
10		127
A		
A.1		
A.2		
A.3		
B		
B.1		
B.2		
B.3		
B.4		
C		
C.1		
C.2		
D		
D.1		
D.2		
E		
E.1		
E.2		
E.3		
F		

1.1

1

2

3

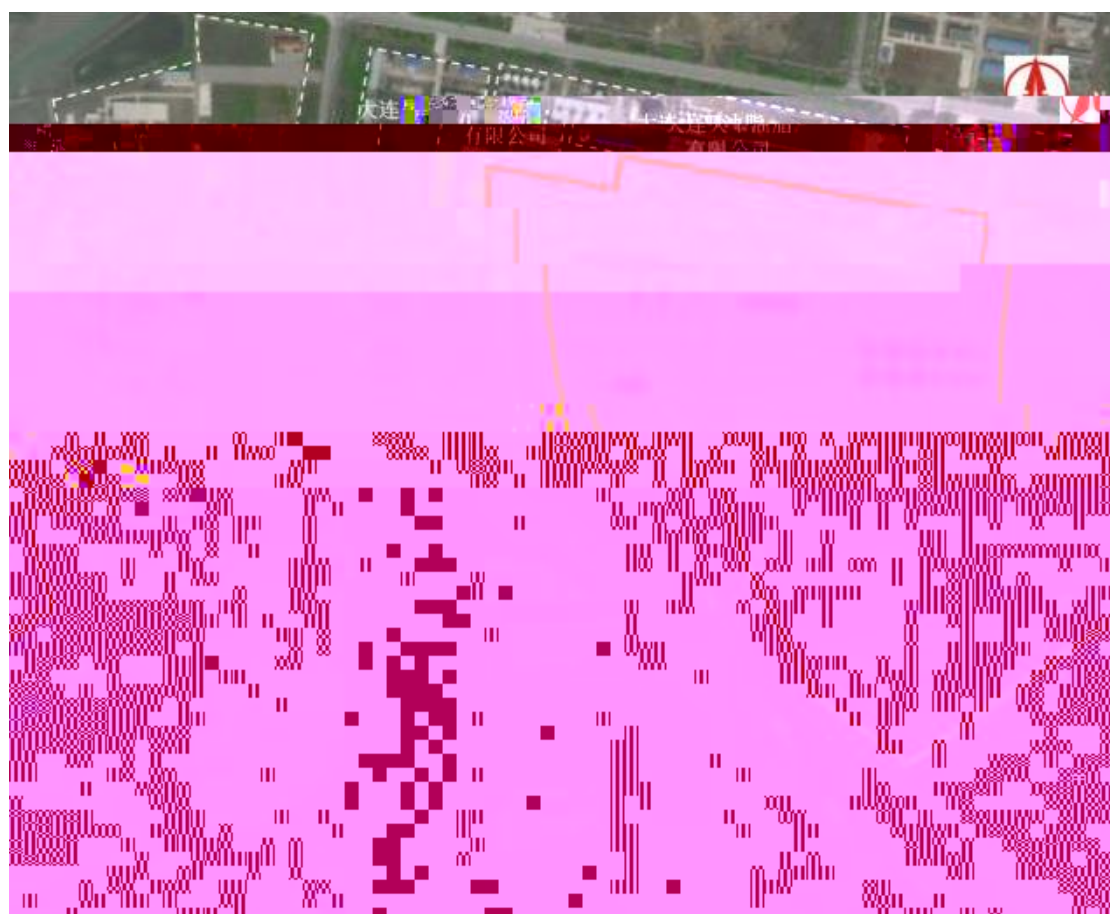
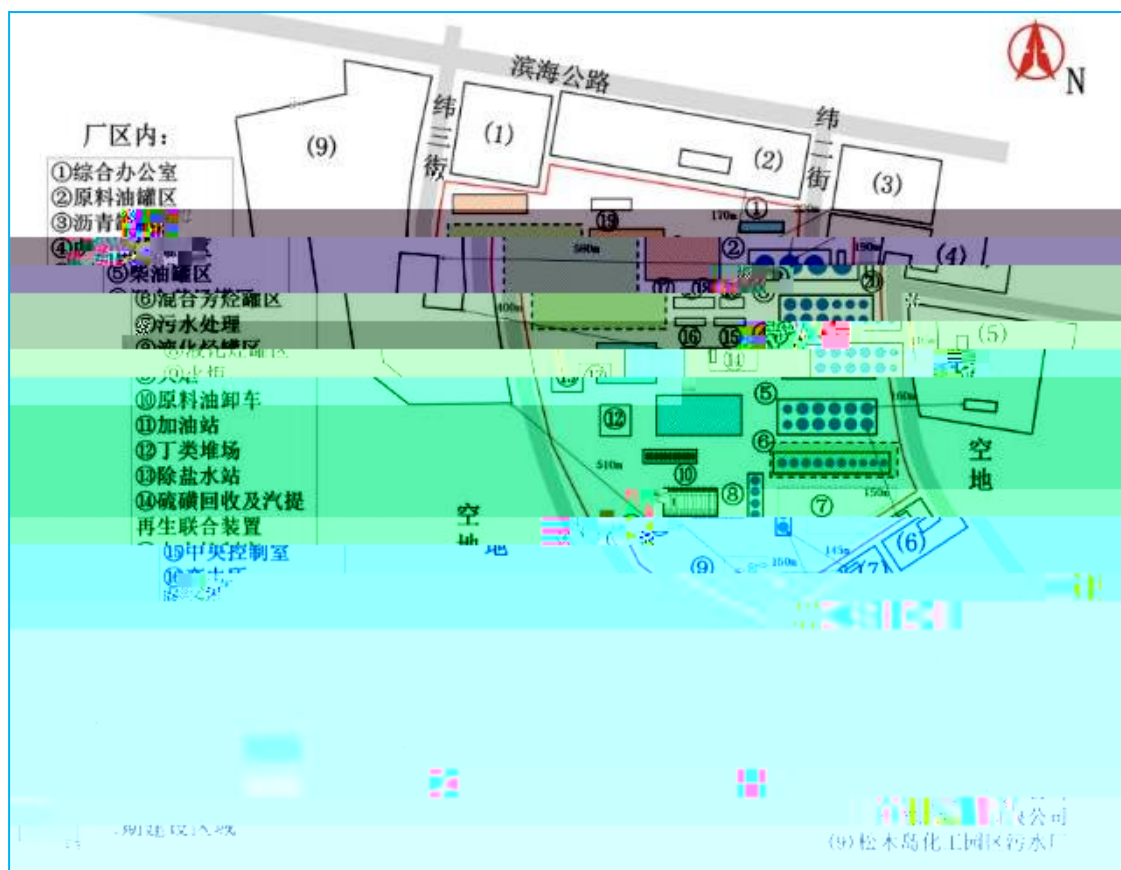
1.2

