



# Q/HYRD

Q/HYRD 209.25.Z09-2022

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|--|
|  |
|--|

## 1.1

## 1.2

- |      |      |        |      |      |     |
|------|------|--------|------|------|-----|
| (1)  | 2015 | 1      | 1    |      |     |
| (2)  | 2008 | 6      |      |      |     |
| (3)  |      |        |      | 2016 | 1 1 |
| (4)  |      | 1997   | 3 1  |      |     |
| (5)  |      |        | 2016 | 11 7 |     |
| (6)  |      | 2007   | 11   |      |     |
| (7)  | 2014 | 12     | 1    |      |     |
| (8)  | 2014 | 12     | 29   | 2014 | 119 |
| (9)  |      | [2013] | 101  |      |     |
| (10) | 2011 | 4      | 18 . |      | 17  |

- (11) [2009]130
- (12) < > [2010]113
- (13) [2014]34
- (14) HJ/T169-2004
- (15) 2011 2
- (16) ( [2012]77 )
- (17) 6 2009
- (18) 493
- (19) 2016 88
- (20) 591
- (21) 2003 1
- (22) GB/T 29639-2013
- (23) GB18218-2009
- (24) GB50016-2014
- (25) ERG2000
- (26)
- (27)
- (28) 2015 7 1
- (29) 2010 7 1
- (30) 2006-2020
- (31) [2008]19
- (32)
- (33) ( 2017 9 ) [2008]36
- (34) [2008]49
- (35) [2010]50
- (36)
- (37) 2004
- 27
- (38) 2012

(39)

1.3

8

#6 7 8 9

1.4

4

1.5

1.5.1

.

1.5.2

1.5.3

500

2000

1.5.4

I

II

III

1.6

1

2

3

4

2.1

× ×

2.1-1

|  |    |       |      |      |           |
|--|----|-------|------|------|-----------|
|  |    |       |      |      |           |
|  | #6 | 210MW | 1998 | 1998 |           |
|  | #7 | 210MW | 2002 | 2002 |           |
|  | #8 | 300MW | 2007 | 2007 | 2009 12   |
|  | #9 | 300MW | 2008 | 2008 | [2009]323 |

2.1-2

|  |    |    |    |    |
|--|----|----|----|----|
|  | #6 | #7 | #8 | #9 |
|--|----|----|----|----|

|  |  |        |        |         |         |
|--|--|--------|--------|---------|---------|
|  |  |        |        |         |         |
|  |  | 680t/h | 680t/h | 1025t/h | 1025t/h |
|  |  | 210MW  | 210MW  | 300MW   | 300MW   |
|  |  |        |        |         |         |
|  |  |        |        |         |         |
|  |  |        |        |         |         |
|  |  |        |        |         |         |
|  |  |        |        |         |         |
|  |  | + SCR  | + SCR  | + SCR   | + SCR   |
|  |  | -      | -      | -       | -       |
|  |  |        |        |         |         |
|  |  |        |        |         |         |
|  |  | 180    |        | 210     |         |
|  |  |        |        |         |         |
|  |  |        |        |         |         |

2.1.1

2.1-3

2789

|    |  |  | m    |  |      |  |
|----|--|--|------|--|------|--|
| 1  |  |  | 20   |  | 20   |  |
| 2  |  |  | 300  |  | 730  |  |
| 3  |  |  | 662  |  | 1256 |  |
| 4  |  |  | 1000 |  | 2206 |  |
| 5  |  |  | 2213 |  |      |  |
| 6  |  |  | 2269 |  | 960  |  |
| 7  |  |  | 2385 |  | 700  |  |
| 8  |  |  | 2396 |  | 1800 |  |
| 9  |  |  | 2541 |  | 877  |  |
| 10 |  |  | 2789 |  | 5178 |  |

