



RenoNix Shower Head Profile

2020.06.25



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1-1. Company Profile

Established 04th November 2010

Business Semiconductor tools marketing, Refurbishment, Installation, Relocation, Conversion & Modification, Parts outsourcing, Technical Service, On call service & Technical Development & manufacturing

Capital 330K USD

Employee 16 Persons

Address 272, Naehyangan-gil, Jeongnam-myeon, Hwaseong-city, Gyeonggi-do, Korea (445-962)

Tel +82 31 354 9494

Fax +82 31 354 9323

E-Mail renonix@irenonix.com

Web Site www.irenonix.com

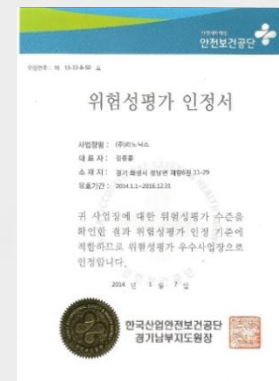
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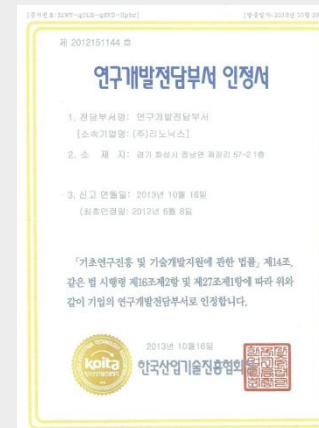
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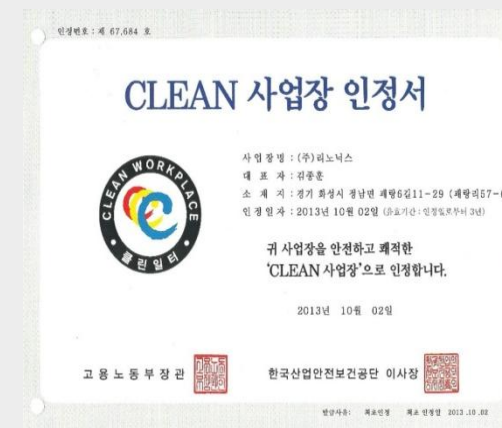
✓Enterprise Risk Management
13-22-B-50



✓Research Institute
2012151144



✓Clean Industry
67,684



1-2. Project Record (The Most Recent 3 Years)

Customer	Project Name	Brief Description	Q'TY	Year
Korea	DxZ PE SiH4 System Controller	Relocation	1	2019
Korea	4 CxZ Giga Fill Process Conversion From PSG to BPSG	Conversion	1	2019
Korea	Endura PCII Chamber Addition	Addition	1	2019
Korea	4 WxZ Chamber Dual Divert	Conversion	1	2019
Korea	HDP SPEED USG 3 Chamber	Relocation	1	2019
Czech	Endura Back Metal 4 Chamber	Refurbish & Set-up	1	2019
Korea	CxZ Chamber From Bottom RPS to Top RPS	Conversion	1	2019
Singapore	Endura System From 6" to 8"	Conversion	1	2019
Korea	CxZ Chamber From Bottom RPS to Top RPS	Conversion	1	2019
Korea	Endura Chamber From HTHU Heater to STF 4F Heater	Conversion	1	2018
Korea	4 DxZ PE TEOS Chamber	Refurbish & Set-up	1	2018
USA	2 WxZ Chamber, 2 WxP Chamber	Refurbish & Set-up	1	2018
Korea	4 WxZ Chamber Dual Divert	Conversion	1	2018
Korea	DLH PE SiH4 3 Chamber	Relocation	1	2018
Korea	AMAT Centura TPCC DPN	Refurbishment/Start up	1	2017
Singapore	AMAT Endura5500 Ai Cu	Refurbishment/Start up	1	2017
USA	AMAT Centura	Refurbishment	1	2017
Korea	AMAT Producer-S 200mm	Refurbishment	1	2017
Korea	AMAT Endura5500 MOCVD	Retrofit & Start up	1	2017
Korea	AMAT Centura WCVD	Refurbishment/Start up	1	2017