A

2.1.6			
1			
	2.1.6-1		
	2.1.6-1		
			35.30
			-21.10
		%	84.7
		%	56.7
		mm	67.8
		mm	171.1
		mm	218.0
		mm	1050.2
		mm	370
		kg/m ²	40
	10m	m/s	31.0
		kg/m ²	60
			SE
			N
			N
		day	22.22
		day	30
		day	11
		mm	930
		month	4
			1.5
		month	6~9
	3	Б	Н
			" "

κ

38



2.1.7-1

2.1.7-1

(m) (m)

GB50160-2008 2018 4.-

OT&T8T8 <w „ E

GB20100-500 0050T w „000 E E

1818



2



2 7-4

Eé

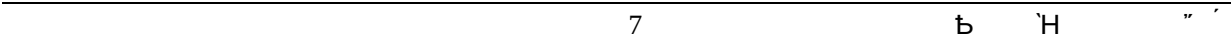
00m0

50m³

6

2 50m³

2



7

5

H

"

'

2.1.7-2

m m

GB50160-2008 2018
4.2.12
GB50160-2008 2018
4.2.12
GB50160-2008 2018

B

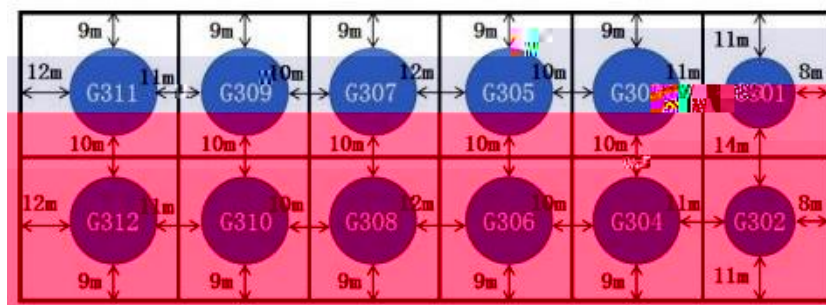
$V = 23000m^3$

: æ
m m

mæ 5

[illegible]

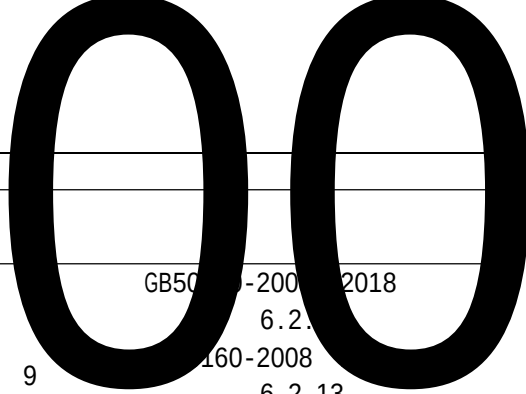
			m	m	
		G310	0.4D=8.4	11	GB50160-2008 2018 6.2.13
			H/2=7.931	9	
			H/2=7.931	12	
1.0m 0.8m 5000m³ 9872.43m³ 604.91m³ 672.42m³ 10% 500m³ 10% 300m³ 5000m³ 3000m³					



2.1.7-6

2.1.7-5

		m	m		
φ 21000 × 15862	G401	H/2=7.931	9	GB50160-2008	2018
		H/2=7.931	8	6.2.13	
	G402	0.4D=8.4	13	GB50160-2008	2018
V=5000m³	G403	0.4D=8.4	13	6.2.8	
φ 21000 × 15862	G402				
V=5000m³					
φ 21000 × 15862	G403				
V=5000m³					
φ 21000 × 15862	G404				
V=5000m³					
φ 21000 × 15862	G405	H/2=7.931	9	GB50160-2008	2018
				6.2.13	
	G403	0.4D=8.4	13	GB50160-2008	2018
V=5000m³	G406	0.4D=8.4	13		
				6.2.8	
φ 21000 × 15862	G406				
	G404	0.4D=8.4	13		
	G408	0.4D=8.4	13		



m					
V=5000m ³		H/2=7.931		GB50160-2008	2018
				6.2.13	
G407		H/2=7.931	9	GB50160-2008	
φ 21000 × 15862	G405	0.4D=8.4	13	6.2.13	
V=5000m ³				GB50160-2008	2018
				6.2.8	
G408					
φ 21000 × 15862					
V=5000m ³					
G409					
φ 21000 × 15862	G407	0.4D=8.4	13		
	G410	0.4D=8.4	13	GB50160-2008	2018
V=5000m ³	G411	0.4D=8.4	13	6.2.8	
G410	G409	0.4D=8.4	13		
φ 21000 × 15862	G408	0.4D=8.4	13	GB50160-2008	2018
				6.2.8	
V=5000m ³					
G411					
φ 17000 × 15420					
V=3000m ³					
G412					
φ 17000 × 15420	G410	0.4D=6.8	17		
		H/2=7.71	11	GB50160-2008	2018
V=3000m ³		H/2=7.71	8	6.2.13	
	1.3m	1.1m			
	14628.17m ³		5000m ³		
5000m ³		1002.8m ³		10%	500m ³
3000m ³		1032.37m ³		10%	300m ³