ETQ 1

1.3 10<sup>6</sup> / 460g/kwh

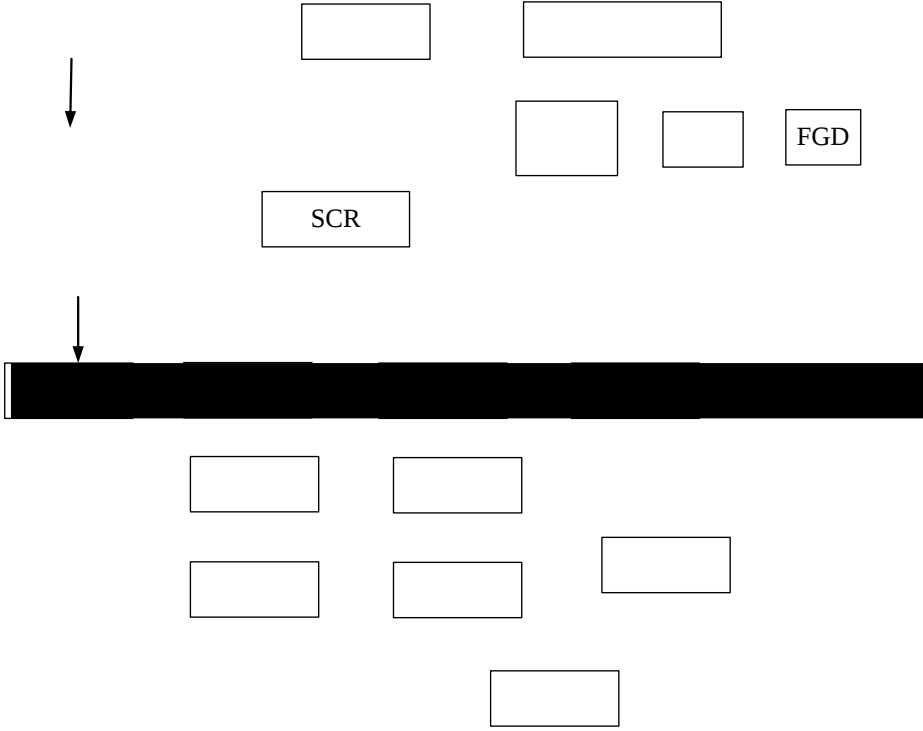
330g/kwh

2.1-4

| %     | %     | %     | MJ/Kg    | MJ/Kg    | %    |
|-------|-------|-------|----------|----------|------|
| 11.12 | 19.35 | 24.99 | 21877.00 | 21060.67 | 0.75 |

2.1.2.2

#6 #7



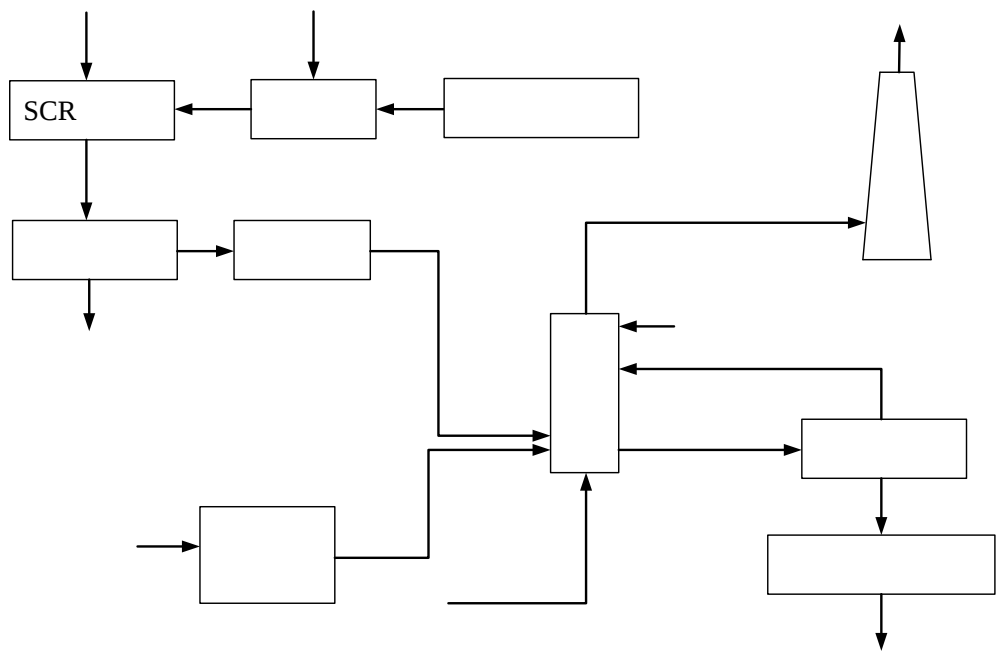
2.2-1 #6 #7

#6 #7 + SCR  
85%

NO<sub>x</sub> #6 7 SCR / SCR

NH<sub>3</sub> 290~400 NO NO<sub>2</sub> N<sub>2</sub>  
NH<sub>3</sub> N<sub>2</sub> NH<sub>3</sub> SCR  
2 #6 7 SCR 2  
#6 #7 90%

