{k+1}} \tag{0.5}$$

n

$$\xi = \frac{1}{2\pi \mathrm{n}} \ln \frac{y_k}{y_{k+\mathrm{n}}} \qquad (0.6)$$



5.3

y……y_{k+n} T 5.3

2.

3.

(1)

(2)