2.1.7-6

	m	m	
G601	3	3	GB50160-2008 2018
φ 12300			6.3...M 1 101 1 10
V=1000m ³			

2.1.3-4

2.1.3-4

	м²	м	
1	1121.74	7.80	
2	389.04	6.60	
3	428.67	7.40	/
4			
5			
6			

2.2

2.2.1

2.2.2

2.2.2-1

2.2.2-2~ 2.2.2-4

1	C-7201		$\Phi 1800 \times 33691 \times 14$ 73m ³	1	Q245R+S321
2	D-7201		$\Phi 2000 \times 6074 \times 12$	1	Q245R
3					
4					
5					
6					
7					
8					
9					
1	C-7101		$\phi 2800 \times 28702 \times 12/14$, 140m ³	1	Q245R+S321
2	C-7102		$\phi 1200/2600 \times 24786$	1	Q245R+S321
3	D-7101		$\phi 8000 \times 8000$	1	Q235-B
4	D-7104		$\phi 1400 \times 6974$, 50%	1	Q245R
5					
6					
7					
8					
9					
1	C-7301		$\phi 1600 \times 18948$	1	Q245R+S321
2	C-7302		$\phi 1600 \times 22335$	1	Q245R+S321
3	C-7302		$\phi 2800 \times 14020$	1	Q245R, 0Cr13

4

5

6

7

8

9

10

11

12 F-7301

φ 2400 × 7600 × 16

1 Q245R,Cr25Ni20

13 F-7302

φ 2100 × 8000 × 16

1 Q245R 0Cr18Ni9

14 E-7309

φ 2100 × 4560

1 Q245R

15 E-7311

φ 1400 × 5744

1 0Cr13, Q245R

16 S-7301

φ 1100 × 70000

1 Q235-B

1

—

DN300, 65m

1

2

/

				/		
23.		0-0.6 MPa	1307P-10035-02486			2025.2
24.						
25.						
26.						
27.						
28.						
29.		0-1 MPa	1307P-10035-03590			2025.2
30.		0-1 MPa	1307P-10036-03568			2025.2
31.		0-0.1 MPa	1307P-09888-01717			2025.2
32.		0-1 MPa	1307P-10035-02482			2025.2
33.		0-1 MPa	L1D049663			2025.2
34.						
35.						
36.						
37.						
38.						
39.						
40.						
41.		0-1 MPa	L1D0409611	В		2025.2
42.		0-0.6 MPa	1307P-09888-01710			2025.2
43.		0-0.6 MPa	1307P-09888-01712			2025.2
44.		0-0.6 MPa	1307P-09888-01657			2025.2
45.		0-0.16	1307P-09888-01701			2025.2

				/		
70.		(0-1.6)MPa	1405P-08677-08473	B		2025.2
71.		(0-6)MPa	22-08-98082			2025.2
72.						
73.						
74.						
75.						
76.		(0-2.5)MPa	1307P-09888-01574	3020P001C		2025.2
77.		(0-2.5)MPa	1307P-09888-01576	3020P002A		2025.2
78.		(0-2.5)MPa	1307P-09888-01575	3020P002B		2025.2
79.		(0-2.5)MPa	1307P-09888-01578	3020P003A		2025.2
80.		(0-2.5)MPa	1307P-09888-01577	3020P003B		2025.2
81.		(0-2.5)MPa	1307P-09888-01579	3020P004A		2025.2
82.		(0-2.5)MPa	1307P-09888-01580	3020P004B		2025.2
83.		(0-1.6)MPa	1307P-09888-01581	3020P005A		2025.2
84.						
85.						

				/		
86.						
87.						
88.		(0-2.5)MPa	1307P-09888-01589	C		2025.2
89.		(0-2.5)MPa	1307P-09888-01587	D		2025.2
90.		(0-1.0)MPa	1307P-09888-01591	B		2025.2
91.						
92.						
93.						
94.						
95.		(0-1.6)MPa	1307P-09888-01605	3040P002B		2025.2
96.		(0-1.6)MPa	1307P-10719-05469	3040P002A		2025.2
97.		(0-1.6)MPa	1307P-09888-01607	3040P002B		2025.2
98.		(0-1.6)MPa	1307P-09888-01608	3040P002C		2025.2
99.		(0-1.6)MPa	1307P-09888-01609	3040P003A		2025.2
100.						
101.						
102.						
103.						
104.						
105.		(0-2.5)MPa	1307P-09888-01527			2025.2

/

106.	(0-2.5)MPa	1307P-09888-01528		2025.2
107.	(0-2.5)MPa	1307P-09888-01522	G-601	2025.2
108.				

				/		
				(		
125.		(0-1.6)MPa	13034439	6		2025.2
126.		(0-2.5)MPa	13034441	6		2025.2
127.		(0-0.6)MPa	13034438	6		2025.2
128.						
129.						
130.						
131.		(0-1.6)MPa	10.09.21.2059	2		2025.2
132.		(0-1.6)MPa	2012054292	B		2025.2
133.		0-0.1 MPa	2012054283	B		2025.2
134.						
135.						
136.						
137.						
138.						
139.		0-0.1 MPa	2012054294	A		2025.2
140.		0-1 MPa	DLWF-03			2025.2
141.		0-1 MPa	DLWF-04			2025.2

				/		
142.		0-1 MPa	1307P-10036-03571			2025.2
143.						
144.						
145.						
146.						
147.						
148.						
149.		0-40 MPa	2017-06-2070	5# /		2025.2
150.		0-40 MPa	2017-06-2064	6# /		2025.2
151.		0-40 MPa	1211131K84	1# 1		2025.2
152.		0-40 MPa	Z1207098059	1# 2		2025.2
153.						
154.						
155.						
156.						
157.						
158.		0-2.5 MPa	1301232B103	1# 3		2025.2
159.		0-1 MPa	1304282W16	1# 1		2025.2
160.		0-1 MPa	1304282W59	1# 2		2025.2
161.						
162.						
163.						

