



信陽師範大學  
Xinyang Normal University

$U \wedge 0A \hat{O} P\hat{A}$

$\hat{O} P\hat{A} = 2 \omega$

$y \dot{E} W i \wedge$

$01 \ddagger D U \wedge 0A \omega L \sim$

*f* @6

12

5

- \$ <

œ+U ÔPÂ ¾.Q.....	2
ÔPÂ 6 +kLq Ê (} Ê ,° µ+^ .....	3
1.1 Ê (},°2ÎCj .....	3
1.2 +kLq Ê ,° µ+^ Ê ›D% ö#• .....	4
B PÂ Â \$- U5 ° • ö#• ¶ e .....	8
2.1 o# ö#\$- U p Ü .....	8
2.2 JØ1• ¬\$- U Ú x ö#• .....	9
B PÂ ? JØ w ìM•E³B PÂ.....	11
B PÂ JØ1•\$- U .!™ `M~ e ]73 ÔPÂ .....	13
B PÂ Ê JØ   ì ´ Þ Ñ(¯ ] µ ÞE³ ÔPÂ .....	17

# œ+U ÔPÂ ¾ O

1.

2.

3.

4.

5.

6.

7.

8.

# ÔPÂ 6 +kLq Ê (} Ê ,° μ+^

## 1.1

GB/T 139922010

1.

2. 502 914

3.

4.

5.

6.

7. 6

1.

0.5

2.

45

5

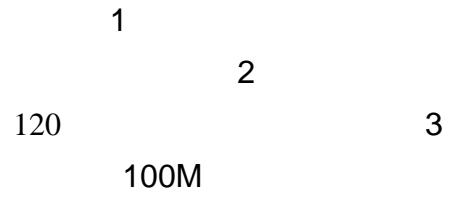
3.

502

502

4.

5.



100M

6.

1.

2.

## 1.2

GB/T 139922010

1/4

1.

2.

3.

4.

1.

$\varepsilon$

$\varepsilon_r$

$\varepsilon_i$

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

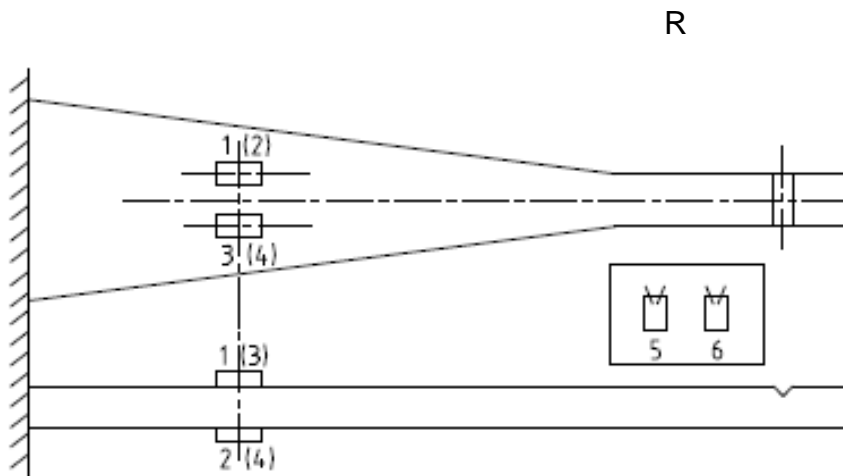
$$b = aX$$

$b$

$X$

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

R4)                      2                      (R5 R6)                      1.1                      ( R1 R3 R2



1.1

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

2.

