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2.5		5
2.6		7
2.7		9
2.8		28
2.9		53
2.10		53
3		54
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3.2		54
3.3		58
3.4 “ ”		59

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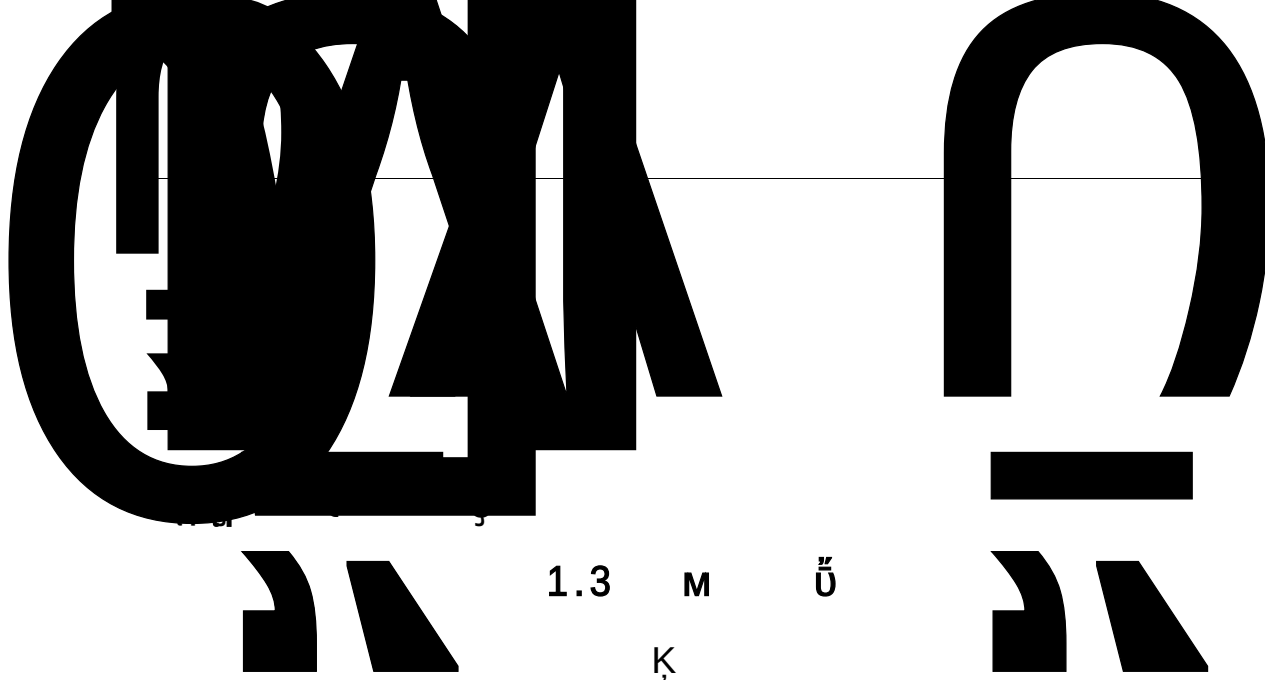
1.1 T !! "