164.						
165.						
166.	0-2.5 MPa	1211211A42	2#	2		2025.2
167.	0-2.5 MPa	1401P-01606-06783	2#	3		2025.2
168.						
169.						
170.						
171.						
172.	0-1 MPa	1307P-10035-02565	2#			2025.2
173.	0-1 MPa	1305242E68.	2#			2025.2
174.	0-1.6 MPa	1904P-11380-13603	LNG			2025.2
175.	0-1.6 MPa	1307P-10035-02358	LNG			2025.2
176.						
177.						
178.						
179.						
180.	1 *					

2.2.3

1

2.2.3-1

2.2.3-1

G101

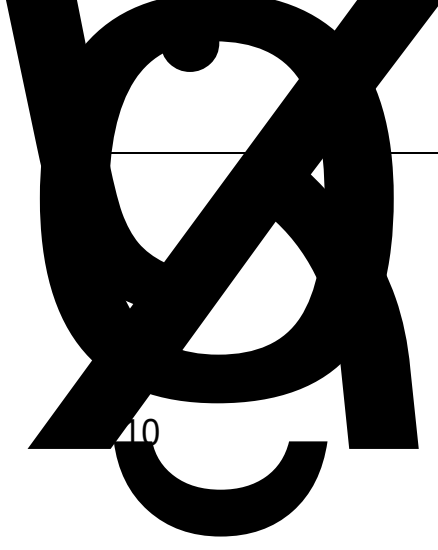
B

$\varnothing 37000 \times$
20100

1

23000m³

G102-G103



10

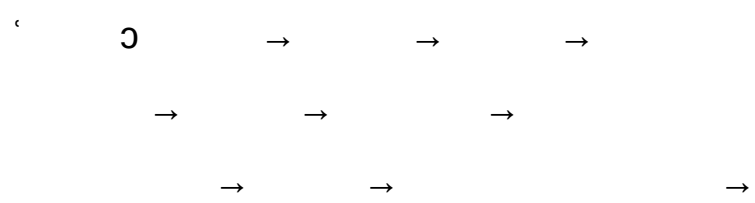
SIS

12

DCS

SIS

3
3



2.3

2.3.3

2.3.3-1

2.3.3-1

		V
1	H ₂ S	65
2	CO ₂	15
3	NH ₃	10
4	HC	2
5	H ₂ O	8
		100

2.3.4

2.3.4-1

2.3.4-1

1		26000	m ³	
2	≥ 30%	15	t/a	
3		15	t/a	
4		15000	Nm ³ /a	
5				
6				
7				
8				
9				

2.3.5

2.3.5-1

1		20000	t/a	

2.4

2.4.1

1

DN200

0.3~0.5MPa

800m³/h

2

m³/h

1

2.4.2

1

220/66kV

66kV

66kV

66 / 10kV

50000kVA 66/10.5kV

10kV

380/220V

2

2404.5kW

DCS SIS

UPS

180min SIS

EPS

EPS

100kW

1000kW

2

2

3

66kV

8

10kV

4

2

2

10kV

380V

1

10kV

380V

10

1600kVA 10/0.4+kV

2

2 2000kVA 10/0.4

1000KW

3

2 2000kVA 10/0.4

4

10kV

2m

5

2.4.3

6m × 6m

380/220V TN-S

4Ω

2.4.4

DCS

SIS

GDS

DCS

SIS

GDS

H

P

PLC

DCS

2.4.4.1

1

DCS

2

SIS

SIS

3 2 SIS

SIL

2.4.4-1

2.4.4-2

2.4.4-1

SIF

SIL

	SIF	SIF			SIL	SIL
1	SIF001	SIF001—	G-101	LZT_001A	SIL1	SIL1
2	SIF002	SIF002—	G-102	LZT_001B	SIL1	SIL1
3	SIF003	SIF003—	G-103	LZT_001C	SIL1	SIL1
4	SIF004	SIF004—	G-207	LZT_201A	SILa	SIL1
5	SIF005	SIF005—	G-208	LZT_201B	SILa	SIL1
6	SIF006	SIF006—	G-209	LZT_203A	SIL1	SIL1
7	SIF007	SIF007—	G-210	LZT_203B	SIL1	SIL1
8	SIF008	SIF008—	G-211	LZT_204A	SIL1	SIL1
9	SIF009	SIF009—	G-212	LZT_204B	SIL1	SIL1
10	SIF010	SIF010—	G-301 LZT_04A	LZT_304A	SILa	SIL1
11	SIF011	SIF011—	G-302 LZT_04B	LZT_304B	SILa	SIL1
12	SIF012	SIF012—	G-303 LZT_03B	LZT_303B	SIL1	SIL1
13	SIF013	SIF013—	G-304 LZT_03D	LZT_303D	SIL1	SIL1
14	SIF014	SIF014—	G-305 LZT_03A	LZT_303A	SIL1	SIL1
15	SIF015	SIF015—	G-306 LZT_03C	LZT_303C	SIL1	SIL1
16	SIF016	SIF016—	G-307 LZT_02B	LZT_302B	SIL1	SIL1
17	SIF017	SIF017—	G-308 LZT_02E	LZT_302E	SIL1	SIL1
18	SIF018	SIF018—	G-309 LZT_02A	LZT_302A	SIL1	SIL1
19	SIF019	SIF019—	G-310 LZT_02D	LZT_302D	SIL1	SIL1

SIF			SIL		
	SIF		SIF		SIL
20	SIF020	SIF020—	G-311 LZT_04A	LZT_304A	SIL1
21	SIF021	SIF021—	G-312 LZT_02C	LZT_302C	SIL1
22	SIF022	SIF022—	G-501 LZT_5110	LZT_510	SIL1
23	SIF023	SIF023—	G-502 LZT_5109	LZT_509	SIL1
24	SIF024	SIF024—	G-503 LZT_5108	LZT_508	SIL1
25	SIF025	SIF025—	G-504 LZT_5107	LZT_507	SIL1
26	SIF026	SIF026—	G-505 LZT_5106	LZT_506	SIL1
27	SIF027	SIF027—	G-506 LZT_5105	LZT_505	SIL1
28	SIF028	SIF028—	G-507 LZT_5104	LZT_504	SIL1
29	SIF029	SIF029—	G-508 LZT_5103	LZT_503	SIL1
30	SIF030	SIF030—	G-509 LZT_5102	LZT_502	SIL1
31	SIF031	SIF031—	G-510 LZT_5101	LZT_501	SIL1
32	SIF032	SIF032—	G-601 LZT_103	LZT_601A	SIL2
33	SIF033	SIF033—	G-602 LZT_104	LZT_601B	SIL2
34	SIF034	SIF034—	G-603 LZT_101	LZT_601C	SIL2
35	SIF035	SIF035—	G-604 LZT_102	LZT_601D	SIL2
36	SIF036	SIF036—	G-605 LZT_105	LZT_601E	SIL2
37	SIF037	SIF037—	G-301 LZT_04A	LZT_304A	SILa
38	SIF038	SIF038—	G-302 LZT_04B	LZT_304B	SILa
39	SIF039	SIF039—	G-303 LZT_03B	LZT_303B	SIL1
40	SIF040	SIF040—	G-304 LZT_03D	LZT_303D	SIL1