1

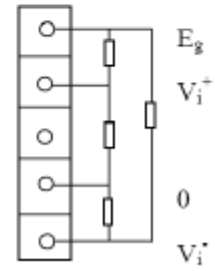
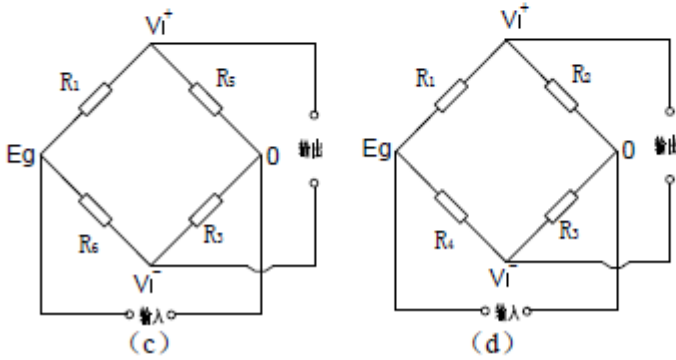
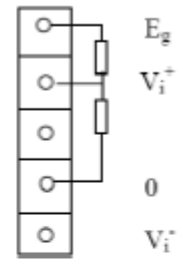
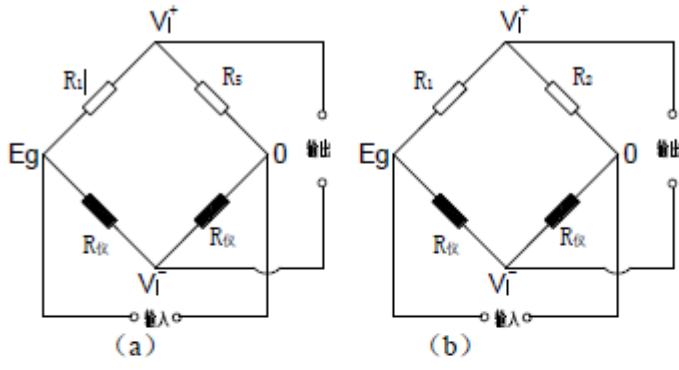
1.2 a

1/4

R5 R6

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

$$\varepsilon_r = \varepsilon_m$$



1.2

2 ( 1.2b )

$$r = 1 - 2 = 1m + 1t - 2m + 2t \quad 1m = m \quad 2m = -m$$

$$r = 2m$$

3 ( 1.2 c )

$$1m = 3m = m$$

$$r = 1 - 5 + 3 - 6 = 2m$$

4 ( 1.2 d )

4

$$r = 1 - 2 + 3 - 4 = 4m$$

1. >100M 120

2. 1.2 a 0 49 5

$$9.8 \times 5 \text{ N} \quad 0$$

1 49N

2

3



3. 1.2 b c d 49N  
2 3

1. 1 2 2

2 2 (1.2)

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

$$K = 2 \quad K = 2.06$$

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
/μϵ											

2

49N

	/μϵ			μϵ	/μϵ			
	1	2	3					
a								
b								
c								
d								

# B PÂ Â \$- U5 ° • ö#• ¶ e

## 2.1

GB/T 507842013  
JGJ/T23—2011

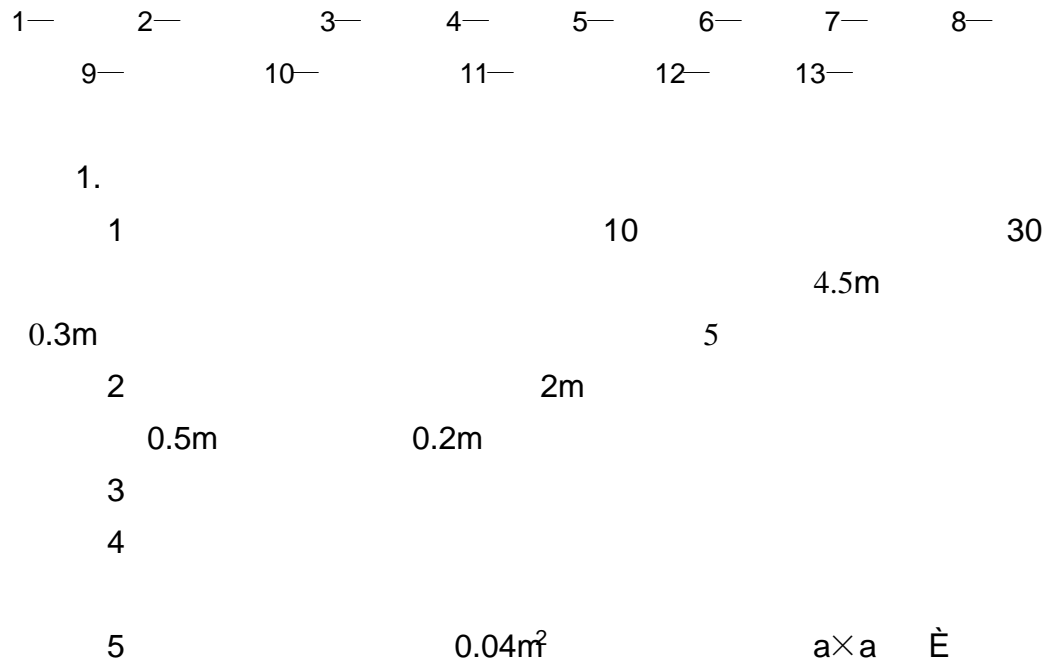
[ ]

1.

JJG 8172011

2.1

2.1



6

7

2.

3.

20mm

30mm

16

1

1.