1-3. Project Record (The Most Recent 9 Years)

Summary list for project

Project Name	Endura	Centura	Producer	LAM / Novellus	TEL SCCM	DNS	Other	TOTAL
Refurbishment/ Start up	18	8	2	2	1	1	5	37
Retrofit / Start up	22	10	-	-	-	-	3	35
Relocation/ Start up	1	12	-	1	-	-	4	18
Refurbishment	6	2	2	-	1(Upgrade)	-	3	14
TOTAL (104)	47	32	4	3	2	1	15	104

Summary list for country

Country	Q'TY	Rate
Korea	54	52%
China	18	17%
Singapore	18	17%
Taiwan	8	8%
Other	6	6%
TOTAL	104	100%

1-4. Business Detail

Customer Satisfaction

Equipment Refurbish

- ✓ AMAT PVD / CVD / ETCH, LAM / Novellus ETCH / CVD, TEL ETCH / TRACK, DNS Scrubber, etc.
- System Refurbishment, Modification, Relocation, Upgrade & Conversion Start-up.

2nd / OPM NEW Overhaul Items

- ✓ AMAT Ceramic Heater 2nd NEW (200mm)
- ✓ AMAT Magnet OPM NEW (200mm / 300mm)
- ✓ LAM Electrode OPM NEW (200mm / 300mm)
- ✓ Roller Follower Mech 2nd NEW
- ✓ CMP Hybrid Bearing 2nd NEW

Spare Parts

- ✓ OEM / OPM / 2nd New Parts
- ✓ OPM : LAM Electrode / Stud Socket / ESC / ALN Heater / Gasket etc.
- ✓ 2nd New : Ceramic Pin.
- ✓ Provide process kits for PVD, CVD, ETCH process chamber.
- ✓ AMAT / LAM / NOVELLUS DNS / TEL etc. system part.

1-5. Main Facilities (I)

➤ Equipment : Main Facilities

NO.	Facilities	Q'ty	Process	Remarks
1	Cylinder Grinder	1	Out diameter	-
2	Ultrasonic M/C	1	Special	-
3	High-Speed Hole MCT	1	Hole	-
4	MCT	1	CNC : Shape	-
5	Horizontal Grinder	1	Surface	-
6	Chamfer M/C	1	Out-Dia chamfer	-
7	Laser Marking M/C	1	Seral Number	-
8	Etching Facilities	1	Removal of impurities	-
9	Spinning M.C	1	Pocket mirror & Rapping	-
10	Polishing M/C	1	Mirror Polishing : < Ra 0.01	-
11	Heater	2	Bonding : Elastomer	DUAL FAN TYPE

1-5. Main Facilities (II)

➤ Equipment : Main Facilities

NO.	Facilities	Q'ty	Process	Remarks
12	CMM (PRESIZE P760C)	1	2 ways : Non-contact & Contact	-
13	He Leak Detector	1	Max 10 -12 Torr	-
14	Elcmeter	1	Dielectric Thickness (0~5,000 μ m)	-
15	Pre-Press	1	50Ton, W600 x D600 x H700	-
16	3D Inspection	1	Inspection range : 500 x 800	-
17	Image Analyzer	1	0~1000X	-
18	CNC Machining	1	PUMA-240 / VF-4/5	Hass

2. Shower Head 2nd NEW

➤ Shower Head 2nd NEW



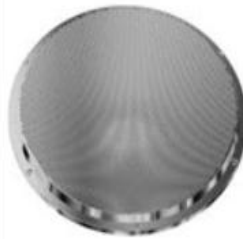
Recently, domestic product of Shower Head used in CVD / Metal Process has shown fail trend during Production.

- ◆ *Process gas unstable*
- ◆ *Cost Increase*
- ◆ *Lower Quality*
- ◆ *PM time Increase*

Therefore, RenoNix here to introduce an product which has qualified by other foundries.

