



(주)부광테크
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 BUKWANG TECH Co.,LTD.

본사

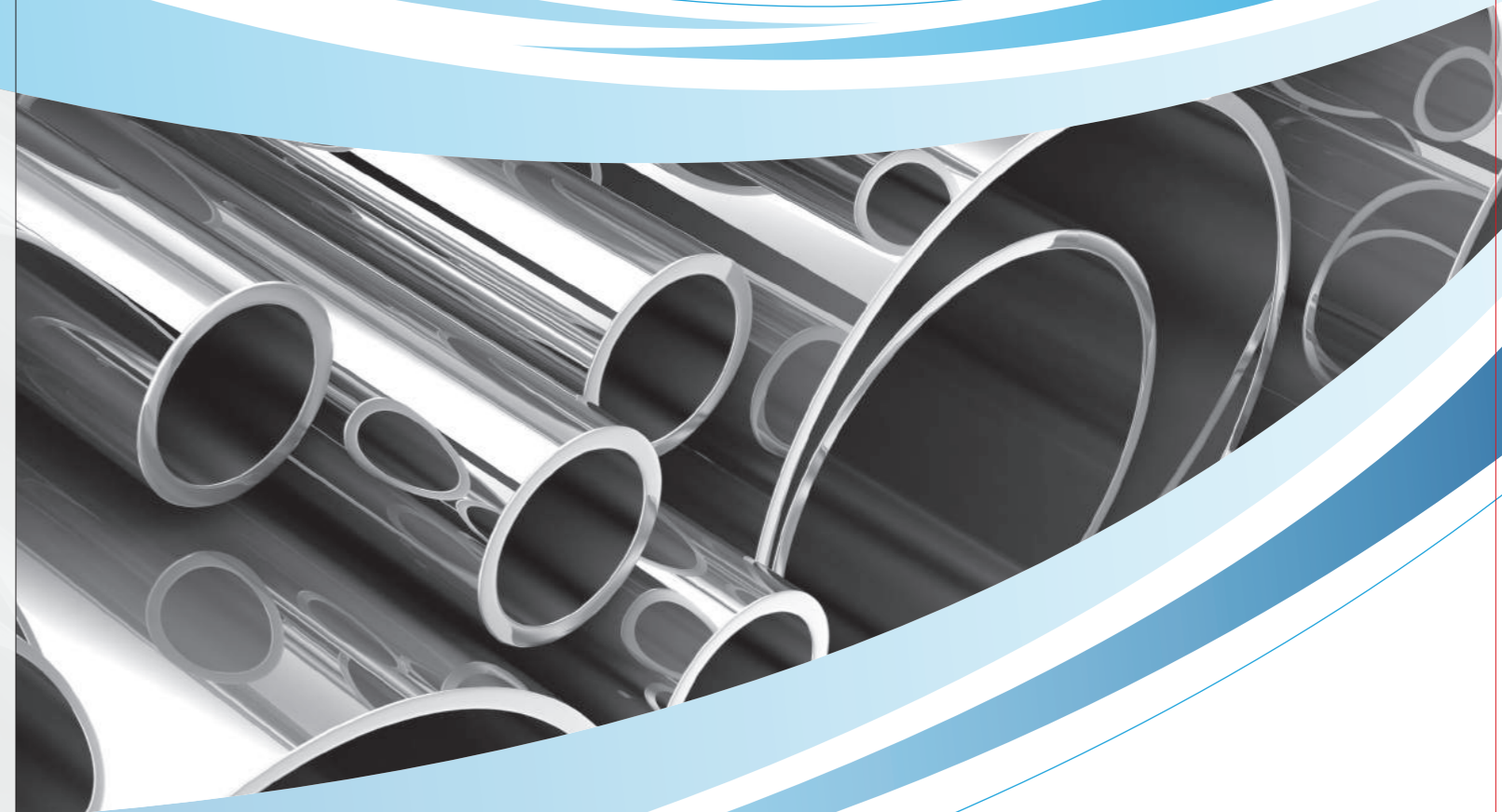
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BU KWANG
CLEAN STAINLESS
PIPES & TUBES

The High Clean Seamless / Welded
Stainless Pipes & Tubes For Semiconductor

CONTENTS

(주)부광테크 4-7
About BUKWANG Tech

회사 연혁 8-9
History of BUKWANG Tech

생산 품목 10-11
Products(EP, BA, AP Pipe & Tube)