16

3

3

10

$$R_m = \frac{\sum_{i=1}^{10} R_i}{10}$$

(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.

C1 C2

1mm

2

1

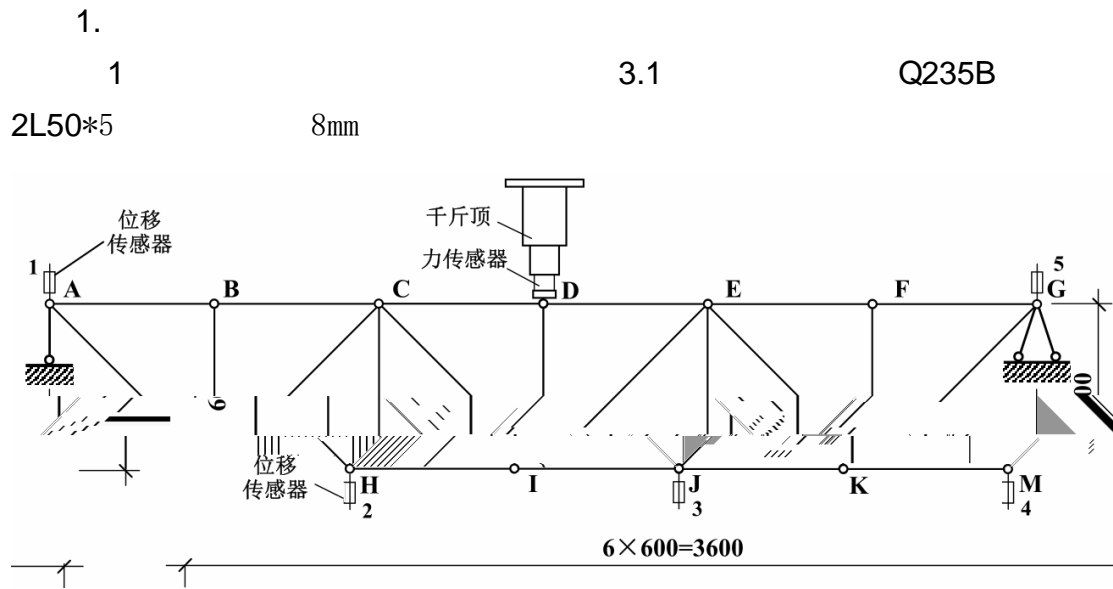
1.

# B PÂ ? JØ w ìM•E³B PÂ

GB/T50344-2019

T/CECS 1009-

2022



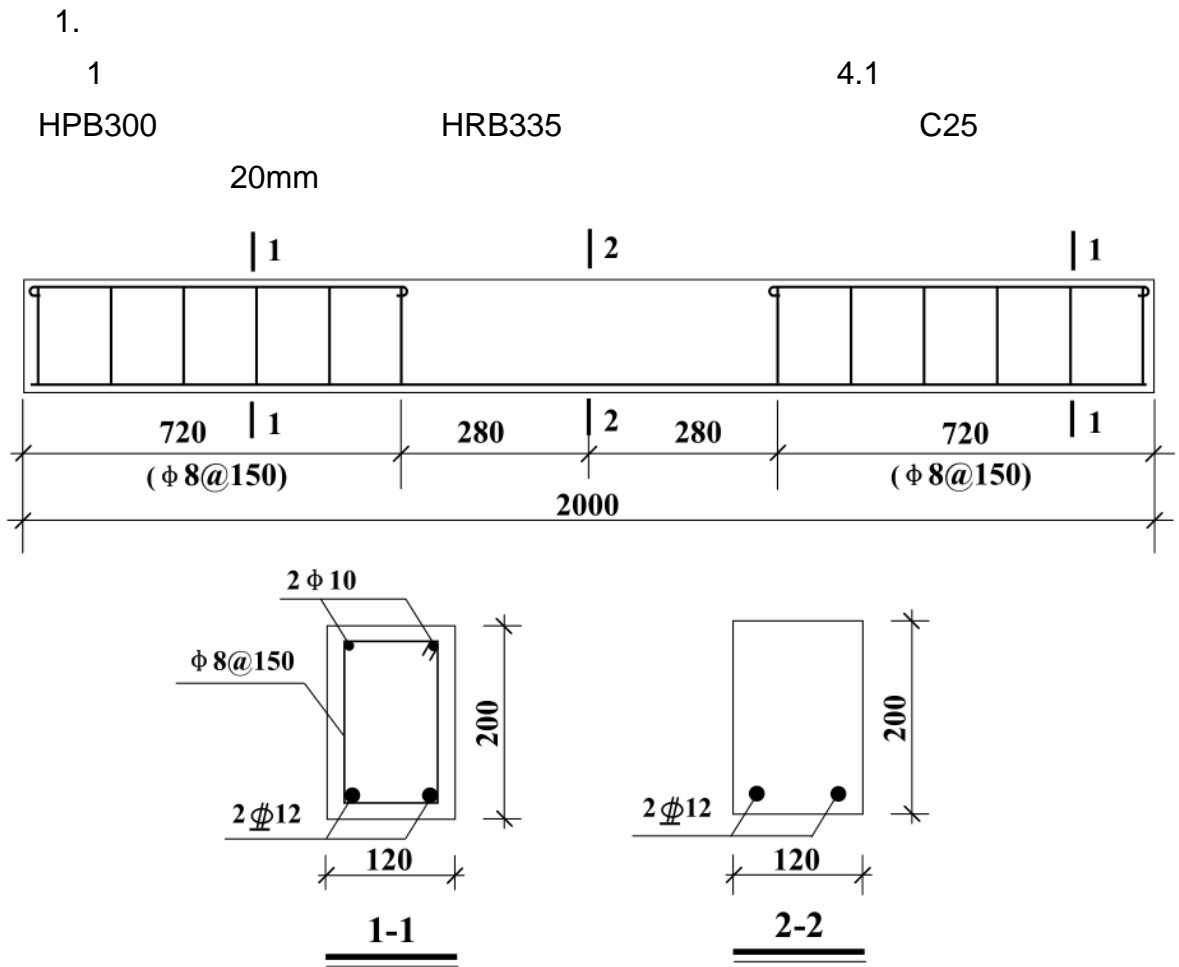
- 1.
  - 1 2L50\*5
  - 8mm
  - 3.1
  - Q235B
- 2.
  - 1 ZI-160
  - 60
  - 2
  - 3
  - 4 PC
  - 5
- 3.
  - 1 500kN
  - 2 500kN