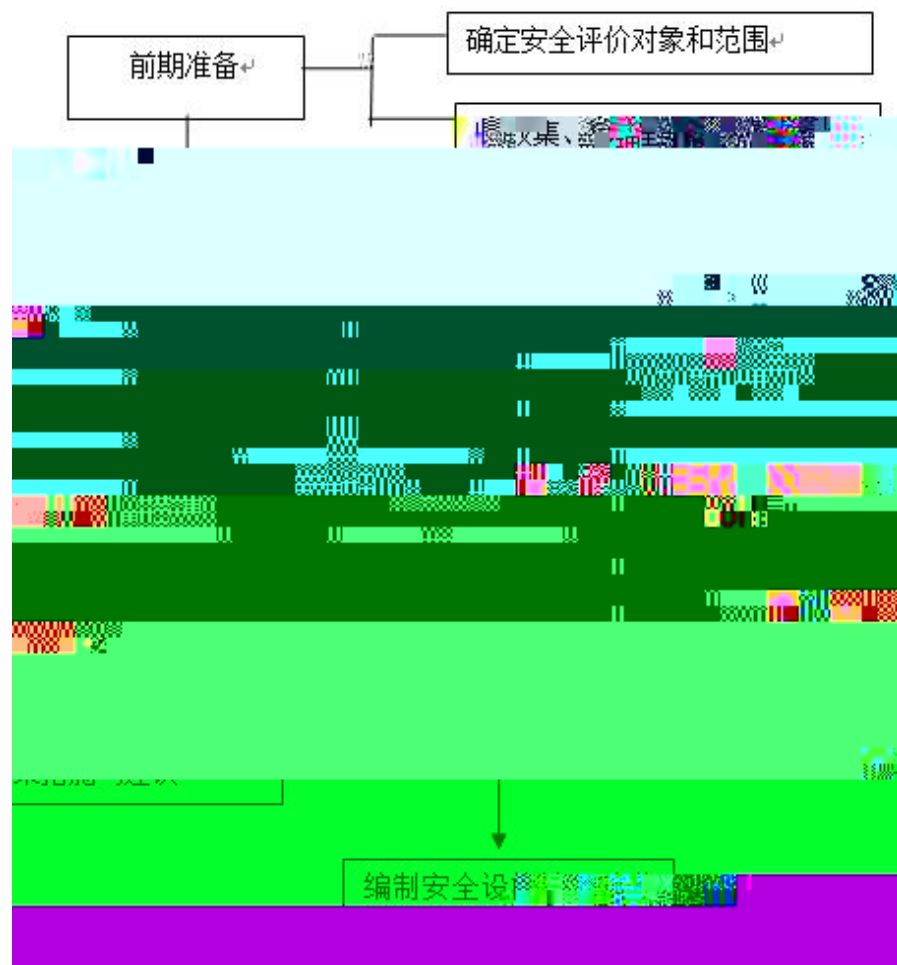
1.1.1 H M

1.1.2 l H M

1.1.3 W

1.2 M





1.4-1

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	2.4.2-1		

				m					
1					2F 3F				/
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4					2	2			2
5					1	1.2			1
6					1				1
7					1				1
8					1				1
9					1				1
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11					1	A			1

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9		30								

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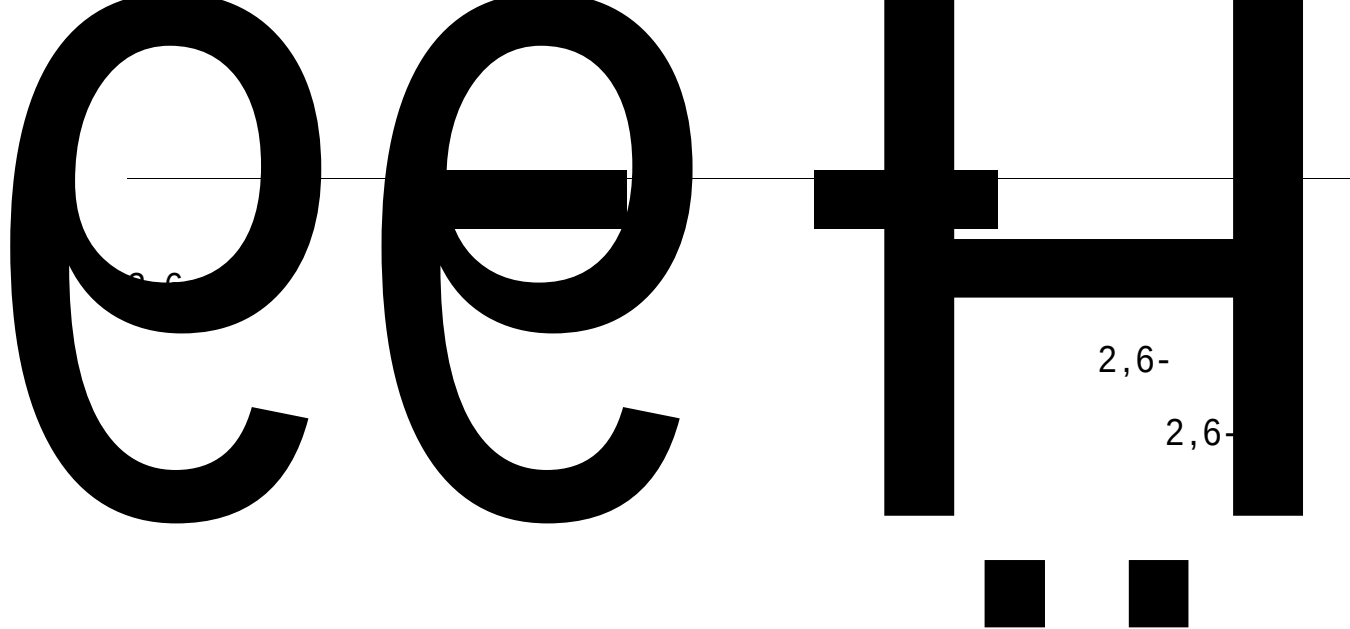
2.5.1-2