SO<sub>2</sub>



2.2-2

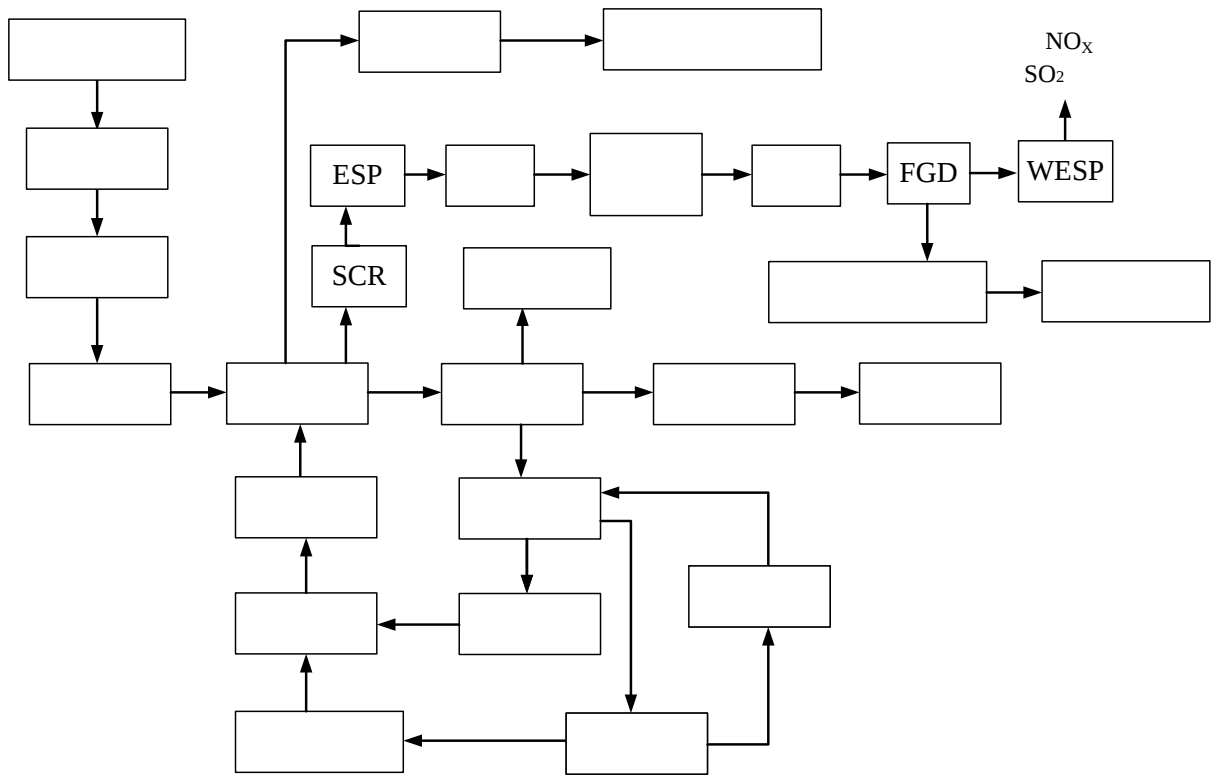
#6 #7

#6 #7

2.2-1

| 2.2-1 #6 #7 |                   | 2×210MW |  |
|-------------|-------------------|---------|--|
|             |                   |         |  |
|             | DG680/13.7-20     | 2       |  |
| #6          | N210-12.7/535/535 | 1       |  |
| #7          | N210-12.7/535/535 | 1       |  |
|             | QFSN-210-2        | 2       |  |
|             | ZGM-80G           | 10      |  |
|             | DPG40             | 10      |  |
|             | 2008AB/1040       | 2       |  |
|             | CMF6N4.2D152      | 4       |  |

|  |                    |   |  |
|--|--------------------|---|--|
|  | AH-R198SW(PAF)     | 2 |  |
|  | LAP8650/883        | 4 |  |
|  | FAF17-9-1          | 2 |  |
|  | ML-H1-R85/172(FDF) | 2 |  |
|  | SAF25-18-1         | 2 |  |
|  | SAF25-16-2         | 2 |  |
|  | 7LD1N-7-A          | 2 |  |