SIF			SIL		
	SIF			SIL	SIL
41	SIF041	SIF041—	G-305 LZT_03A	LZT_303A SIL1	SIL1
42	SIF042	SIF042—	G-306 LZT_03C	LZT_303C SIL1	SIL1
43	SIF043	SIF043—	G-307 LZT_02B	LZT_302B SIL1	SIL1
44	SIF044	SIF044—	G-308 LZT_02E	LZT_302E SIL1	SIL1
45	SIF045	SIF045—	G-309 LZT_02A	LZT_302A SIL1	SIL1
46	SIF046	SIF046—	G-310 LZT_02D	LZT_302D SIL1	SIL1
47	SIF047	SIF047—	G-311 LZT_04A	LZT_304A SIL1	SIL1
48	SIF048	SIF048—	G-312 LZT_02C	LZT_302C SIL1	SIL1
49	SIF049	SIF049—	G-501 LZT_5110	LZT_510 SILa	SIL1
50	SIF050	SIF050—	G-502 LZT_5109	LZT_509 SILa	SIL1
51	SIF051	SIF051—	G-503 LZT_5108	LZT_508 SILa	SIL1
52	SIF052	SIF052—	G-504	LZT_507	

	SIF	SIF	SIL	SIL
62	SIF062	SIF062— G-604 LYT_102	SILa	SIL1
63	SIF063	SIF063— G-605 LYT_105	SILa	SIL1
1.SILa 2. /Null				

2.4.4-2

SIF SIL

SIL

SIF F SIF SIL

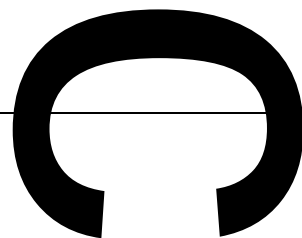
1 SIF001

2.4.4-3

		SIL											
SIS730 1		SIL1	STOP_7301A	K7301A	0	BOOL	3 2			USV_7301	K7301AB		
			STOP_7301B	K7301B	0	BOOL				USV-7311	D7302		
		SIL1	LICA—7306A		≤ 15	%				USV_7307			
			LS-7306		0	BOOL				PV_7314	D7302		
		SIL1	TSHH_7309	F-7301	≥ 1400					PV-7312	D7301		
			TSHH_7310	F-7301	≥ 1400					PV-7311	K7301B		
			TSHH_7312	F-7301	≥ 1400					FV-7303	K7301A		
			PS_7307		≤ 0.01	MPa				UV-7305	D-7301		
			FT-7305	K-7301A/B	≤ 500	Nm3/h							
			PS-7315		≥ 0.07	MPa							
			LS-7304	D-7301	0	BOOL							
			LS-7302	D-7302	0	BOOL							

	SIL		
	-	0303-LSHH1007A	G-307
G-307	-	XZY_303B1_STOP	
	-	0303-HS-UV007	
	-	XZY_303B2_STOP	XZY_303B2 G-307
G-308			
G-308			
G-309			
G-309			
G-310		LZT_02D_HH	
	-	0303-LSHH1010A	

	SIL				
		LZT_01A_HH		m	
	-	0303-LSHH1011A	G-311		
	-	XZY_301A_STOP			
	-	0303-HS-UV011			
G-311	-	XZY_301B_STOP		XZY_301B	G-311
		LZT_302C_HH	G-312	>14100	
G-312	SIL1				



	SIL						
G-506	-	XZY_505B_STOP				XZY_505B	G-506
	-	HS-HV1006					
G-507	SIL1	LZT_504_HH	G-507	>14150	m		
		LZT_5104_HH			m	XZY_504A	G-507
G-508	SIL1	LZT_503_HH	G-508	>14150	m		
		LZT_5103_HH			m		
	-	0305-LSH1013	G-508			XZY_503A	G-508
	-	XZY_503A_STOP					
	-	HS-UV1008					
G-508		XZY_503B_STOP					

G-510 SIL
- XZY

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SIL

-	XZZSL_506B	G-505
-	XZZSL_505B	G-506
-	XZZSL_504B	G-507
-	XZZSL_503B	G-507
-	XZZSL_510B	G-501
-	XZZSL_509B	G-502
-	XZZSL_508B	G-503
-	XZZSL_507B	G-504

KTS_P501

2012-07-25

		SIL												
(	/	-	XZZSL_301B	G-311						KTS_3030P002 AKTS_3030P002B				
		-	XZZSL_302A2	G-309						KTS_3030P003 AKTS_3030P003B				
		-	XZZSL_302B2	G-307										
		-	XZZSL_302C2	G-312										
		-	XZZSL_302D2	G-310										
		-	XZZSL_302E2	G-308										

2.4.4-5

		SIL						
D-4601		LIT101	18	18	m		LSV_5901	
			60	60			HV_5901	
A/B	-	PT_5101/PT_5201		0.2	Mpa			
	-	TE_3111/TE_3211		20				A/B
	-							
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2.4.4.4

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2.4.5-2~ 2.4.5-5

2.4.5-2

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/	24

2.4.5-3

	13795119718 85187187
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2.4.5-4

	85256119
/	30

0.65Mpa G ≤ 40

lum ≤ 1mg/m³ ≤ 1mg/m³

-31

2.4.7-1

2.4.7-1

		Nm ³ /h		Nm ³ /h	
5		630	-	114	-
6			-		-
7			-		-
		630	1600	1078	-
			118m ³ /min	60m ³ /min	

2230Nm³/h

1078Nm³/h

118m³/min

60m³/min

2

DN350

350~370

3.5~3.7Mpa

1.0MPa

160

1.0MPa

18.4t/h

20t/h

6t/h

2.4.7-2

		t/h	
1		-6	
2		21.62	DN350 350~370 3.5~3.7Mpa 220t/h
3		23.725	
		39.345	

2.4.7.3

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JY/CMS-N2-350/99.5 350Nm³/h 0.6MPa G ≤ 40