		%		t	t		d
1		≥ 99.7	A	14000	1648	1000m ³ /	31-V102A/B 36
2	2,6-	≥ 99.7	A			500m ³ /	V604A/B 59
3	2 3 6-	≥ 99.5				/200L	31-V103A 84 66
4		≥ 75	A				10
5	2,6- BHT	≥ 98.5					33
6		≥ 99.75	A			1000m ³ /	31-V103B 74
7		70%	B			50m ³ /	31-V107 20
		30%					
8		≥ 75	A				10
9	20%	20					22-V0257 6

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2.7.1-1

1		Mpa	(	t / h		
		0.6	5-6	100		

5

3000m³/h

1 1 3000m³/h N=55kW × 2

2 1000m³

4 Q=700m³/h H=60m N=160kW 3 1

1 Q=400m³/h H=50m

N=75kW

1 Q=200m³/h H=60m N=75kW

90m³/h

25m³/h 70

65m³/h 10

2.7.2 °

1

20kV

20kV

20kV

20kV

220V

20kV

2

1		20kV		20kV	0.4kV
		20kV			
		0.95			
2	1	20/10kV	4000kVA		10kV
				2	20/0.4kV
					2500kVA
		4267.44kW		3657.29kW	720kW
		20kV			
	PT			KYN28	
3		20kV			45AH
4					
3					
	20kV	20kVAC	50Hz		
		380/220VAC	50Hz		TN-S
		380/220VAC	50Hz		TN-S
		380/220VAC	50Hz		TN-S
		DC 220V			
		AC 220V			
		AC 380V	UPS		
				AC 220V	UPS

AC 220V UPS

4

20kV

20kV

220V

5

DCS SIS

UPS

30min

UPS

30min

180min

2.7.3

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4mm

2

10Ω

18m

0.5m

25m

ABD

0.4kV 0.4kV

UPS PLC

0.4kV

I SPD I SPD
2.5kV 12.5kA
II SPD II SPD
5kA
6 I

2.5kV

005B

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185

0.3MPa

150m³/h 3 2 1

70 25t/h 1

1 8200m³/h dIIBT4Gb 12 /

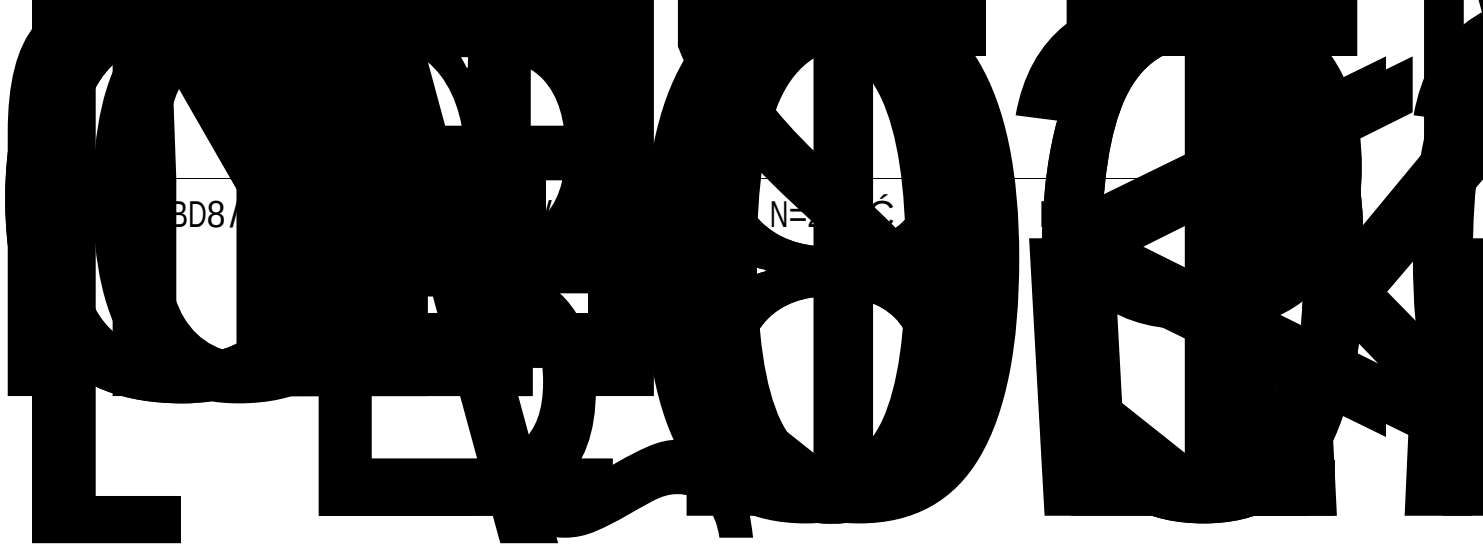
3600m³/h

13500m³/h 12300m³/h 1350m³/h

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1620m³ 1



BD8/

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02			LSHH32003B XV-32001B (1002)	32P102	
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4