2.2-3

#8 #9

+SCR

85%

NO<sub>x</sub>

SCR

/

SCR

#8 9

SCR

2

3

7790 12000 12600mm

3

3

#8 #9

+

+

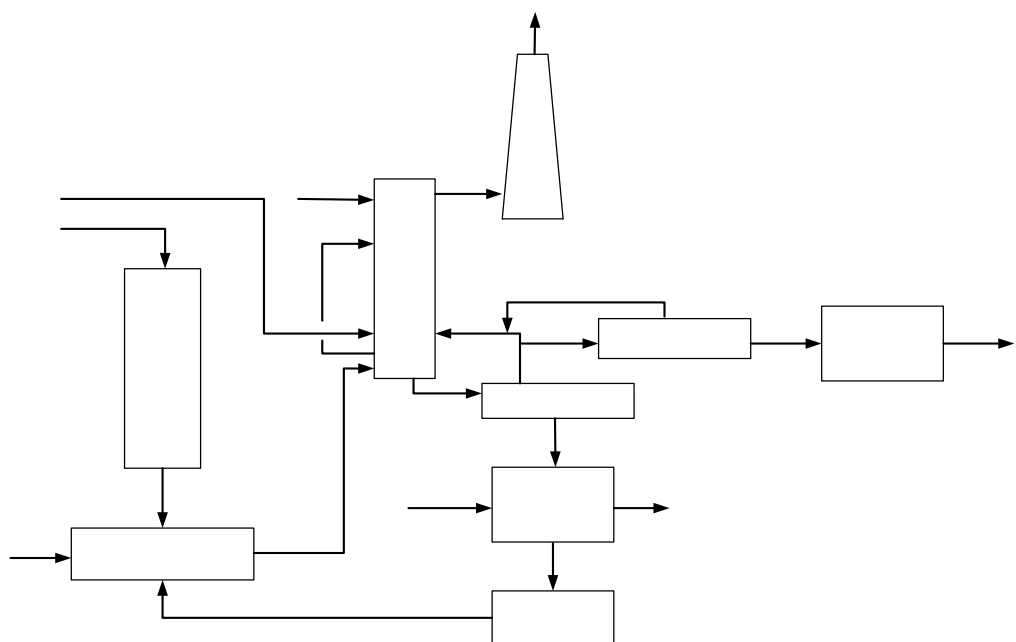
-

1.5%

98.7%

-

SO<sub>2</sub>



2.2-4

#8 #9

2.2-2

| 2.2-2               | #8 | #9 | 2×300MW |
|---------------------|----|----|---------|
|                     |    |    |         |
| DG1025/18.2- 4      |    | 2  |         |
| N300-16.7/537/537-8 |    | 2  |         |
| QFSN-300-2-20B      |    | 2  |         |
| ZGM95N              |    | 10 |         |
| DPG50               |    | 10 |         |
| 2008AB/1135         |    | 4  |         |
| LAP/0320/883        |    | 4  |         |

|  |                |    |  |
|--|----------------|----|--|
|  | LEK259-3*4-2-2 | 4  |  |
|  | 3HE-140        | 4  |  |
|  | Y315M-4        | 4  |  |
|  | 9-19NO.5A      | 4  |  |
|  | IK-525SL       | 24 |  |
|  | 2031G          | -  |  |

2.3

2.3.1

2.

- /

3. SO<sub>2</sub> NO<sub>x</sub>

-

#6 #7

90%

50%

#8 #9

1.5%

98.7%

50%

#6 #7

+

SCR

#8 #9

+

SCR

2.3.2

|     |                  |                  |               |                    |                    |   |
|-----|------------------|------------------|---------------|--------------------|--------------------|---|
| 1   | $\text{Ca}^{2+}$ | $\text{Mg}^{2+}$ | $\text{Cl}^-$ | $\text{SO}_4^{2-}$ | $\text{SO}_3^{2-}$ | / |
| FGD |                  |                  |               | 26.2t/h            |                    |   |