품질 관리 12-13
High Level Quality Management

연구 개발 14-15
Research & Development

Specifications for Semiconductor

제조공정 16-17
Manufacturing Processes

제품생산범위 / 공차 18-19
Product Range / Dimension Tolerance

기본자재 / 세정공정 20-21
Standard Material(Single Melted Material)
/ Cleaning Processes

내면조도 22
Inner Surface Roughness

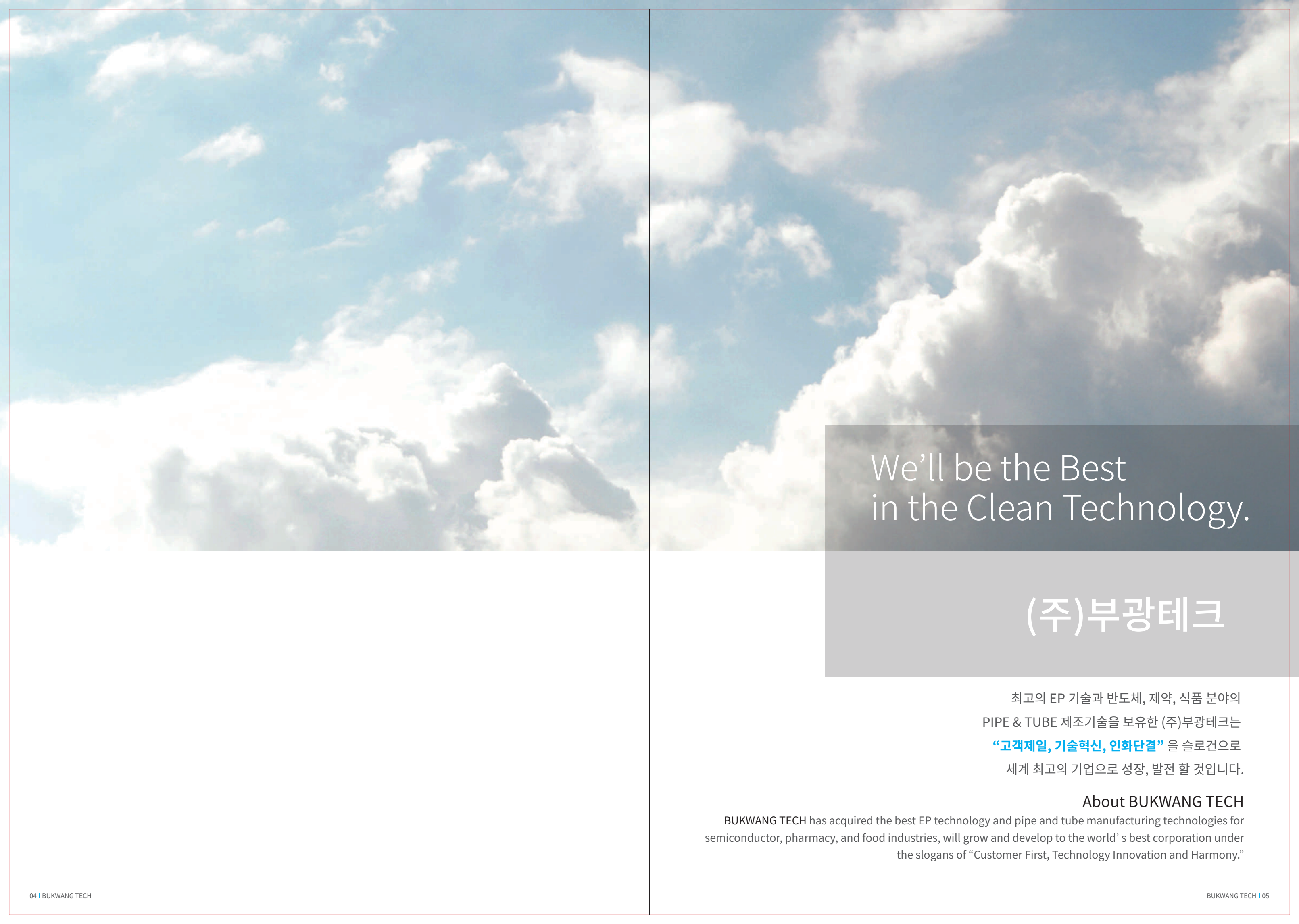
Oil, Particle 수치 / 용출이온 23
Assurance Values of Oil, Particle / Elution Ion

Specifications for Stainless Steel Sanitary Pipes

제품생산범위 / 공차 24
Product Range / Dimension Tolerance

기본자재 / 내면조도 25
Standard Material / Inner Surface Roughness

특허 / 인증서 26-27
Patents / Certifications



We'll be the Best
in the Clean Technology.

(주)부광테크

최고의 EP 기술과 반도체, 제약, 식품 분야의
PIPE & TUBE 제조기술을 보유한 (주)부광테크는
“고객제일, 기술혁신, 인화단결” 을 슬로건으로
세계 최고의 기업으로 성장, 발전 할 것입니다.

About BUKWANG TECH

BUKWANG TECH has acquired the best EP technology and pipe and tube manufacturing technologies for semiconductor, pharmacy, and food industries, will grow and develop to the world's best corporation under the slogans of “Customer First, Technology Innovation and Harmony.”

Company Brief

회사 개요 / About Company

회사명 / Company Name	(주)부광테크 / Bukwang Tech Co.,Ltd
설립 / Foundation of Company	2003년 9월 / Sep. 2003
자본금 / Capital	KRW 3,860,000,000(US\$ 3,500,000)
본사 / Address	충남 논산시 은진면 동산산업단지 101-6 / 101-6, Dongsansaneopdanji-ro, Eunjin-myeon, Nonsan-si, Chungcheongnam-do, Korea
제2공장 / Second Plant	경기도 안산시 단원구 해안로 48 / 18B 53L, 48, Hae-an-ro, Danwon-gu, Ansan-si, Gyeonggi-do, Korea
중국법인 / Chinese Corporation	江苏省常州市新北百丈镇 百丈工业园振兴路19号 No.19,ZhenXing Road,BaiZhang Industrial Park, Xinbei district,ChangZhou City.
홈페이지 / Home Page	www.bktech.co.kr