DCS

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1 1E-5/

0.021bar 0.138bar 0.207bar 0.689bar 0.689bar

2 1E-5/

0.035bar 0.039bar 0.026bar 0.027bar
0.039bar

2.7.8 A

IP65

4 20mA

UPS

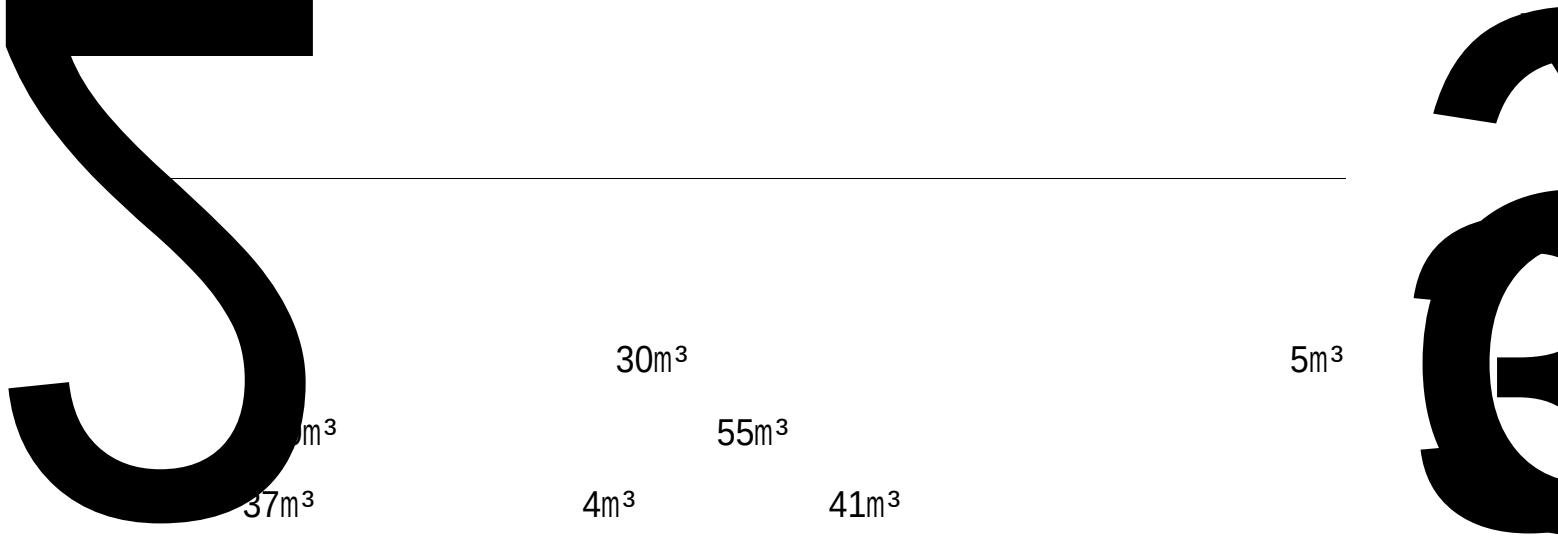
Exd CT4

Exia CT4

2.7.9

820

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37m³ 30m³ 55m³ 41m³ 4m³ 5m³

XV_1101,XV_1102 / /

/ /

02 → →

→

40kpa 40kpa

2.7.11 φ

10m

4m

Exd I I CT4

Exd CT6

IP65

4 20mA

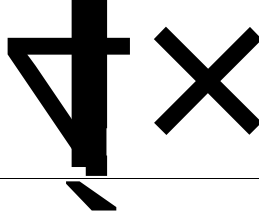
GDS

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2.7.12

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ExdI I BT4Gb

ExdI I CT4Gb

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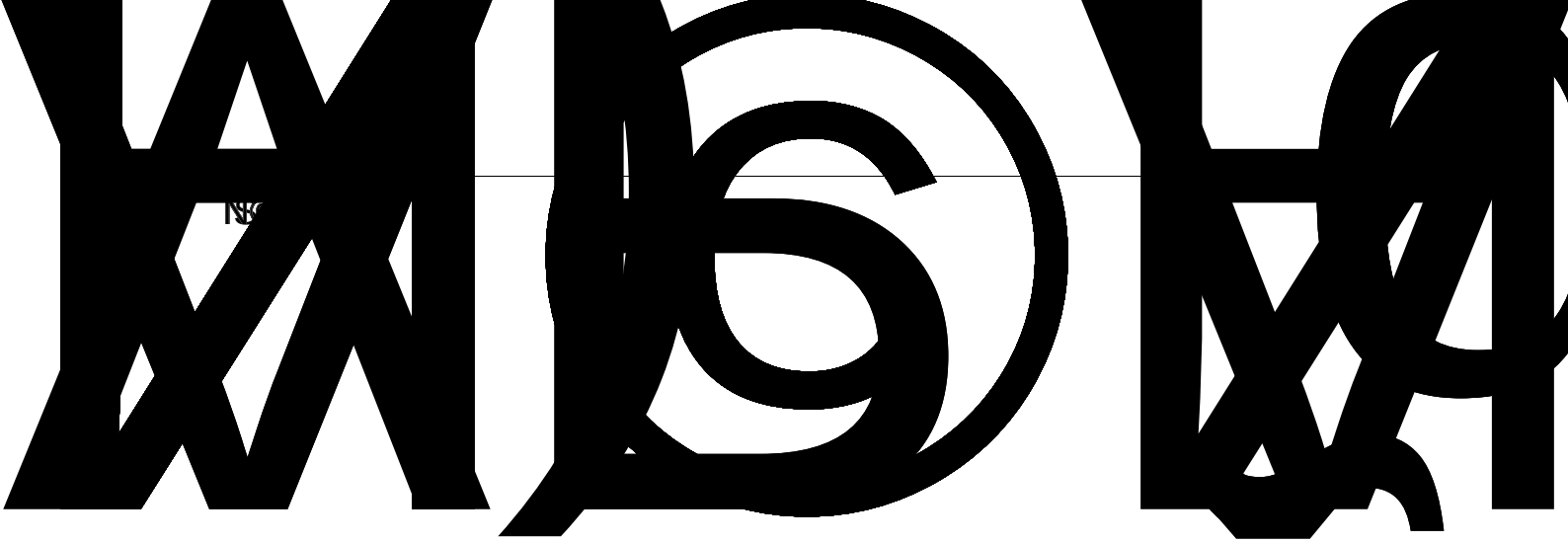
2.7.13-1

2.7.13-1

1				30 /		
2				3 /		
3				102 /		

2.7.14 ı ı

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					MPa
		m ³			
13	21-V0105A /B	800 × 1600V=1 m ³	S30408	2	
14	21-V0106	1400 × 2600V=4 m ³	S30408	1	
15	21-V0107	1400 × 2600V=4 m ³	S30408	1	