2

2.3.3

- 1
- 2

GB12348-90III

2.3.4

|   |                    |  |   |  |  |   |
|---|--------------------|--|---|--|--|---|
| 4 |                    |  |   |  |  |   |
| 8 | 8000m <sup>3</sup> |  | 6 |  |  | / |
|   |                    |  |   |  |  | / |

100% 4

2.4

2.4.1

2.4.1.1



50-300

45%

55%

433.6

382

2.4.1.2

3km

2.4.3

2.4-1

|    |  |               |
|----|--|---------------|
|    |  |               |
| 1  |  | GB3838-2002   |
| 2  |  | GB3095-2012   |
| 3  |  | GB3096-2008 3 |
| 4  |  |               |
| 5  |  |               |
| 6  |  |               |
| 7  |  |               |
| 8  |  |               |
| 9  |  |               |
| 10 |  |               |
| 11 |  |               |

3.1

3.1-1

|  |    |                   |       |                |
|--|----|-------------------|-------|----------------|
|  |    |                   |       | H <sub>2</sub> |
|  |    | 2.1               |       | 2              |
|  | UN | 1049              | 21001 | CAS 1333-74-0  |
|  |    |                   |       | 0.07           |
|  |    | -259.2            |       | -252.8         |
|  |    | 506.62 kPa (4.7 ) |       | 132.5          |
|  |    |                   |       | 11.40 MPa      |
|  |    |                   |       |                |
|  |    |                   |       |                |

|  |  |  |
|--|--|--|
|  |  |  |
|--|--|--|

3.2

3.2.1.1

1

2

3

4

|   |  |  |   |
|---|--|--|---|
|   |  |  |   |
|   |  |  |   |
| 3 |  |  |   |
| 4 |  |  | / |
| 5 |  |  |   |
| 6 |  |  |   |
| 7 |  |  |   |
| 8 |  |  |   |
| 9 |  |  |   |
|   |  |  |   |
| 1 |  |  | 1 |
| 2 |  |  |   |
| 3 |  |  |   |
| 4 |  |  |   |
|   |  |  |   |
| 1 |  |  |   |
| 2 |  |  |   |
| 3 |  |  |   |

|    |  |  |     |
|----|--|--|-----|
|    |  |  |     |
|    |  |  |     |
| 4  |  |  |     |
| 5  |  |  | GIS |
| 6  |  |  |     |
|    |  |  |     |
| 1  |  |  |     |
| 2  |  |  |     |
| 13 |  |  |     |