보유기술 및 적용산업 / Technology & Application



Company History

Established BUKWANG TECHNOLOGY Co., Ltd.	2003. Sept	2003. 09	(주)부광 설립
Established R&D Center	2003. Oct	2003. 10	R&D Center 설립
Started to deliver Coating to Samsung Electronics	2004. Nov	2004. 11	삼성전자 Coating 납품 시작
Selected as the Clean Technology Development Project Contractor by the Ministry of Commerce, Industry and Energy	2005. Mar	2005. 03	산자부 청정기술 개발사업 사업자 선정
Certified as Part/Material Dedicated Corporation Certified for Korea New Technology (EM, Korea Agency for Technology and Standards, Ministry of Commerce, Industry and Energy)	2005. June	2005. 06	부품소재 전문기업인증 한국 신기술인증(EM, 산자부 기술표준원)
Certified for Venture Business	2005. July	2005.07	벤처기업인증
ISO 9001 Certificate	2005. Aug	2005.08	ISO9001 인증
Registered as Partner to Hynix Semiconductor			Hynix 반도체 업체 등록
Developed Clean EP Tube & Fitting	2006. Jan	2006.01	Clean EP Tube & Fitting 개발 완료
Completed New Banwol Factory	2006. May	2006.05	반월 신 공장 준공
Selected as the Technology Innovation Development Project Contractor by Small and Medium Business Administration	2006. June	2006.06	중기청 기술혁신 개발사업 사업자 선정
Acquired Quality Certificate for AP, BA, EP Fittings from Hynix	2007. Mar	2007.03	AP, BA, EP 배관자재 Hynix 품질인증획득
Certified for Technology institute	2007. May	2007.05	기술연구소 인증
Acquired Quality Certificate from BOE-OT	2007, Nov	2007.11	BOE-OT 품질인증획득
Acquired Quality Certificate for AP BP EP Fitting & Tubes LG Display	2007. Dec	2007.12	LG Display 품질인증 획득
Registered as Partner to BOE-Hydis	2008. Jan	2008.01	BOE-Hydis 업체 등록
Registered as Parter to LG Display	2008. Mar	2008.03	LG Display 협력업체 등록
Increased Capital by KRW 2,000,000,000	2010. May	2010.05	자본금 20억 증자
Exchanged only representative in joint representative	2011. JAN	2011.01	공동대표에서 단독대표로 변경
Expansion of the Equipment (EP : ~ 6" 150A)(Cleaning : all size)	2012. JUN	2012.06	대구경 EP, BA 설비확장 (EP : ~6", 150A /정밀세정 MP, BA, AP : ~600A 가능)
Selected as a unit price contract company for SK Hynix	2013. Dec	2013.12	SK Hynix 반도체 단가 계약 업체 선정
Exchanged the name from Bukwangtechnology to bukwangtech	2014. Dec	2014.12	Bukwangtechnology에서 Bukwangtech로 상호 변경
Supply materials approved by SK Hynix	2014~Now	2014~현재	SK Hynix 반도체 장비업체 배관자재 승인
Mass production of cold drawing line and EP line(EP: ~600A) in Nonsan	2016	2016	인발, EP Line 양산 가동
Supply materials approved by Samsung C&T, Samsung Electronics, LG Display, Serve One	2017	2017	삼성물산, 삼성전자, LG Display, Serve One 장비업체 배관자재 승인

Products

생산품목 / Manufacturing Range

EP, BA, AP Pipe & Tube

(주)부광테크는 적기, 적소에 최고의 제품을 공급할 수 있도록 준비되어 있습니다. EP, BA, AP PIPE & TUBE의 EP 및 정밀세정을 아우르는 모든 제조능력을 만나보십시오.

BUKWANG TECH is ready for supplying the best products in position, in time.

BUKWANG TECH has equipped with all manufacturing processes including from EP, BA, AP PIPE & TUBE to EP and precise cleaning.

(주)부광테크는 STS304와 STS 316L 재질로 PIPE & TUBE의 다양한 규격(1/8"~600A)의 Seamless & Welded Stainless Steel EP, BA, AP를 생산 및 공급하고 있습니다.

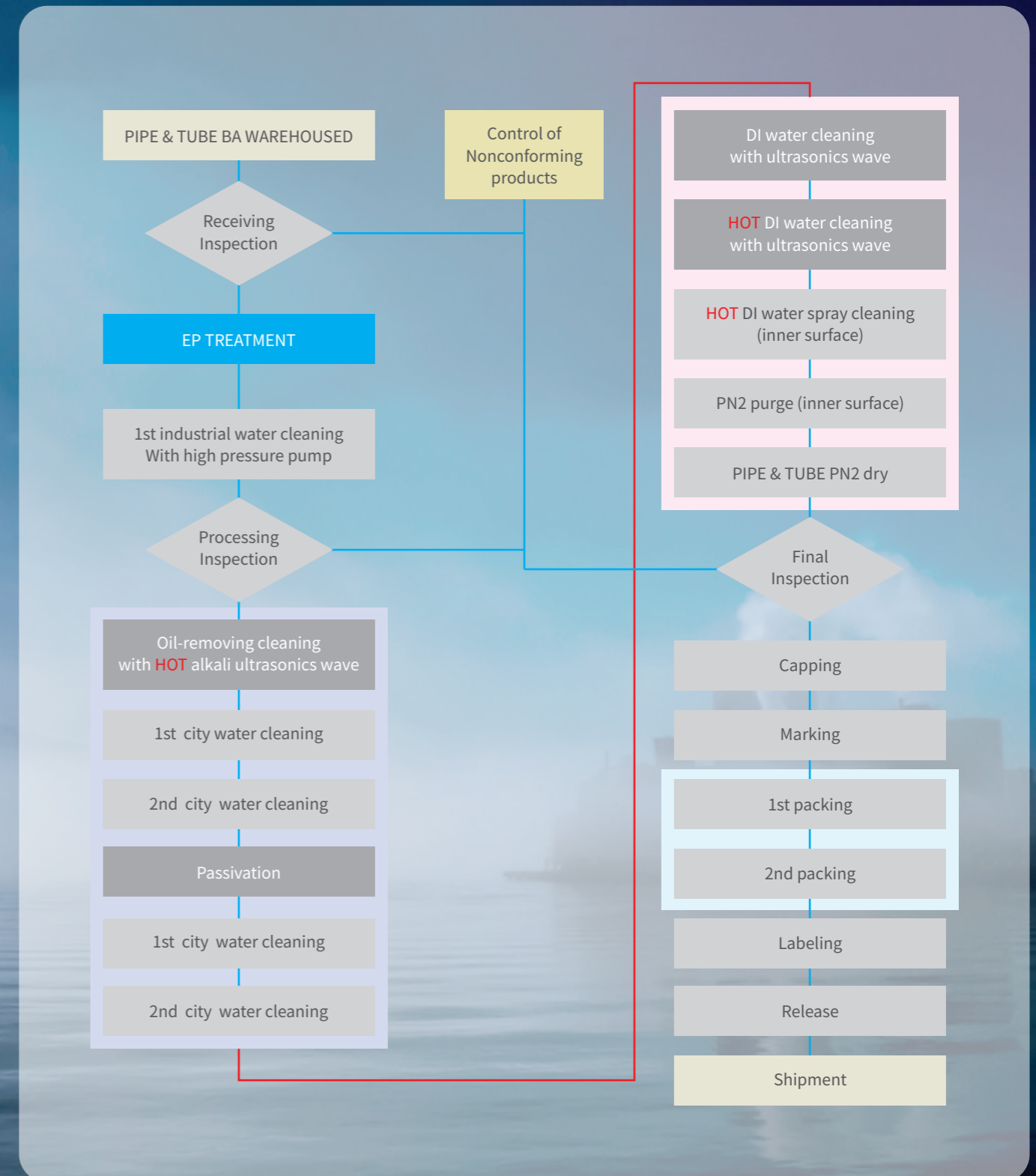
BUKWANG TECH has been manufacturing and supplying diverse sizes(1/8" ~ 600A) of Seamless & Welded Stainless Steel EP, BA and AP for PIPE & TUBE with STS304 and STS316L materials.