16	21-V0108A /B	W4000 × L4000 × H2500	Q345R	2	
17	21-V0109	1400 × 2600V=4 m ³	S30408	1	
18	21-V0110	1400 × 2600V=4 m ³	S30408	1	
19	21-V0111	800 × 1600 V=1m ³	S30408	1	
20	21-V0112	1600 × 3200V=7 m			

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					MPa
31	21-V0123	4500 × 4500 V=16 m ³		1	
32	21-V0124	2200 × 4000 V=15 m ³		1	
33	21-V0125	1400 × 2600 V=4 m ³	S30408	1	
34	21-V0127	2600 × 6000 V=			

						MPa
64	21-E0126	600 × 3000F=190 m ²	304/	1	45/10	0.05
					5/10	0.3
65	21-C0101A /B					



					MPa	
31	22-V0216	$\frac{2400 \times 4000}{m^3} V=20$	304	1		2%
32	22-V0217	$\frac{2400 \times 2600}{m^3} V=11$	304	1		
33	22-V0218	$\frac{1200 \times 1800}{m^3} V=2$	304	1		

MPa

71	22-V0262A B	V=5m ³	304	2	
72	V0263	V=5m ³	304	1	50
73	V0264	V=4m ³	304	1	10
74					

					MPa
87	22-E0214	1000 × 4000 F=218 m ²	304/	1	
88	22-E0216	1600 × 4000 F=522 m ²	304/	1	



							MPa
120	22-X0202		200kW	304	2		
121	C0206AB		Q=500m ³ /h	304	2		
122	X0201			304	1		
123	X0202			304	1		
124	X0203			304	1		