2.4.7-3

2.4.7-3

		0.6MPa	
1		30	-
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7		-	60
8		-	60
		330	280
700Nm ³ /h			

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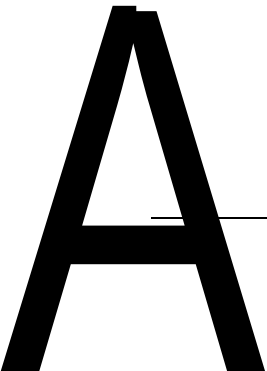
2.4.10

2.4.10-1

2.4.10-1

			m³/h	()	Mpa(G)		m	NPSHA (m)		kW		

		m³/h ()	Mpa(G)	YBD7.2/30-125-235	m	NPSHA (m)	kW
1	A	108	0.72		72	5	Y3 Ø25



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4.1

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4.6

4.7

4-1

The flowchart illustrates the process of safety evaluation. It begins with '被评价单位概况' (General Situation of the Unit Being Evaluated), which leads to '收集、整理资料' (Collecting and Organizing Materials). This step feeds into '确定评价方法' (Determining Evaluation Methods). Simultaneously, '确定安全评价范围' (Determining the Scope of Safety Evaluation) also influences the selection of methods. The '确定评价方法' step branches into two specific methods: '安全检查表法' (Checklist Method) and '危险度评价法' (Degree of Danger Evaluation Method). These methods are applied to '物料性质、危险特性' (Material Properties and Dangerous Characteristics). The entire process is governed by '法律法规、标准规范' (Laws, Regulations, Standards, and Specifications). The final output is a comprehensive report, represented by a large box at the bottom labeled '安全评价报告' (Safety Evaluation Report).

4-1

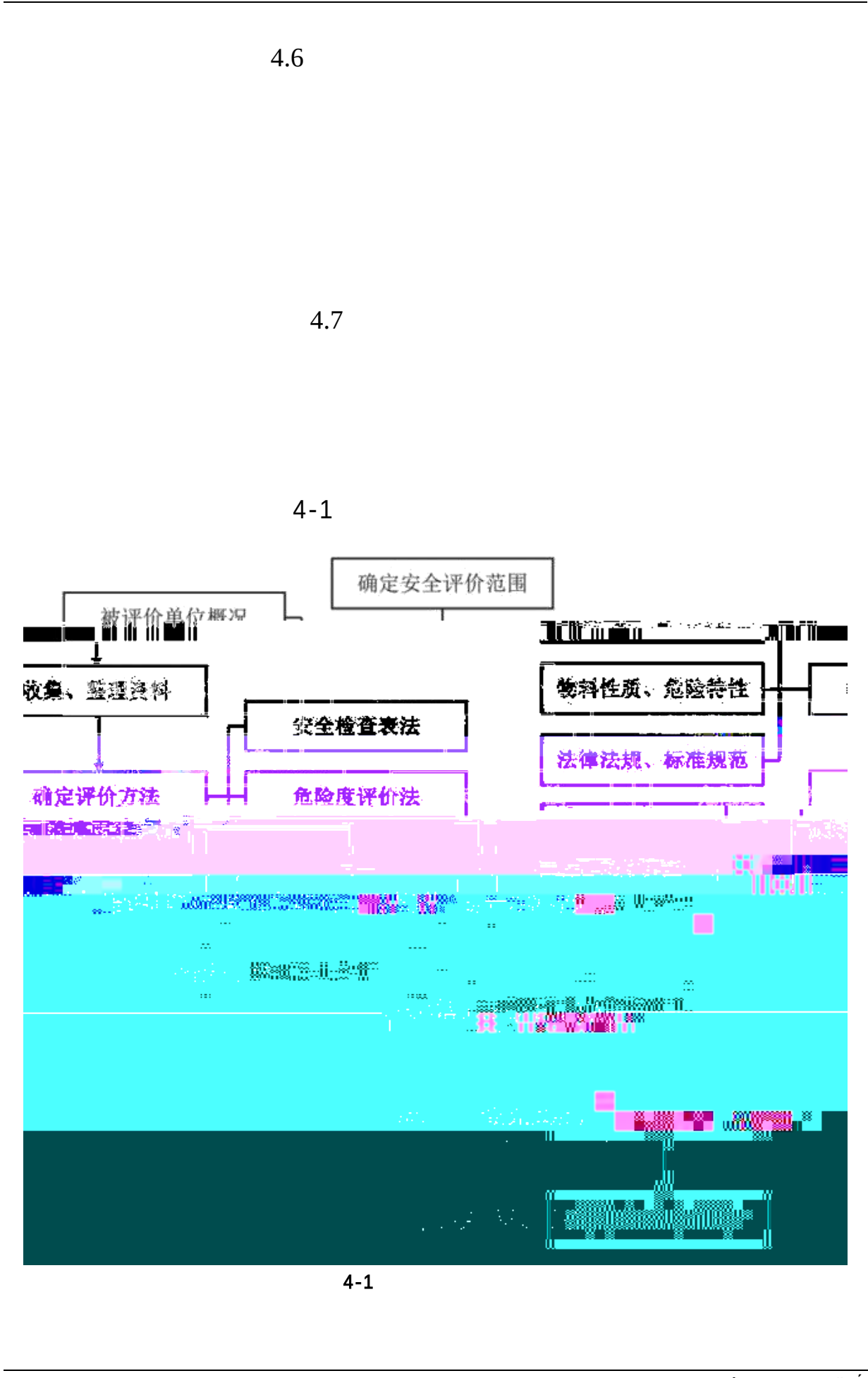
4.6

4.7

4-1

The flowchart illustrates the process of safety evaluation. It begins with '被评价单位概况' (General Situation of the Unit Being Evaluated), which leads to '收集、整理资料' (Collecting and Organizing Materials). This step feeds into '确定评价方法' (Determining Evaluation Methods). Simultaneously, '确定安全评价范围' (Determining the Scope of Safety Evaluation) also influences the selection of methods. The chosen methods are categorized into two main types: '安全检查表法' (Checklist Method) and '危险度评价法' (Degree of Danger Evaluation Method). These methods lead to the final evaluation results, which are presented in a table format. The table includes columns for '序号' (Serial Number), '危险源名称' (Name of Hazard Source), '危险等级' (Danger Level), and '控制措施' (Control Measures). The table lists various hazards such as '火灾' (Fire), '爆炸' (Explosion), '中毒和窒息' (Poisoning and Asphyxiation), etc., and their corresponding control measures.

