HJ-BAT-XXX

Guideline on Best Available Technologies of Pollution Prevention and Control for Electroplating Industry on Trial

.....1
1 2
1.1 2
1.2 2
2 2
2.1 2
2.2 3
3 5
3.1 5
3.2 8
3.3 10
3.4 11
3.5 12
3.6 12
4 13
4.1 13
4.2 14
4.3 15
4.4 18
4.5 19
4.6 19

1

1.1

1.2

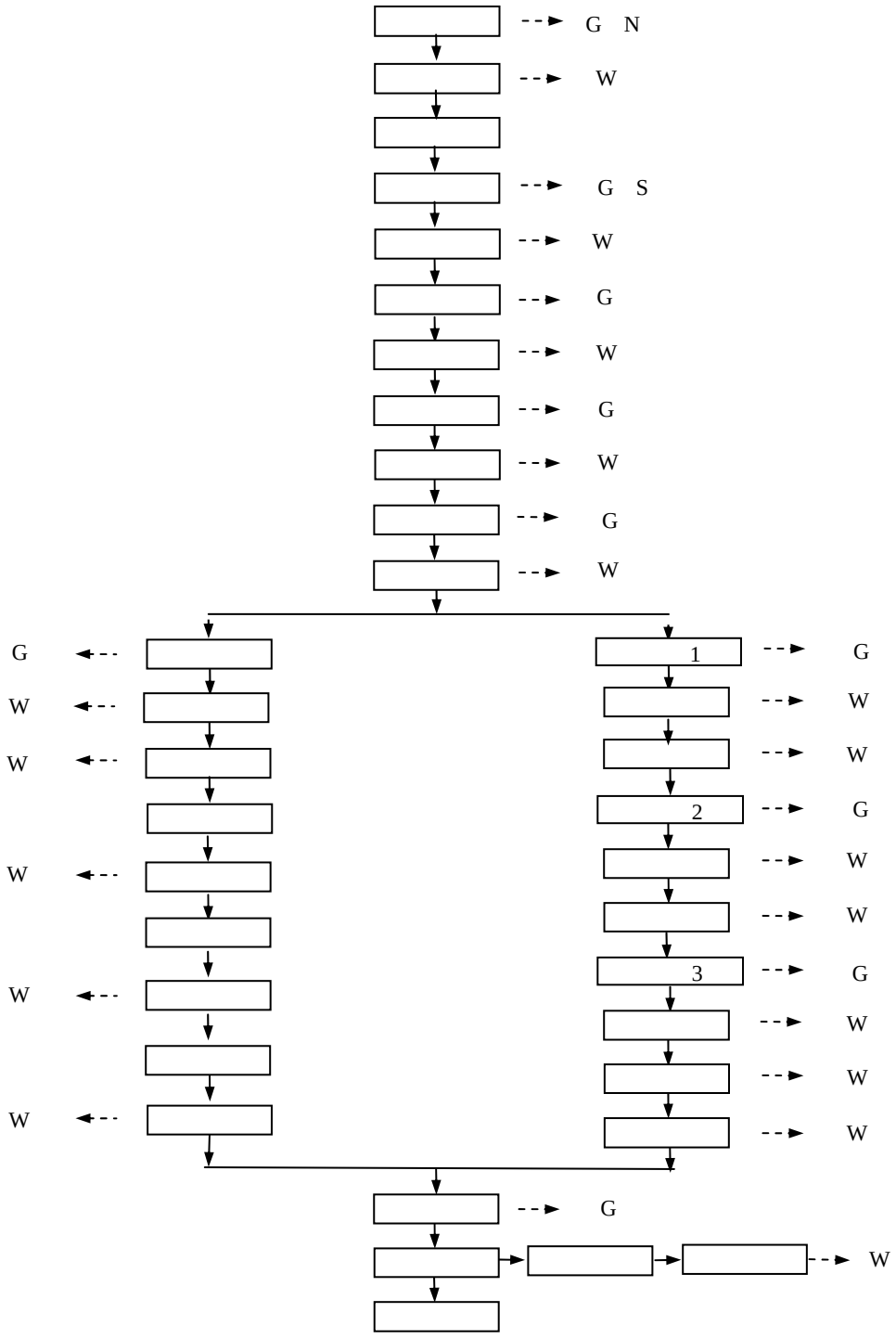
1.2.1

1.2.2

2

2.1

1



1

2.2

2.2.1

EDTA

2.2.2

1

1

3

3.1

3.1.1

3.1.1.1

90%

3.1.1.2

CDS pH1.0 3.0

CDS

(Cu^{2+})