2.8.1-3

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502.8.1-12 , ñ0

1	P4601a~d			Q=700m ³ /h H=60m N=160KW 380V	4
2	T4601			Q=3000m ³ /h 33 28 43 380V 2 N=55KW × 2	1
3	V4601			120m ³ /h	1
4				LSC370B1A 3890 × 1810 × 2250 239kW	1
5				SLW200-500G Q=200m ³ /h H=60m	1
6	F-0601	800		800 × 10 ⁴ kcal / h	1
7	V-0601		Q345R	20m ³ 2800 × L2200	1
8	V-0602		Q345R	25m ³ 2000 × L4000	1
9	V-0604		Q345R	2.35m ³ 1000 × L2600	1
10	P-0602A/B /C		Q345R	Q=300m ³ /h H=70m	1
11	P-0601		Q345R	Q=10m ³ /h H=32m	1
12	C-0601		Q345R	Q=19500Nm ³ /h	1
13				GDK90-8A 0.8Mpa 3171 × 1574 × 1903	1
14				HBHAD-20-0	1
15				XF9/7/5/3/I-48F	5
16		PSA		HBFD295-300 2250 × 1200 × 2850	1
17			Q345R	2.0m ³ 0.8Mpa 1000 × 3100	1
18			Q345R	2.0m ³ 0.8Mpa 1000 × 3100	1
19			Q345R	2.0m ³ 0.8Mpa 1000 × 3100	1
20			Q345R	2.0m ³ 0.8Mpa 1000 × 3100	1

2.8.2 I

2.8.2-1

1		17 BE7196 23)	φ 1000*2764	2026 8 29	
2		17 BE7195 23)	φ 1000*2764	2026 8 29	

3

3		17	BE7194	23)	φ 1000*2764	2026	8	29
4		17	BE7187	23)	φ 1000*2764	2026	8	29
5		17	BE7197	23)	φ 800*2750	2026	8	29
6		17	BE7198	23)	φ 800*2750	2026	8	29
7		15	BE8008	23)	φ 650*1943	2026	8	29
8		15	BE8007	23)	φ 550*3773	2026	8	29
9		15	BE8006	23)	φ 600*3743	2026	8	29
10		15	BE7241	23	φ 3100*9725	2026	8	29
11		15	BE7243	23	φ 3100*9725	2026	8	29
12		15	BE8150	23	φ 1000/3000 × 12840	2026	8	29
13	-	15	BE7754	23	φ 1000*5953	2026	8	29
14	-	15	BE7751	23	φ 800 × 5372	2026	8	29
15	-	15	BE7244	23	φ 800 × 5725	2026	8	29
16	-	15	BE7242	23	φ 800 × 5725	2026	8	29
17	-	15	BE7755	23	φ 500 × 3113	2026	8	29
18	-	15	BE7753	23	φ 500 × 3113	2026	8	29
19		17	BE7750	23	φ 600 × 4210	2026	8	29
20		17	BE7752	23	φ 700 × 4966	2026	8	29
21		17	BE7404	23	φ 1600 × 6165	2026	8	29
22	2,6-	17	BE7405	23	φ 1000 × 5442	2026	8	29
23		15	BE7406	23	φ 1400 × 3558	2026	8	29
24		17	BE7407	23	φ 2200 × 6248	2026	8	29
25		17	BE7403	23	φ 1400 × 4139	2026	8	29
26								9

36		15	BE9752(24)	$\varnothing 800 \times 2866$	2026	12	29
37		15	BE9755(24)	$\varnothing 1200/1400$ $\times 5287$	2026	12	29
38		17	BE9754(24)	$\varnothing 2200 \times 6248$	2026	12	29
39		17	BE9756(24)	$\varnothing 1400 \times 6100$	2026	12	29
40		17	BE9757(24)	$\varnothing 800 \times 2881$	2026	12	29
41		15	BE9761(24)	$\varnothing 400 \times 4756$	2026	12	29
42		15	BE9759(24)	$\varnothing 600 \times 7059$	2026	12	29
43		15	BE9758(24)	$\varnothing 600 \times 7059$	2026	12	29
44		15	BE9760(24)	$\varnothing 600 \times 5532$	2026	12	29
45	Ý						

12		LS-000504-219N1BHGC2	2026.8	
13		LS-000505-273N1BHGC2	2026.8	
14		PL-001303-57M1EWGC2	2026.8	
15		PL-001402-76M1EWGC2	2026.8	
16		PL-001501-57M1EWGC2	2026.8	
17		PL-001601-57M1ECGC2	2026.8	
18		PL-001701-57M1EWGC2	2026.8	
19		PL-001702-57M1EWGC2	2026.8	
20	2,6-	PL-002201-76M1EWGC2	2026.8	2,6-
21	2,6-	PL-002301-57M1BWGC2	2026.8	

54	0.3MPa.G	LLS-211402-219M3BHGC2	2026.8	0.3MPa.G
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81