4-1

[illegible]

4.6

4.7

4-1

The flowchart illustrates the process of safety evaluation. It begins with '被评价单位概况' (General Situation of the Unit Being Evaluated), which leads to '收集、整理资料' (Collecting and Organizing Materials). This step feeds into '确定评价方法' (Determining Evaluation Methods). Simultaneously, '确定安全评价范围' (Determining the Scope of Safety Evaluation) also influences the selection of methods. The '确定评价方法' step branches into two specific methods: '安全检查表法' (Checklist Method) and '危险度评价法' (Degree of Danger Evaluation Method). These methods are applied to '物料性质、危险特性' (Material Properties and Dangerous Characteristics). The entire process is governed by '法律法规、标准规范' (Laws, Regulations, Standards, and Specifications). The final output is a '安全评价报告' (Safety Evaluation Report).

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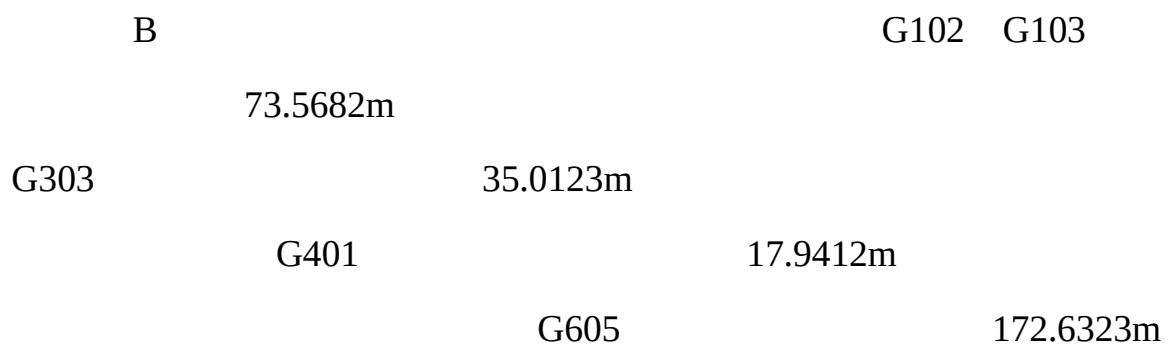
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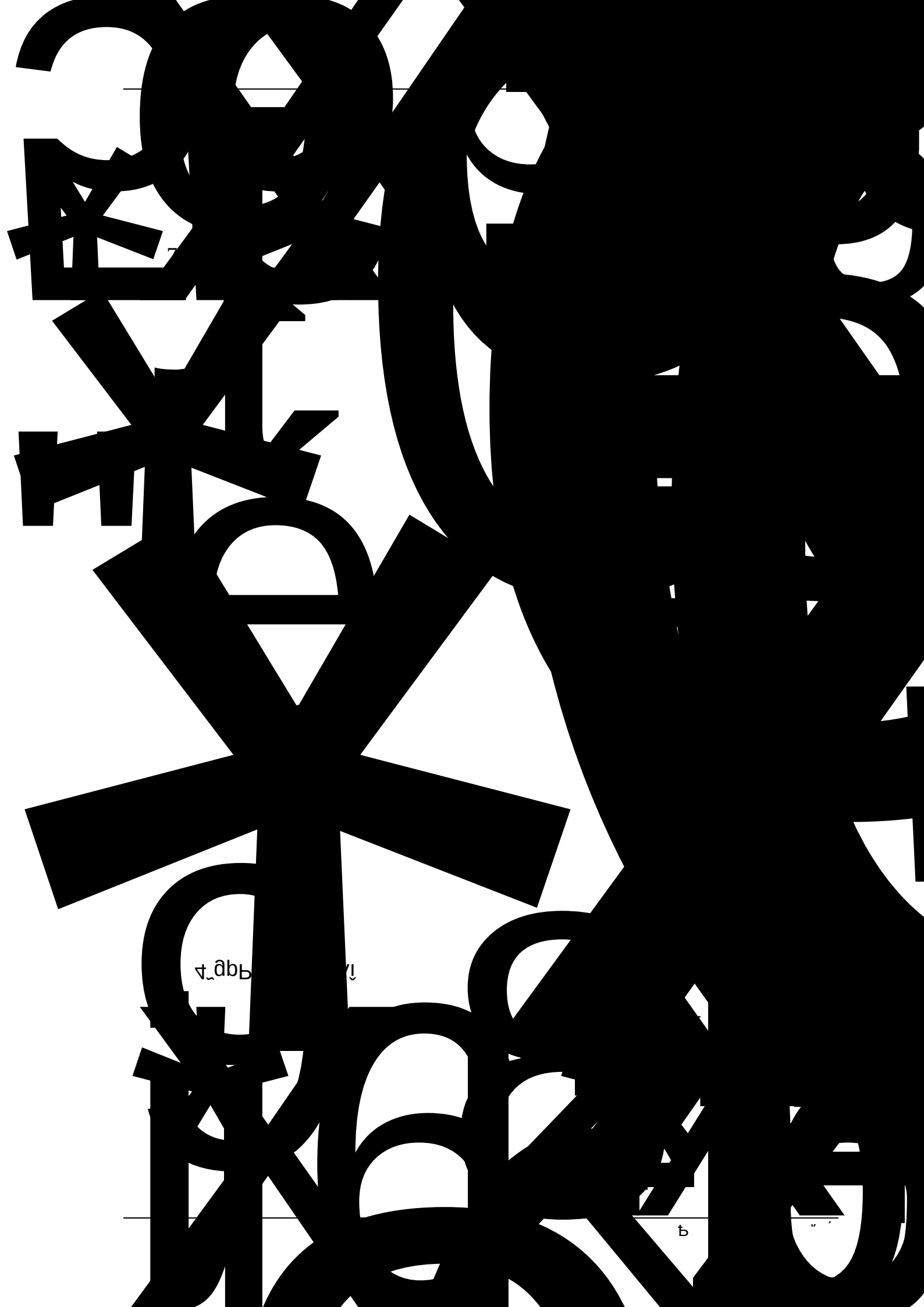
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7.2.1-3

This image shows a full page of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. At the top center, there is a small black header containing the text "7.2.1-3".