3.2-2

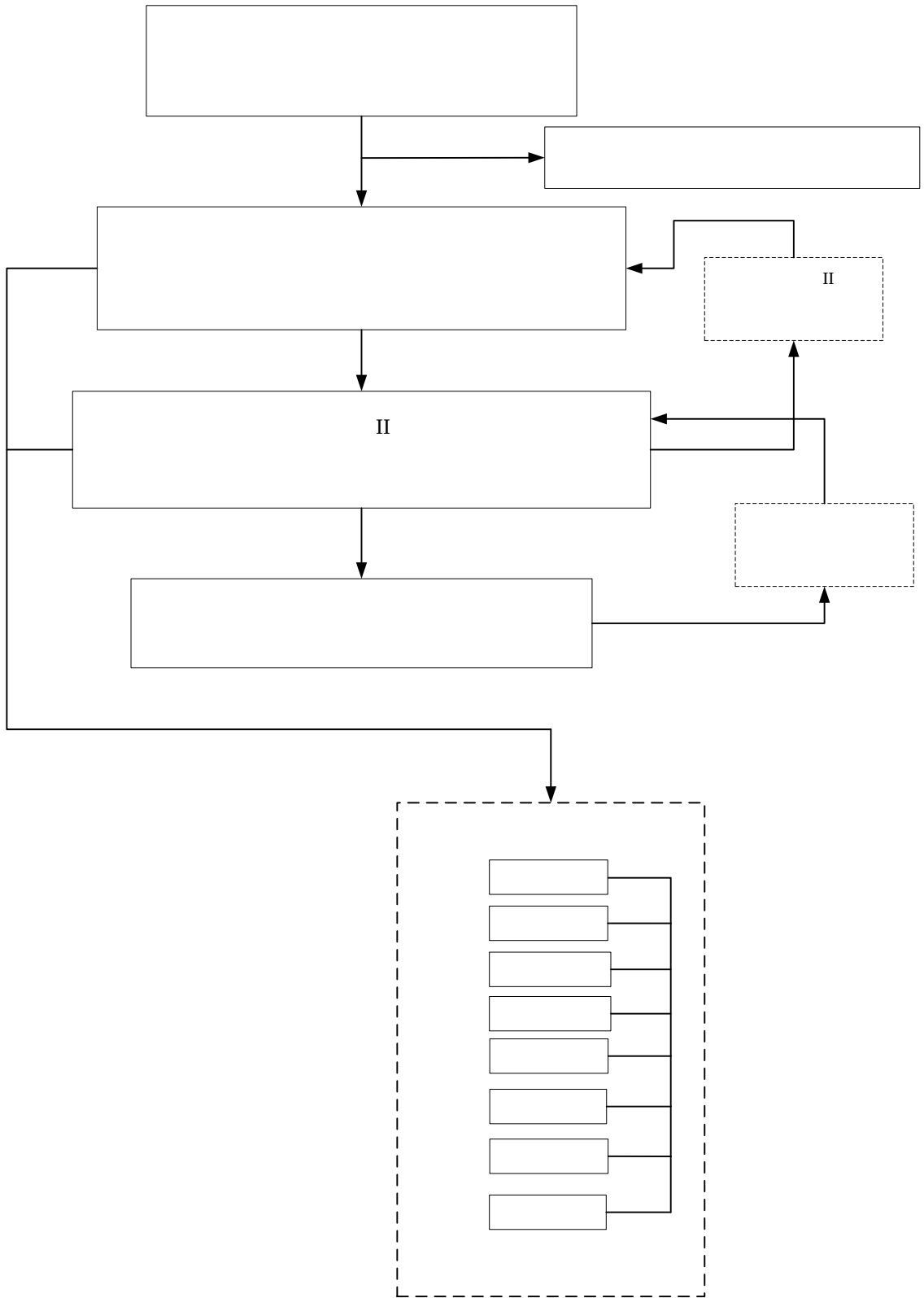
|  |  |  |   | / | / |  |
|--|--|--|---|---|---|--|
|  |  |  |   | / | / |  |
|  |  |  |   | / | / |  |
|  |  |  |   | / | / |  |
|  |  |  | / |   |   |  |
|  |  |  |   | / | / |  |
|  |  |  |   | / | / |  |
|  |  |  |   | / | / |  |
|  |  |  |   | / | / |  |
|  |  |  | / |   |   |  |

3.3

3.3-1

|   |  |  |                                                   |  |
|---|--|--|---------------------------------------------------|--|
|   |  |  |                                                   |  |
| 1 |  |  | H <sub>2</sub>                                    |  |
| 2 |  |  | SO <sub>2</sub> NO <sub>x</sub>                   |  |
| 3 |  |  | SO <sub>2</sub> NO <sub>x</sub>                   |  |
| 4 |  |  | Ca <sup>2+</sup> Mg <sup>2+</sup><br>COD TN TP pH |  |
| 5 |  |  |                                                   |  |

4.1



4.1-1

4.2.1

4.2.1.1

4.2.1.2

1

2

3

4

5

6

4.2.2

4.2.2.1

4.2.2.2

1

2

3

4

5

6

7

8

9

4.2.3

4.2.3.1

1

4.2.3.2

1

2

3

4

5

6

a.

b.

c.

4.2.3.3

1

2



4.2.5

1

4.2.6

5.1

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.

5.2

- 1
- 2
- 3
- 4

5.2-1

|  |             |
|--|-------------|
|  |             |
|  | GB 50058-92 |
|  |             |

|  |          |
|--|----------|
|  |          |
|  |          |
|  |          |
|  | 4        |
|  | 2m       |
|  |          |
|  |          |
|  |          |
|  | GB190-90 |
|  |          |
|  |          |
|  |          |

5.3

5.3.1

5.2-2

|  |  |     |
|--|--|-----|
|  |  |     |
|  |  |     |
|  |  |     |
|  |  | 1 2 |
|  |  |     |