- EP Pipe & Tube : 1/8"~600A
- BA Pipe & Tube : 1/8"~600A
- AP Pipe & Tube : 1/8"~600A

생산 설비 및 공정과정 / Manufacturing facility and Processes

CFOS, Oil free, Tube EP 설비, 초순수 설비, HOT 초순수 설비, N₂ 시스템, Fitting EP 설비, 정밀세정 설비, 기계세정 설비, 질소 퍼지 설비, 클린룸 설비 등 최신 생산 설비를 갖추고 최상의 제품을 생산하고 있습니다.

CFOS(Clean For Oxygen Use), Oil free, Tube EP Treatment Line, D·I Water System (>18M[^]), HOTDI Water System, HOT N₂ System, Fitting EP Treatment Line, Precision Cleaning Line, Super Mechanical Cleaning Line, N₂ Purge Line, Clean Room - Class.1000. We are producing the best products with the advanced manufacturing facilities.



Best Quality Management

철저한 품질관리는 고객에 대한 최소한의 약속입니다.

(주)부광테크는 품질경영시스템(ISO9001)을 획득하였으며, 다양한 품질관리 항목을 마련하였습니다. 소재 수급에서 제품 출하에 이르기까지 철저한 품질관리로 안정된 제품생산에 전력을 다하고 있습니다.

Complete quality control is a minimum promise of BUKWANG TECH for the customers. BUKWANG TECH has acquired Quality Management System(ISO9001) and has been doing its best to produce staper products with through quality control from procurement of materials to delivery by preparing diverse quality control items.

품질관리 조직 / Quality Control Organization



품질관리 항목 / Quality Control Items

- Standard Material 관리(Standard Material Management)
- Dimension Tolerance 관리(Dimension Tolerance Management)
- 내면 조두 시험(Inside Lighting Level Test)
- Oil 측정 관리(Oil Measurement Management-Oil free)
- CFOS(Clean For Oxygen Use)
- Particle 측정 관리(Particle Measurement Management)
- 용출이온 분석(Elution Ion Analysis)
- 표면관찰-광학기기, SEM (Surface Observation-Optical Device, SEM)

Research & Development

(주)부광테크는 설립 초기부터 기술연구소를 설립, 운영하고 있으며, 더욱 확대해 가고 있습니다. 첨단 연구 장비를 보유한 기술연구소는 (주)부광테크의 발전에 기초가 되었습니다.

BUKWANG TECH has founded and operated technology research center from the beginning and is expanding it further. The R&D center having advanced research equipment becomes a basis for development of BUKWANG TECH

연구실 보유장비 / Laboratory Equipment

- SEM-AIS2001, 미래로시스템(SEM-AIS2001, Miraero System)
- EDS-Detector-M, Rontec사(EDS-Detector-M, Rontec)
- 비커스경도기-MH112, Mitutoyo사(Vickers Hardness Meter-MH112, Mitutoyo)
- 구면조도측정기(DSF-500, Kosaka laboratory)
- Spherical Light Meter (DSF-500, Kosaka laboratory)
- 두께측정기-XRF-2000(Thickness Gauge-XRF-2000)
- 헬륨디텍터(Helium Detector)
- 광학현미경(Optical Microscope)
- 염수분무시험기(Salt Water Spray Test Chamber)
- Others

(주)부광테크는 우수한 기술력 및 연구설비를 바탕으로 국책연구 과제를 성공적으로 수주, 진행, 완료하였습니다.