3.1.1.3

24K

3.1.1.4

350HV

3.1.1.5

3.1.1.6

80%

95% 20%

3.1.1.7

3.1.2

3.1.2.1

3.1.2.2

90% 100%

3.1.2.3

3.1.2.4

30%

3.1.3

3.1.3.1

3.1.3.2

-

3.1.3.3

3.1.3.4

100%

3.1.3.5

3.1.3.6

150g/L

,

95%

3.1.3.7

,

3.2

3.2.1

3.2.1.1

3.2.1.2

pH 2.5 3.0

pH 7 9

3.2.1.3

pH pH

3.2.1.4 +

/ 95%

3.2.2

3.2.2.1

pH9 11

15 20min 97% 99%

3.2.2.2

pH 9 10

30 60

pH 2 4 pH 8 9

3.2.2.3 +

+

3.2.3

3.2.3.1 A/O /

CODcr 500mg/L CODcr 80% CODcr 100mg/L

3.2.3.2 A^2/O /

A^2/O A/O

CODcr 500mg/L 50mg/L CODcr 80% 90% 80% 90% CODcr50 100mg/L 5 10mg/L COD

3.2.3.3 A/O^2(/)

A/O^2 A/O A O O

CODcr 500mg/L 50mg/L CODcr 80% 90% 85% 90% CODcr50 100mg/L 5 7.5mg/L COD

3.2.3.4

3000 6000mg/L

CODcr 500mg/L 50mg/L 5mg/L CODcr 90% 95%
85% 90% 70% 75% CODcr50 75mg/L 5 7.5mg/L 1.25
1.5mg/L
COD

3.2.3.5

0.2 0.5mg/L
2.0mg/L 8000 12000mg/L

95%
CODcr 500mg/L 50mg/L 5mg/L CODcr 93% 95%
90% 95% 90% 95% CODcr 25 35mg/L 2.5 5.0mg/L
0.5mg/L
COD

3.2.3.6

10000
15000mg/L 100% 500%

CODcr 500mg/L 50mg/L 5mg/L 60mg/L CODcr
93% 95% 90% 95% 90% 95% 90%
CODcr25 35mg/L 2.5 5.0mg/L 0.25 0.5mg/L 6mg/L
COD

3.2.4

3.3

3.3.1

3.3.1.1

3.3.1.2

95%

3.3.1.3

15%

90% 96%

3.3.2

3.3.2.1

/

3.3.2.2

/

3.4

3.4.1.