- 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/T503442019



4.1

2

:

2.

1 ZI-160

20+1

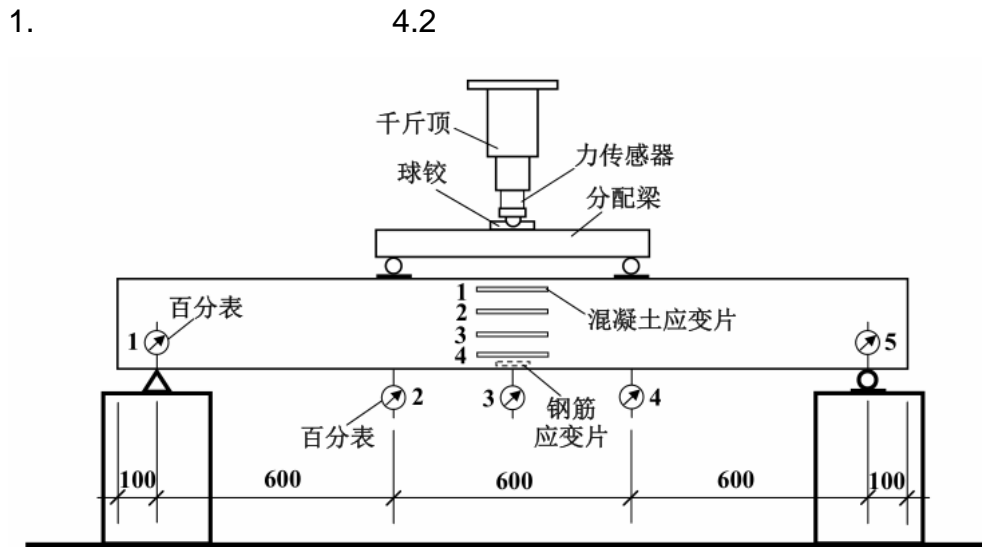
2

3

4

PC

- 5
- 3.
- 1 500kN
- 2 500kN



- 4.2
- 2. ( )
  - 3. 4.2

$P=25\text{KN}$  20%  
 ( 3.5kN) ( 33kN)  
 1/2 1/4  
 4.1

- 4.
- 5. 5%

1



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.