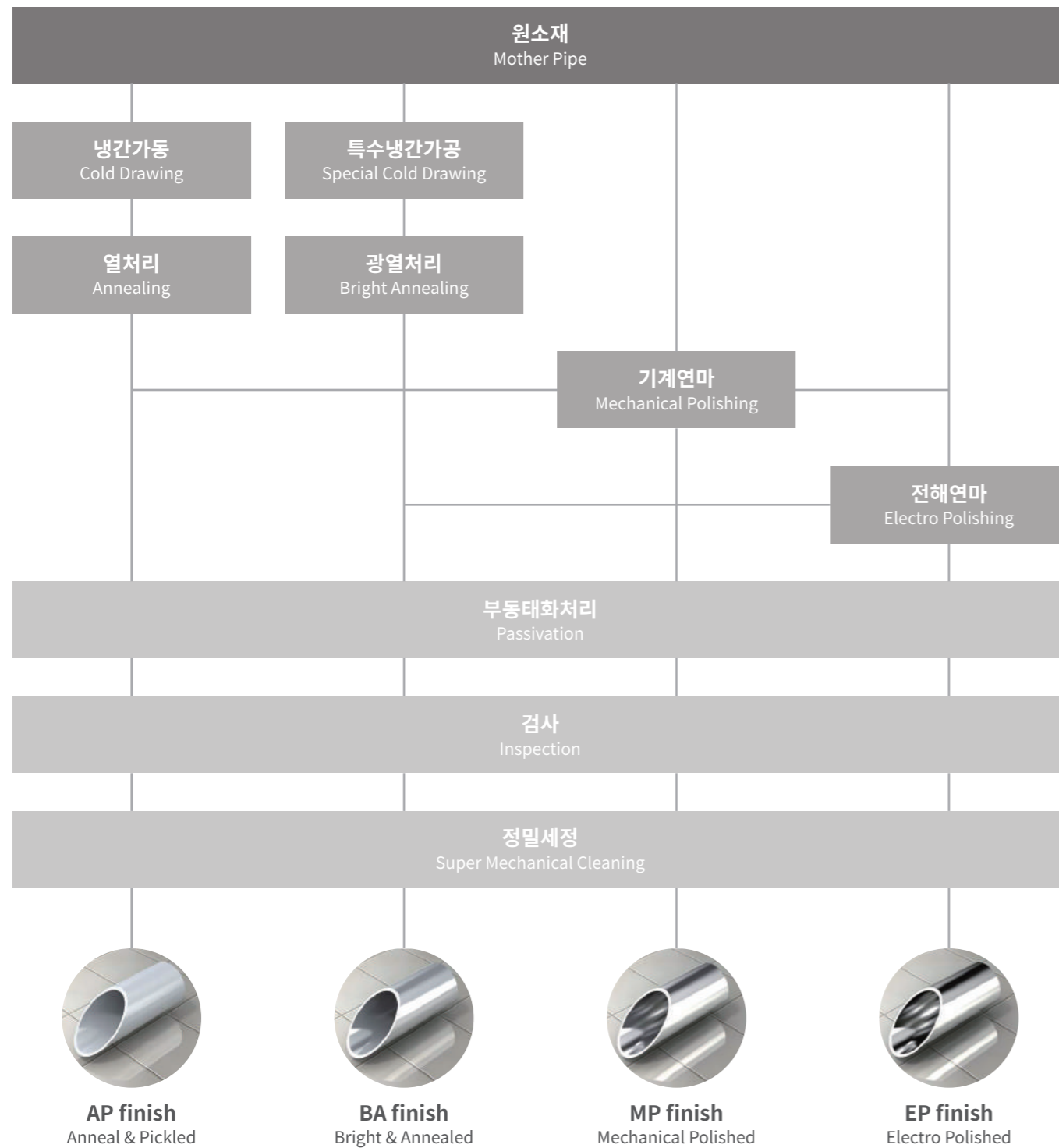
- 청정생산기술개발 보급사업 (2005. 03. 01~2007. 02. 28) - 산업자원부
- 기술혁신개발사업 (2006. 09. 01~2007. 08. 31) - 중소기업청

BUKWANG TECH has successfully contracted, processed and completed the national research projects based on excellent technical competence and research equipment.

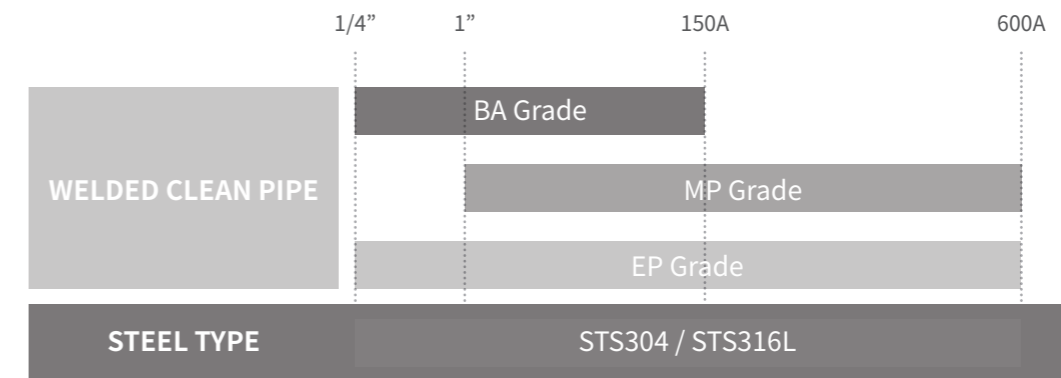
- Development and Propagation of Clean Technology (Mar. 01, 2005 ~ Feb. 28, 2007)
- Ministry of Commerce, Industry and Energy
- Technology Innovation Development (Sept. 01, 2006 ~ Aug. 31, 2007)
- Small and Medium Business Administration