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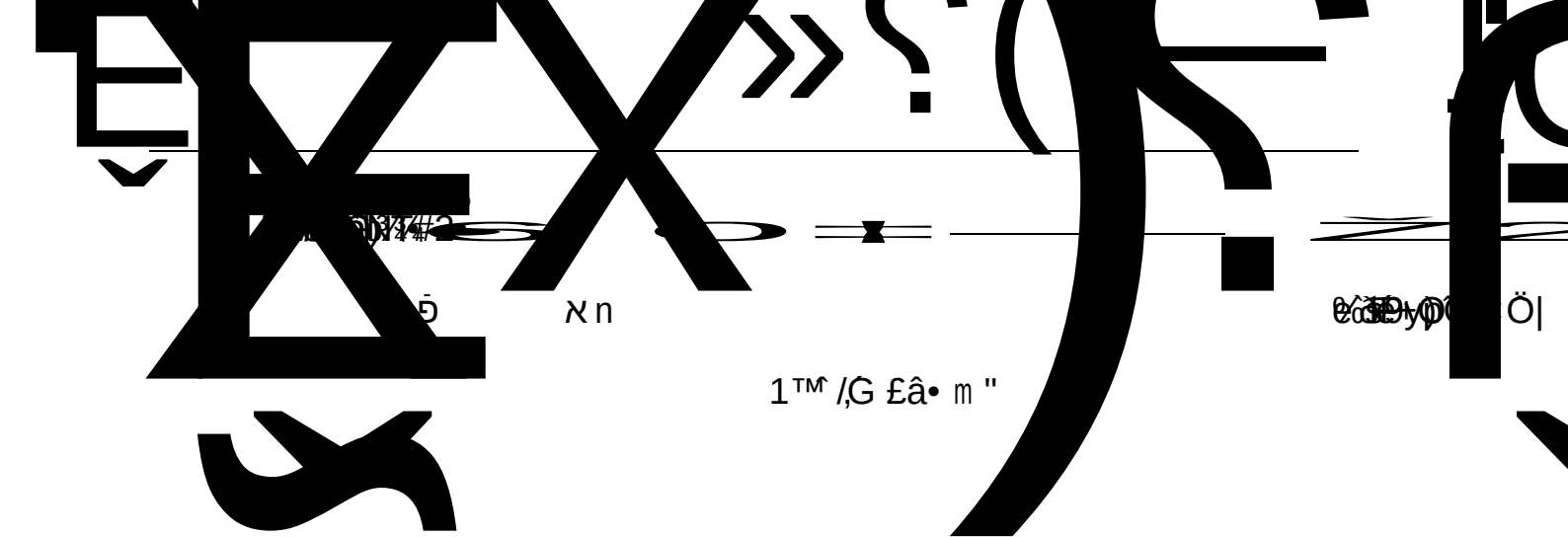
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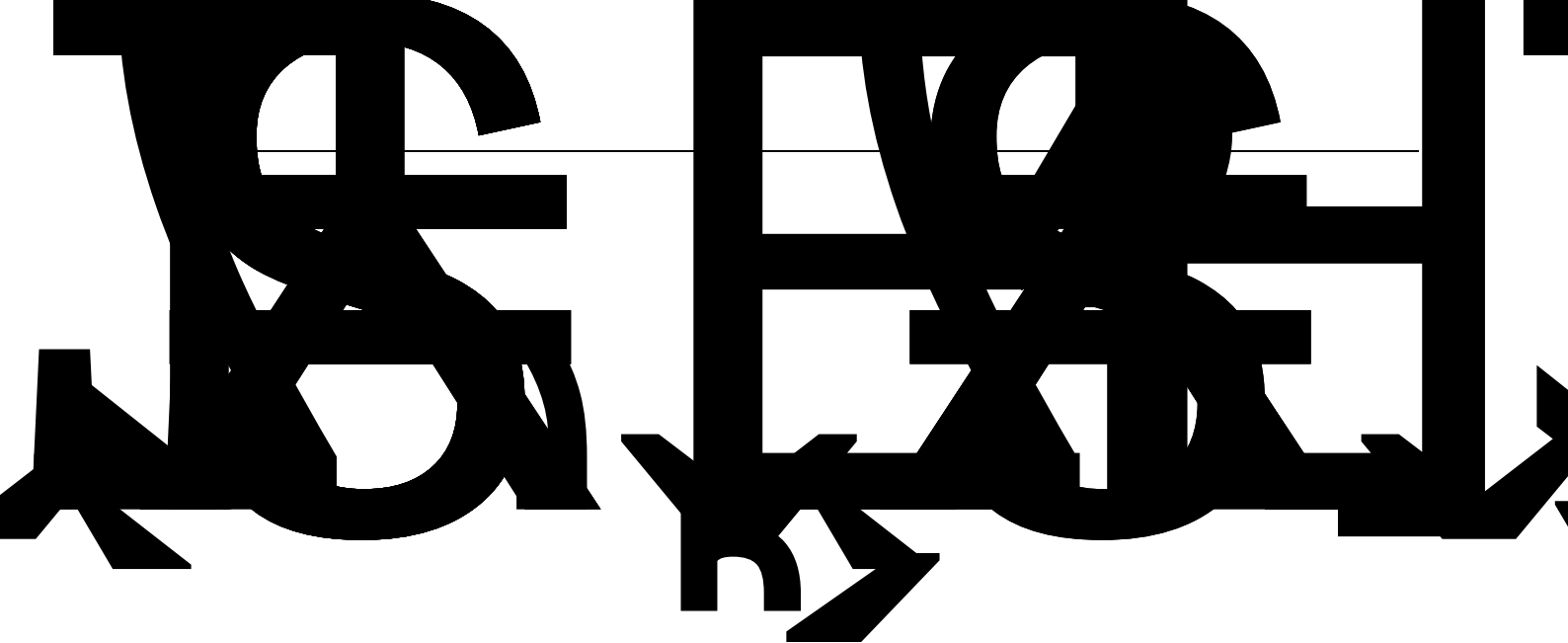
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