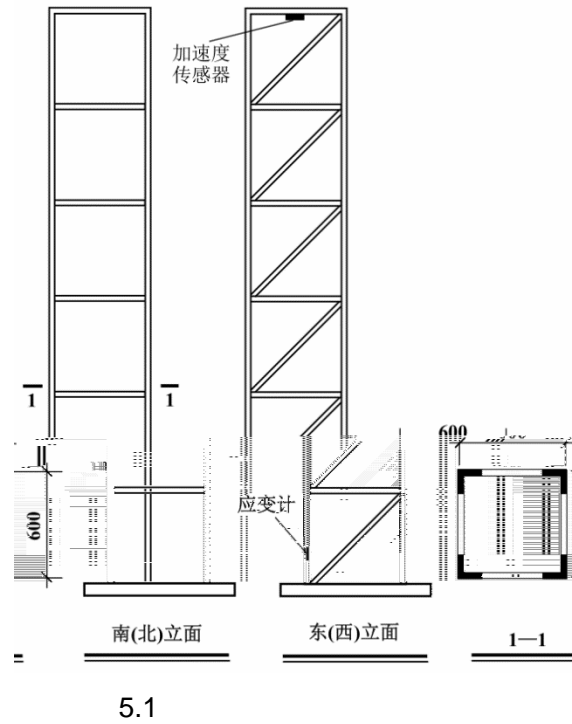
# Б PÂ Ê JØ |ì ´ Ъ Ñ( ]µ ЪE³ ÔPÂ

GB/T503442019

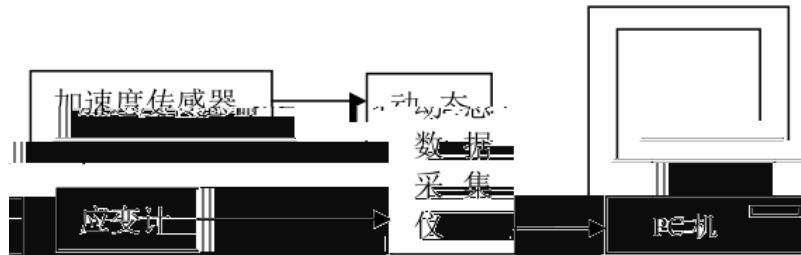
T/CECS 1009-

2022

1. L50x5 Q235B  
600mmx600mm 600mm  
3.6m 5.1
- 2.
- (1) :
- (2) :
- (3) ZIDY04 (4)
- )
- (4)
- (5) PC



1. 5.2



- 2.

(1)

( ) ( )  
)

jpg word

(2)

( ) ( )  
)  
( )

jpg , word ,

(3)

( ) ( )  
)

jpg , word

1.

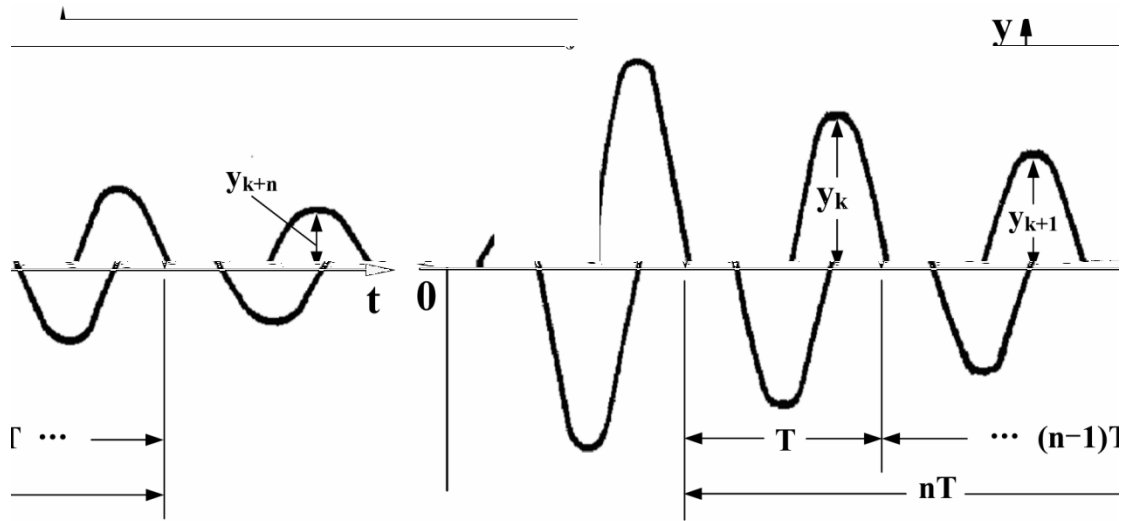
(5.1) (3.2)

$$f_n = \frac{1}{T} \quad (0.4)$$

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

n

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



5.3

$y \dots y_{k+n} \quad T$

5.3

- 2.
- 3.
- (1)
- (2)