Specifications for Semiconductor

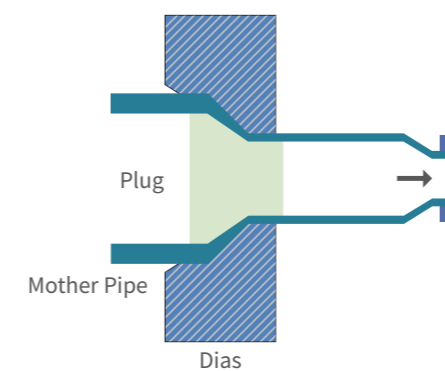
제조공정 / Manufacturing Processes



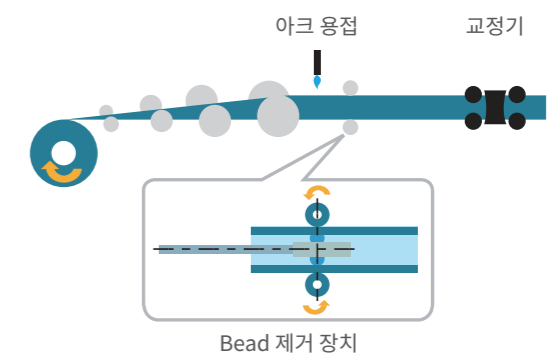
제조범위 / Manufacturing Ranges



Seamless Drawing



Welded Pipe Process Drawing



Specifications for Semiconductor

제품 생산 범위 / Product Range

Size	Outer Diameter (mm)	Wall Thickness			Grade				Seam Type
		mm	sch5	sch10	AP	MP	BA	EP	
1/8"	3.18	0.51	0.71		●		●	●	SMLS
1/4"	6.35	0.89	1.00		●		●	●	SMLS
3/8"	9.53	0.89	1.00		●		●	●	SMLS
1/2"	12.70	1.00	1.24		●		●	●	SMLS
5/8"	15.88	1.24	1.65		●		●	●	SMLS
3/4"	19.05	1.24	1.65		●	●	●	●	SMLS
1"	25.40	1.24	1.65		●	●	●	●	SMLS / WELD
15A	21.7		1.65	2.10	●	●	●	●	SMLS / WELD
20A	27.2		1.65	2.10	●	●	●	●	SMLS / WELD
25A	34.0		1.65	2.80	●	●	●	●	SMLS / WELD
32A	42.7		1.65	2.80	●	●	●	●	SMLS / WELD
40A	48.6		1.65	2.80	●	●	●	●	SMLS / WELD
50A	60.5		1.65	2.80	●	●	●	●	SMLS / WELD
65A	76.3		2.10	3.00	●	●	●	●	SMLS / WELD
80A	89.1		2.10	3.00	●	●	●	●	SMLS / WELD
90A	101.6		2.10	3.00	●	●	●	●	SMLS / WELD
100A	114.3		2.10	3.00	●	●	●	●	SMLS / WELD
125A	139.8		2.80	3.40	●	●		●	WELD
150A	165.2		2.80	3.40	●	●		●	WELD
200A	216.3		2.80	4.00	●	●		●	WELD
250A	267.4		3.40	4.00	●	●		●	WELD
300A	318.5		4.00	4.50	●	●		●	WELD
350A	355.6		4.00	5.00	●	●		●	WELD
400A	406.4		4.50	5.00	●	●		●	WELD
450A	457.2		4.50	5.00	●	●		●	WELD
500A	508.0		5.00	5.50	●	●		●	WELD
600A	609.6		5.50	6.50	●	●		●	WELD

공차 / Dimension Tolerance

Size	Outer Diameter (mm)	Wall Thickness			Tolerance	
		mm	sch5	sch10	Outer Diameter	Thickness
1/8"	3.18	0.51	0.71		+0.06, -0	±12.5%
1/4"	6.35	0.89	1.00		+0.06, -0	±10%
3/8"	9.53	0.89	1.00		+0.06, -0	
1/2"	12.70	1.00	1.24		+0.06, -0	
5/8"	15.88	1.24	1.65		+0.06, -0	
3/4"	19.05	1.24	1.65		+0.06, -0	
1"	25.40	1.24	1.65		±0.08%	
15A	21.7		1.65	2.10	±0.10%	±10%
20A	27.2		1.65	2.80		
25A	34.0		1.65	2.80		
32A	42.7		1.65	2.80	±0.30%	
40A	48.6		1.65	2.80	±0.50%	
50A	60.5		1.65	2.80	±0.60%	
65A	76.3		2.10	3.00	±0.70%	
80A	89.1		2.10	3.00	±0.80%	
90A	101.6		2.10	3.00	±1.00%	
100A	114.3		2.10	3.00	±1.0%	
125A	139.8		2.80	3.40		
150A	165.2		2.80	3.40		
200A	216.3		2.80	4.00		
250A	267.4		3.40	4.00	±0.5%	+15%, -12.5%
300A	318.5		4.00	4.50		
350A	355.6		4.00	5.00		
400A	406.4		4.50	5.00		
450A	457.2		4.50	5.00		
500A	508.0		5.00	5.50		
600A	609.6		5.50	6.50		

Specifications for Semiconductor

기본소재 / Standard Material (Single Melted Material)

<SEAMLESS>

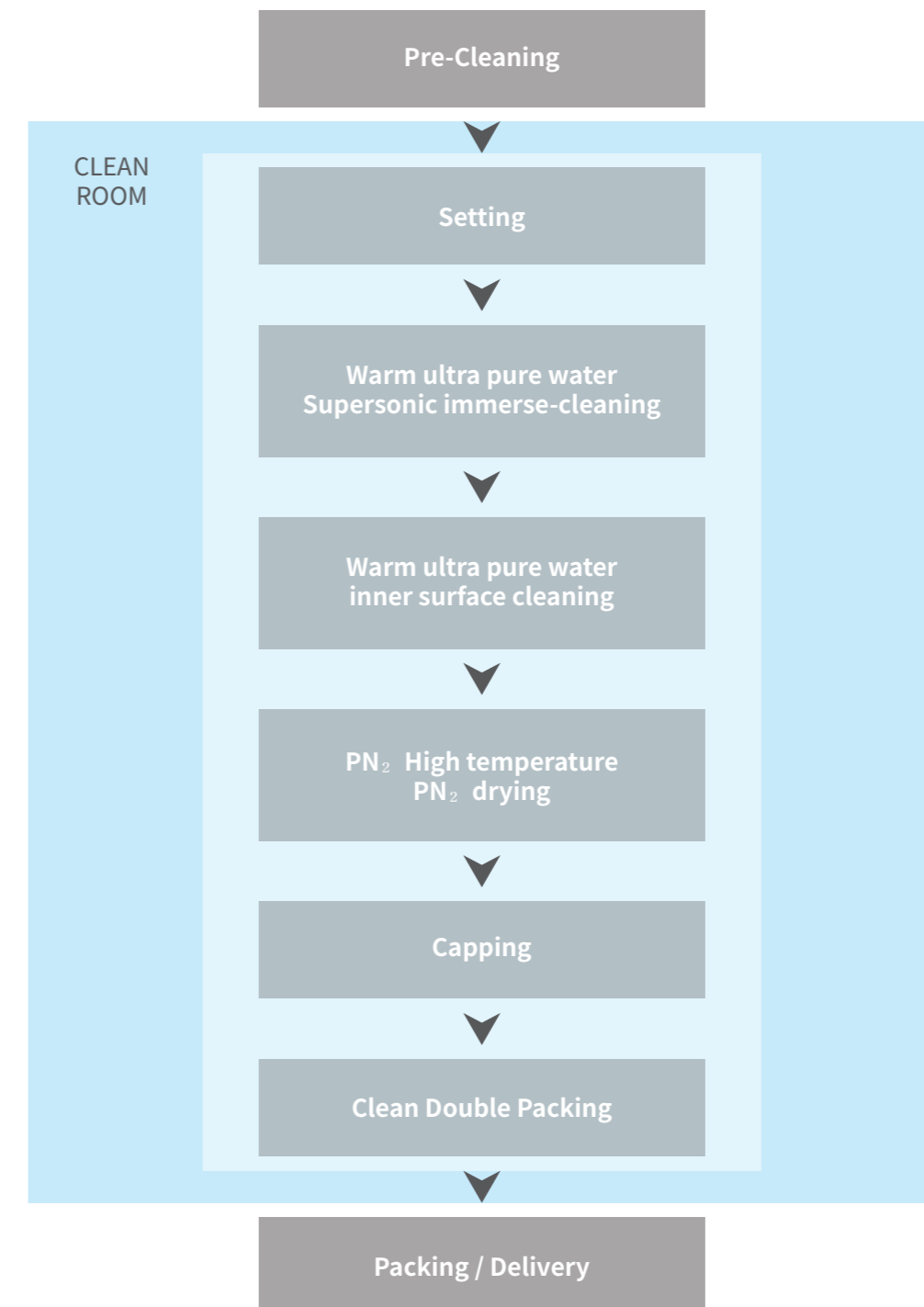
Stainless Tube	Chemical Elements (%)									Mechanical Property				
	Spec.	C	Si	Mn	P	S	Ni	Cr	Mo	Spec.	Tensile Strength (N/mm ²)	Yield Strength (N/mm ²)	Elongation (%)	Hardness (Hv)
SUS304 TP-S	Standard Value	Max 0.08	Max 1.00	Max 2.00	Max 0.04	Max 0.03	8.00 ~ 11.00	18.00 ~ 20.00	-	Standard Value	Min 520	Min 205	Min 35	-
	Value Range									Value Range	600 ~ 647	235 ~ 304	54 ~ 66	145 ~ 188
	Typical Value	0.02	0.47	1.09	0.02	0.002	9.07	18.25	-	Typical Value	618	284	59	165
SUS316L TP-S	Standard Value	Max 0.03	Max 1.00	Max 2.00	Max 0.04	Max 0.03	12.00 ~ 16.00	16.00 ~ 18.00	2.00 ~ 3.00	Standard Value	Min 480	Min 175	Min 35	-
	Value Range									Value Range	569 ~ 610	255 ~ 294	50 ~ 58	150 ~ 187
	Typical Value	0.019	0.35	0.71	0.027	0.001	12.64	16.68	2.20	Typical Value	588	275	53	162