PL-211104B-89M1EGC2

2026.8

82

PL-2111. MMMMMM 22

107		PL - 211403B - 273M1EHGC2	2026.8		
108		PL - 211404A - 273M1EHGC2	2026.8		
109		PL - 211404B - 273M1EHGC2	2026.8		
110		PL - 211405A - 273M1EHGC2	2026.8		
111		PL - 211405B - 273M1EHGC2	2026.8		
112		PL - 211406A - 325M1EHGC2	2026.8		
113		PL - 211406B - 325M1EHGC2	2026.8		
114		PL - 211407A - 325M1EHGC2	2026.8		
115		PL - 211407B - 325M1EHGC2	2026.8		
116		PL - 211408 - 377M1EHGC2	2026.8		
117		PL - 211408 - 219M1EHGC2	2026.8		
118		PL - 212101 - 76M1EGC2	2026.8		
119		PL - 212102 - 76M1EGC2	2026.8		
120		PL - 212103 - 57M1EGC2	2026.8		
121		PL - 212104 - 57M1EGC2	2026.8		
122	2,6-	PL - 212108 - 57M1EHGC2	2026.8	2,6-	
123	2,6-	PL - 212109 - 57M1EHGC2	2026.8	2,6-	
124		PL - 212204A - 57M1EGC2	2026.8		
125		PL - 212204B - 57M1EGC2	2026.8		
126		PL - 212205 - 57M1EGC2	2026.8		
127		PL - 212305A - 76M1EGC2	2026.8		
128		PL - 212305B - 76M1EGC2	2026.8		
129		PL - 212306 - 76M1EGC2	2026.8		
130	2,6-	PL - 212309A - 108M1EHGC2	2026.8	2,6-	

131	2,6-	PL-212309B-108M1EHGC2	2026.8	2,6-	
132	2,6-	PL-212310-108M1EHGC2	2026.8	2,6-	
133	2,6-	PL-212313A-108M1EHGC2	2026.8	2,6-	
134	2,6-	PL-212313B-108M1EHGC2	2026.8	2,6-	
135	2,6-	PL-212314-108M1EHGC2	2026.8	2,6-	
136		PL-212407A-57M1EGC2	2026.8		
137		PL-212407B-57M1EGC2	2026.8		
138		PL-212408-57M1EGC2	2026.8		
139		PL-212409-57M1EGC2	2026.8		
140		PL-212501-108M1EHGC2	2026.8		
141	2,6-	PL-212504A-57M1EWGC2	2026.8	2,6-	
142	2,6-	PL-212504B-57M1EWGC2	2026.8	2,6-	
143	2,6-	PL-212505-57M1EWGC2	2026.8	2,6-	
144	2,6-	PL-212506-38M1EWGC2	2026.8	2,6-	
145	2,6-	PL-212513-159M1EWGC2	2026.8	2,6-	
146	2,6-	PL-212513A-159M1EWGC2	2026.8	2,6-	
147	2,6-	PL-212513B-159M1EWGC2	2026.8	2,6-	
148	2,6-	PL-212514-159M1EWGC2	2026.8	2,6-	
149		PL-212604A-76M1EWGC2	2026.8		

229	/	PG-23003b-159P1EHGC2	2026.12	/
230	/	PG-23004a-159P1EHGC2	2026.12	/
231	/	PG-23004b-159M1EHGC2	2026.12	/
232	/	PG-23005-159P1EHGC2	2026.12	/
233		PG-23006-57M1EHGC2	2026.12	
234		PG-23012-133M1EHGC2	2026.12	
235		PG-23014-133M1EPGC2	2026.12	
236		PG-23016-133M1EPGC2	2026.12	
231 "				

264		PL-23002b-45M1EWGC2	2026.12
265		PL-23005-76P1EWGC2	2026.12
265	266		

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5 8eJ1 83K'

312	PL-23110b-89M1BJSGC2	2026.12
313	PL-23112a-76M1EWGC2	2026.12
314	PL-23112b-76M1EWGC2	2026.12

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5050' 3



351		PH-310104-4M1EWGC2	20		
352		PH-310105-4M1EWGC2	206.8		
353		PH-310109-3.5M1EWGC2	206.8		
354		PH-310110-3.5M1EWGC2	206.8		
355		PL-310131-3.5M1EWGC2	206.8		
356		PL-310132-3.5M1EWGC2	206.8		
357		PL-310137-3.5M1EWGC2	206.8		
358		PL-310139-4M1EWGC2	206.8		
359		PL-310140-4M1EWGC2	206.8		
360		PL-310141-3.5M1EWGC2	206.8		
361		PL-310142-3.5M1EWGC2	206.8		
362		PL-310147-3.5M1EWGC2	206.8		
363		PL-310149-4M1EWGC2	206.8		
364		PL-310150-4M1EWGC2	206.8		
365		PL-310151-3.5M1EWGC2	206.8		
366		PL-310155-3.5M1EWGC2	206.8		
367		PL-310159-4M1EWGC2	206.8		
368		PL-310160-4M1EWGC2	206.8		
369		PL-310161-3.5M1EWGC2	206.8		
370		PL-310165-3.5M1EWGC2	206.8		
371		PL-310166-4M1EWGC2	206.8		
372		PL-310169-4M1EWGC2	206.8		
373		PL-310170-4M1EWGC2	206.8		