5.3.2

5.3.3



6.1

24

020

## 7.1

### 7.1.1

| 7.1-1 |  |     |
|-------|--|-----|
|       |  |     |
|       |  |     |
|       |  | 1 2 |

|  |  |  |
|--|--|--|
|  |  |  |
|  |  |  |

7.1.2

1

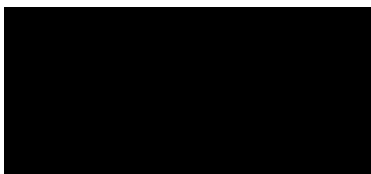
2 /

7.1.2.1

7.1.2.2

7.1-2 II

|   |  |  |
|---|--|--|
| / |  |  |
|---|--|--|

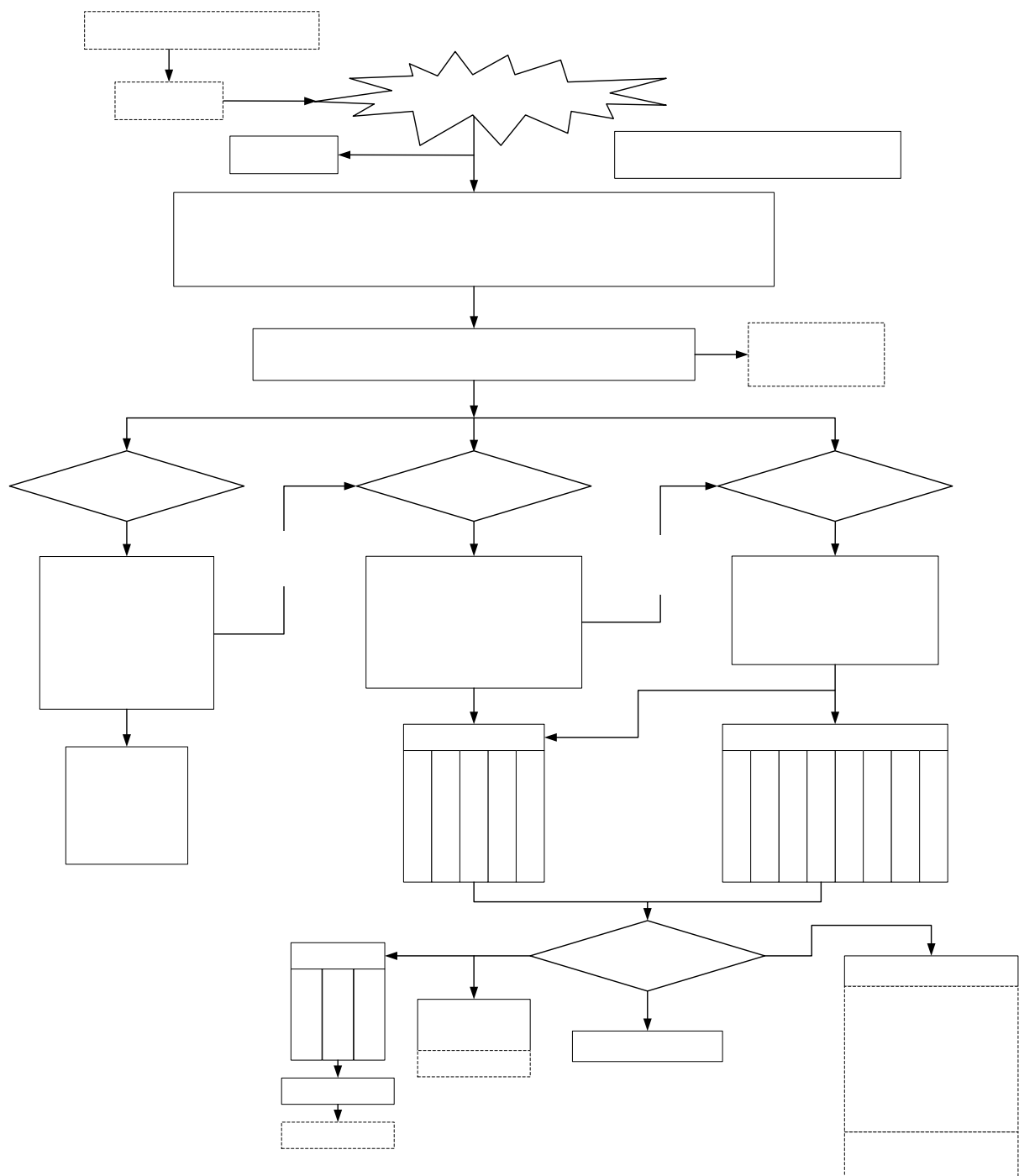
[illegible]