3.4.3

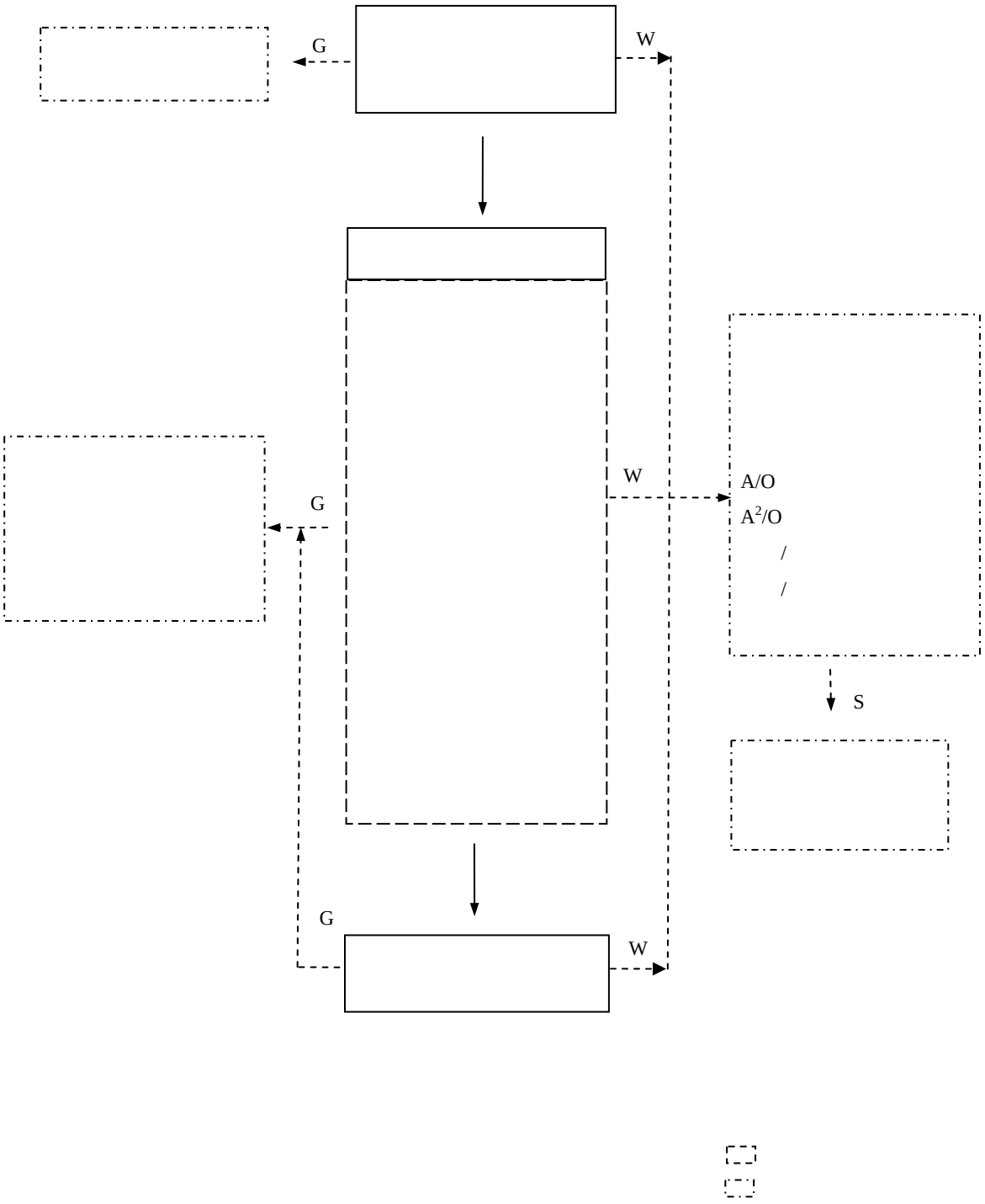
90%

1%

4

4.1

2



4.2

2

		50%	
		90% 100% 80%	
		70%	
		100% CODcr 40 mg/L pH 6 9	
		100% CODcr 40 mg/L pH 6 9	
		99% 100% 100% pH 6 9	
		95% 100%	
		95%	
		100%	

4.3

4.3.1

4.3.1.1

pH 10 11 300 350mV 10 15min pH 7 8 600 650mV 10 15min

4.3.1.2

CN^- 0.2mg/L

4.3.1.3

4.3.2

4.3.2.1

pH 2.5 3.0 20 30min ORP 250 300mV

4.3.2.2

0.2mg/L

4.3.2.3

4.3.3

4.3.3.1

pH 6 15 20min

4.3.3.2

pH pH

4.3.3.3

4.3.4 +

4.3.4.1

pH 6.0 7.0 0.03 0.4μm -0.01 -0.03MPa

4.3.4.2

90% 95%

4.3.4.3

4.3.5 A/O

4.3.5.1

A 20 35℃ pH6.5 8.5 DO 0.2 0.5mg/L O 20 35℃ pH7 8 DO 2.0mg/L

4.3.5.2

CODcr 500mg/L CODcr 80% CODcr 100mg/L

4.3.5.3

4.3.6 A^2/O

4.3.6.1

A 4h 20 35℃ pH6.5 8.5 0.2mg/L A 2 4h, 20 35℃ pH6.5 8.5 0.2 0.5mg/L O 4h 20 35℃ pH7 8 2.0 4.0mg/L

100% 300%

4.3.6.2

CODcr 500mg/L 50mg/L CODcr 80% 90% 80% 90% CODcr50 100mg/L 5 10mg/L

4.3.6.3

4.3.7

4.3.7.1

3000 6000mg/L 2.0 4.0mg/L -0.01 -0.03MPa HRT 4 6h 100% 300% 0.03 0.4μm

4.3.7.2

CODcr 500mg/L BOD_5 200mg/L 50mg/L 5mg/L 60mg/L CODcr 80% 90% BOD_5 90% 80% 90% 70% 80% 70% 80% CODcr50 100mg/L BOD_5 20mg/L, 5.0 10mg/L 1.0 1.5mg/L 18mg/L

4.3.7.3

4.3.8

4.3.8.1

15g/L 2.0mg/L 0.5mg/L -0.01 -0.03MPa HRT 4 5h 100% 500% 0.03 0.4μm

4.3.8.2

CODcr 500mg/L BOD_5 200mg/L 50mg/L 5mg/L 60mg/L CODcr 95% BOD_5 95% 90% 95% 90% 95% 90% CODcr25 35mg/L BOD_5 10mg/L, 2.5 5.0mg/L 0.5mg/L 6mg/L

4.3.8.3

4.3.9

4.3.9.1

60% 75% 97% 0.9 1.7MPa 60% 90%

4.3.9.2

20 40mg/L 0.4mg/L

4.3.9.3

4.3.10

3

	95% CN^- 0.2mg/L	
	98% 0.2mg/L	
	98%	
+	50% 60% 95%	
A/O	CODcr 500mg/L CODcr 80% CODcr 100mg/L	
A^2/O	CODcr 500mg/L 50mg/L CODcr 80% 90% 80% 90% CODcr50 100mg/L 5 10mg/L	
	CODcr 500mg/L BOD_5 200mg/L 50mg/L 5mg/L 60mg/L CODcr 80% 90% BOD_5 90% 80% 90% 70% 80% 70% 80% CODcr50 100mg/L BOD_5 20mg/L, 5.0 10mg/L 1.0 1.5mg/L 18mg/L	
	CODcr 500mg/L BOD_5 200mg/L 50mg/L 5mg/L 60mg/L CODcr 95% BOD5 95% 90% 95% 90% 95% 90% CODcr25 35mg/L BOD_5 10mg/L, 2.5 5.0mg/L 0.5mg/L 6mg/L	
	20 40mg/L 1800μS/cm 0.4mg/L 50μS/cm	

4.4

4

	10% 90% 95% 5% (HF) 85%	

	95%	
	pH 90% 0.1% 0.2% 3 4s 96%	

COD

4.6.4

4.6.5

4.6.6

4.6.7