<WELDED>

Stainless Tube	Chemical Elements (%)									Mechanical Property				
	Spec.	C	Si	Mn	P	S	Ni	Cr	Mo	Spec.	Tensile Strength (N/mm ²)	Yield Strength (N/mm ²)	Elongation (%)	Hardness (Hv)
SUS304 TP-S	Standard Value	Max 0.08	Max 1.00	Max 2.00	Max 0.04	Max 0.03	8.00 ~ 11.00	18.00 ~ 20.00	-	Standard Value	Min 520	Min 205	Min 35	-
	Value Range									Value Range	600 ~ 647	235 ~ 304	54 ~ 66	145 ~ 188
	Typical Value	0.02	0.5	0.76	0.03	0.01	8.08	18.14	-	Typical Value	618	284	59	165
SUS316L TP-S	Standard Value	Max 0.03	Max 1.00	Max 2.00	Max 0.04	Max 0.03	12.00 ~ 16.00	16.00 ~ 18.00	2.00 ~ 3.00	Standard Value	Min 480	Min 175	Min 35	-
	Value Range									Value Range	569 ~ 610	255 ~ 294	50 ~ 58	150 ~ 187
	Typical Value	0.01	0.6	1.8	0.03	0.002	13.03	17.27	2.08	Typical Value	588	275	53	162

세정공정 / Cleaning Processes

· CFOS (Clean For Oxygen Use), Oil free



Specifications for Semiconductor

내면조도 / Inner Surface Roughness

Size	Outer Diameter (mm)	Inner Surface Roughness Assurance Values			
		AP Grade	MP Grade	BA Grade	EP Grade
1/8"	3.18	Ry ≤ 25μm Ra ≤ 40 or 100μ"	Ry ≤ 3.0μm Ra ≤ 15μ"	Ry ≤ 4.5μm	Ry ≤ 1.0μm
1/4"	6.35			Ry ≤ 3.0μm	Ry ≤ 0.5 or 0.7μm Ra ≤ 5 or 10μ"
3/8"	9.53			Ra ≤ 15 or 28μ"	
1/2"	12.70			Ry ≤ 3.0 or 4.0μm Ra ≤ 15 or 28μ"	
5/8"	15.88				
3/4"	19.05				
1"	25.40		Ry ≤ 4.0μm Ra ≤ 20μ"	Ry ≤ 0.5 or 0.7μm Ra ≤ 5 or 10μ"	
15A	21.7				
20A	27.2				
25A	34.0				
32A	42.7				
40A	48.6				
50A	60.5		Ry ≤ 25μm Ra ≤ 40 or 100μ"	Ry ≤ 4.0μm Ra ≤ 20μ"	Ry ≤ 0.5 or 0.7μm Ra ≤ 5 or 10μ"
65A	76.3				
80A	89.1				
90A	101.6				
100A	114.3				
125A	139.8				
150A	165.2	Ry ≤ 25μm Ra ≤ 40 or 100μ"	Ry ≤ 4.0μm Ra ≤ 20μ"	Ry ≤ 0.5 or 0.7μm Ra ≤ 5 or 10μ"	
200A	216.3				
250A	267.4				
300A	318.5				
350A	355.6				
400A	406.4				
450A	457.2	Ry ≤ 25μm Ra ≤ 40 or 100μ"	Ry ≤ 4.0μm Ra ≤ 20μ"	Ry ≤ 0.5 or 0.7μm Ra ≤ 5 or 10μ"	
500A	508.0				
600A	609.6				

Oil, Particle 수치 / Assurance Values of Oil, Particle

Method	Grade	Assurance Values
Oil	AP	0.1mg/ft ² or Lower
	MP	0.01mg/ft ² or Lower
	BA	0.01mg/ft ² or Lower
	EP	0.01mg/ft ² or Lower
Particle	AP	Number of Particle above 0.3μm Less Than 5/cf
	MP	Number of Particle above 0.1μm Less Than 5/cf
	BA	Number of Particle above 0.1μm Less Than 5/cf
	EP	Number of Particle above 0.1μm Less Than 5/cf