I

119 120

7.1-3 I

| 7.1-3 I |         |  |
|---------|---------|--|
| /       |         |  |
|         | I       |  |
|         |         |  |
|         |         |  |
|         |         |  |
|         |         |  |
|         | 119 120 |  |
|         |         |  |
|         |         |  |
|         |         |  |
|         |         |  |
|         |         |  |
|         |         |  |



**7.1-1**

7.2

7.2.1

7.2.1.1

1

1211

2

119

3

4

5

7.2.1.2

1

3

7.2.1.3

4

7.2.1.4

5

7.2.1.5

7.2.1.6

1

2

BP

3

4

,

7.2.2

1

SO<sub>2</sub> NO<sub>x</sub>

SO<sub>2</sub> NO<sub>x</sub>

2

a)

b)

c)

d)

e)

120

f)

3

c)

d)

e)

f)

g)

h)

i)

j)

k)

4

a)

b)

c)

d)

5

a)

b)

c)

d)



7.3.1

7.3.2

1

2

1

3

7.3.3

020-82111855

020-83357844

020-82113386 82113730

020-82222999

020-82111733

7.3.4

7.3.5

1

2

3

7.3.6 .

pH      pH

7.3.7

7.3.7.1

1

2

3

10cm

10m×10m

5

### 7.3.7.2

2

6

24

**7.3-1**

|  |    |  |  |  |
|--|----|--|--|--|
|  |    |  |  |  |
|  | PH |  |  |  |

|  |                                 |            |    |                |                |        |
|--|---------------------------------|------------|----|----------------|----------------|--------|
|  | COD<br>BOD <sub>5</sub> SS      | 1<br><br>2 |    | 200<br><br>200 | 500            |        |
|  | SO <sub>2</sub> NO <sub>2</sub> | 1<br><br>4 | 10 | 100m 200m 1km  | 2~50m<br>2~50m | 4<br>4 |

7.3.8

8.1

1

2

3

4

5

6

8.2

1

2

3

8.3

8.4

1

2

3

4

5

6

7

8

9

8.5

1

2

3

4

8.6

10

1

2

3

4

5

6

7

8

9

10

## 9.1

### 9.1.1

- (1)
- (2)
- (3)
- (4)
- (5)

### 9.1.2

- (1)
- (2)
- (3)
  
- (4)

### 9.1.3

- (1)
- (2)
- (3)
- (4)
- (5)

(6)

(7)

9.1.4

(1)

(2)

(3)        2   3

(4)

(5)

15

(6)

(7)

(8)

9.1.5

1

9.1.6

9.2

9.2.1

9.2.2

9.2.3

1

9.2.4

11.1

1

2

11.2

2

3

11.3

a

b

11.4

11.5

11.6

1

1~2

2

3

110

4

11.7

120

11.8

11.9

1

2

3

4

5

6

7

## 12.1

1            emergency response plan

2            emergency preparedness

3            emergency response

4            emergency rescue

5            recovery

6

7

8

12.2

12.3

3

1

2

3

4

5

6

7

12.4

2022 3

12.5

|  |  |  |                             |
|--|--|--|-----------------------------|
|  |  |  |                             |
|  |  |  | 1363222439<br>020-82098819  |
|  |  |  | 13622231512<br>020-82099449 |
|  |  |  | 13660096680<br>020-82099449 |
|  |  |  | 13650974256<br>020-82098283 |
|  |  |  | 13828442110<br>020-82098813 |
|  |  |  | 18819828098<br>020-82099592 |
|  |  |  | 13602755382<br>020-82098809 |
|  |  |  | 13710489896<br>020-82091167 |
|  |  |  | 13922742726<br>020-82099560 |
|  |  |  | 13502412084<br>020-82099782 |
|  |  |  | 13802737300<br>020-82099578 |
|  |  |  | 13710518948<br>020-82899582 |
|  |  |  | 18198979723<br>020-82091745 |
|  |  |  | 020-82098220<br>15014175476 |
|  |  |  | 020-82099526                |

|  |  |  |             |
|--|--|--|-------------|
|  |  |  | 15014175477 |
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|  |  |  | 13825068493 |
|  |  |  | 13500025818 |
|  |  |  | 13556155505 |

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[illegible]