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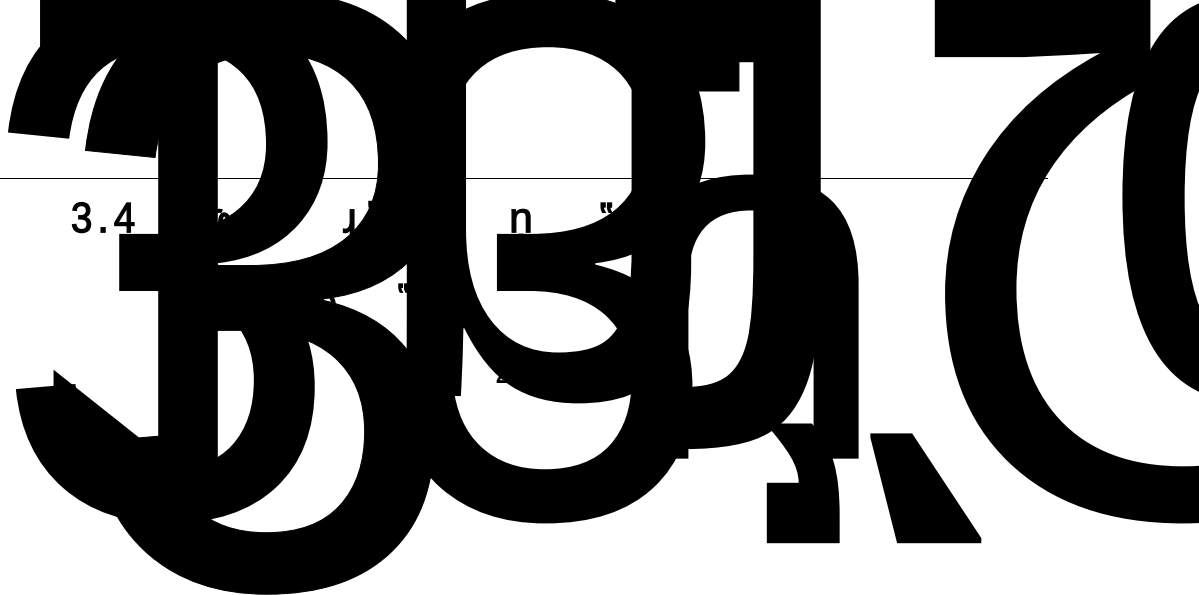
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3.4 “...J” n “

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3.4.2 “...↓ .”

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3.6-1

3.6-1 HAZOP

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5 4 1 2 3 4 5 6

33 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

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6.2.4 Ө і і X ε . u N^{sp}

6.2.4-1

6.2.4-1

		12.08	14.81	22.35
		0.2	1.68	3.26
		8.7	8.8	8.9
		0.26	2.04	3.97
		1.47	7.35	14.29
		1.38	7.03	13.67
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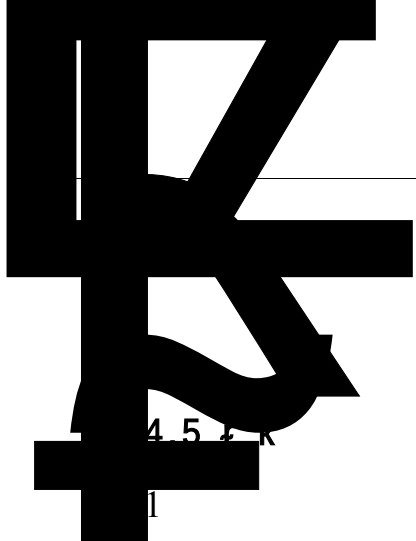
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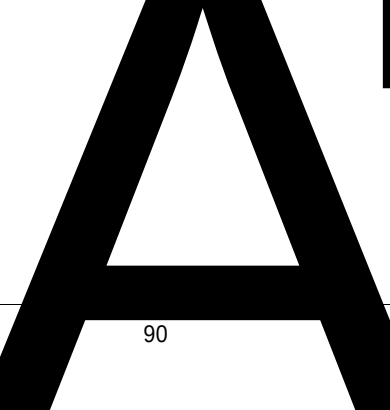
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