용출이온 / Elution Ion

ELUTION ION MEASUREMENT(+)	+ ION				
	NA+	NA+	NA+	NA+	-
Result	NA+	NA+	NA+	NA+	-
N/D : LESS THAN DETECTION					
ELUTION ION MEASUREMENT(-)	- ION				
	F-	Cl-	Br-	NO ²⁻	SO ₄ ²⁻
Result	N/D	N/D	N/D	N/D	N/D
N/D : LESS THAN DETECTION					

Specifications for Stainless Steel Sanitary Pipes

제품 생산 범위 / Product Range

Outer Diameter	Thickness (mm)	Length (m)
25.4	1.2	4 or 6
31.8	1.2	
38.1	1.2	
50.8	1.5	
63.5	2.0	
76.3	2.0	
89.1	2.0	
101.6	2.0	
114.3	3.0	
139.8	3.0	
165.2	3.0	

공차 / Dimension Tolerance

Outer Diameter	Thickness (mm)	Outer Diameter Tolerance (mm)	Thickness Tolerance (mm)
25.4	1.2	±0.15	±10%
31.8	1.2	±0.16	±10%
38.1	1.2	±0.19	±10%
50.8	1.5	±0.25	±10%
63.5	2.0	±0.25	±10%
76.3	2.0	±0.25	±10%
89.1	2.0	+0.30, -0.40	±10%
101.6	2.0	+0.35, -0.40	±10%
114.3	3.0	+0.40, -0.60	±10%
139.8	3.0	+0.40, -0.80	±10%
165.2	3.0	+0.40, -1.20	±10%

기본소재 / Standard Material

Material	Chemical Elements (%)								Mechanical Property	
	C	Si	Mn	P	S	Ni	Cr	Mo	Tensile Strength (N/mm ²)	Elongation (%)
STS304	Max 0.08	Max 1.00	Max 2.00	Max 0.04	Max 0.03	8.00 ~ 11.00	18.00 ~ 11.00	-	Min 520	Min 35
STS316L	Max 0.03	Max 1.00	Max 2.00	Max 0.04	Max 0.03	12.00 ~ 16.00	16.00 ~ 18.00	2.00 ~ 3.00	Min 520	Min 35

내면조도 / Inner Surface Roughness

Outer Diameter (mm)	Wall Thickness (mm)	Inner Surface Roughness		
		BA grade	MP grade	EP grade
25.4	1.2	Ra≤20μm	Ra≤20μm	Ra≤12μm
31.8	1.2			
38.1	1.2			
50.8	1.5	Ra≤24μm	Ra≤24μm	Ra≤16μm
63.5	2.0			
76.3	2.0			
89.1	2.0			
101.6	2.0			
114.3	3.0	Ra≤28μm	Ra≤28μm	
139.8	3.0			
165.2	3.0			

Patents and Certifications

특허 / Patents

- 2005. 01
전해전마 겸용 전기 도금장치 및 이를 이용한 무전해 도금장치 (특허: 제 0470750호)
Electro-Plating Equipment Combined Electro-polishing and Non-electro Plating Equipment
- 2005. 06
무전해 도금 처리 방법 (특허: 제 0499793호)
Method for Non-electro Plating

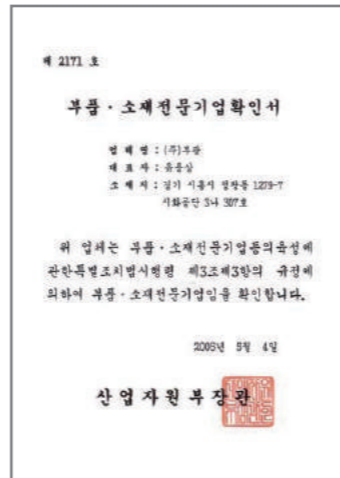
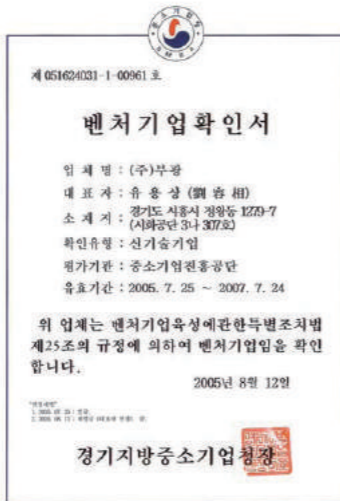


- 2005. 07
폐기 가스 배출 장치 (실용신안등록: 제 0390707호)
Equipment for Exhausting Waste Gases
- 2005. 10
배관용래치 클램프 (실용신안등록: 제 0399466호)
Latch Clamp for Pipe Line

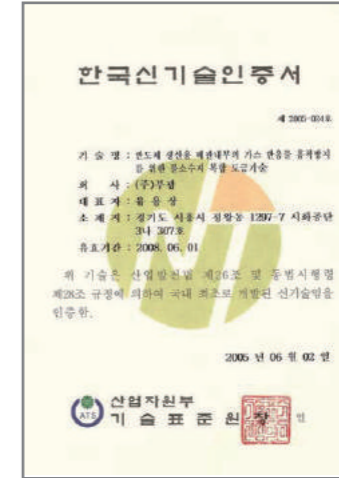


인증서 / Certifications

- 2005. 08
벤처기업 확인서 (제 051624031-1-00961호)
Venture Business Certification
- 2005. 08
부품·소재 전문기업 확인서 (제 2171호)
Part/Material Dedicated Corporation Certification



- 2005. 06
한국 신기술 인증서 (제 2005-024호)
New Technology Certification
- 2004. 11
품질경영시스템 인증서 (ISO인증) (인증등록번호: WQ-QS04-019)
Quality Management System Certification



- 2005. 07
품질경영시스템 인증서 (ISO9001) (인증등록번호: WQ05-094)
Quality Management System Certification



- 2007. 05
기업부설연구소 인정서 (제 20071816호)
Technology Institute Certification
- 2005. 11
표창장(제 59107호)
Citation of Ministry of Commerce, Industry and Energy