2. Shower Head 2nd NEW

➤ Shower Head Final Inspection Report



CVD Shower Head

AMAT : PRODUCER FACE PLATE

Novellus : Shower Head

ATTO : S/H_3 CIRCLE MAHA SPX

TES : ACL, Carbon Shower Head



METAL Shower Head

AMAT : ISPRINT WXZ S/H

AMAT : ISPRINT WXZ Blocker Plate

TEL : TRIAS S/H-END,

Middle Plate



Final Inspection Report

Normal Information

Report No.	RNSH20181212-1	Date	2018.12.12
Parts No.	0020-49785	Description	Face Plate APF 300MM

Material Information

Material	ALUMINIUM	Equipment	AMAT/Producer SE (300mm)
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Dimension Spec

	A	B	C	D	E	F	G	H	I
Dimension Spec	Φ433.8	Φ338.7	Φ348	60.8	12.7	7.61723	Φ1.2	Φ0.4	Φ3.8
Tolerance	±0.3	±0.2	±0.2	±0.15	±0.1	±0.05	±0.05	±0.05	±0.05
Measured Value	433.87	338.83	348.02	60.84	12.64	7.617	1.19	0.39	3.81
Result	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass

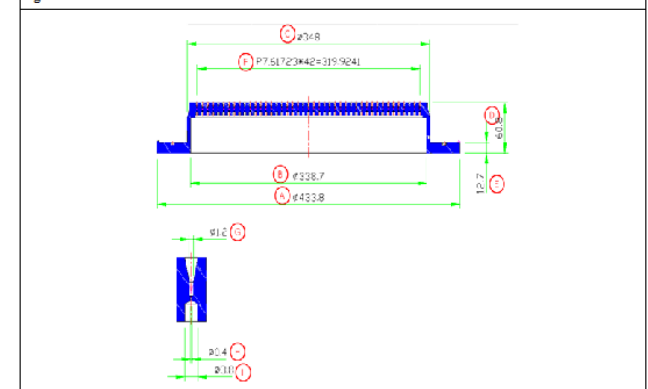
Surface & Roughness

	Unit	A Point	B Point	C Point	D Point	AVG.	Remark
Coating	μm	-	-	-	-	-	
Ra	μm	-	-	-	-	-	

Other Inspection Items

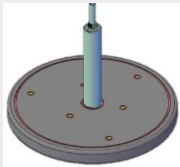
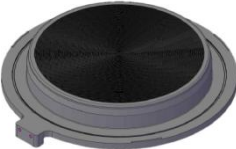
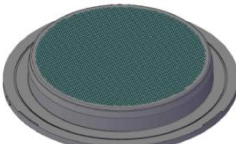
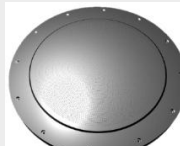
Flatness	0.05	Assembly Condition	Pass	Vision Inspection	Pass
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Figure or DWG



2. Shower Head 2nd NEW (I)

➤ The following Shower Head could be provided by RenoNix.

No.	M/N	Description (Type)	Equipment	Hole Q'TY	Hole Size	Product Size	Photos
1	16-271392-00	Shower Head SHWRHD, 300mm, 13 IN_30 (E-BEAM Welding)	LAM VECTOR Series (300mm)	3,292	Φ 1	Φ 381 * 268T	
2	16-289070-00	Shower Head, 300mm WCVD (E-BEAM Welding)	LAM ALTUS WN MAX (300mm)	3,355	Φ 1	Φ 381 * 268T	
3	0041-25016	Plate_Face Plate, 70TKH, NO Center Hole, 300mm (E-BEAM Welding)	AMAT PRODUCER GT HARP (300mm)	9,703	Φ 0.3	Φ 494.2 * 78.7T	
4	0020-49785	Face Plate APF 300mm Producer SE (Non Welding)	AMAT PRODUCER SE (300mm)	4,685	Φ 1.2	Φ 433.8 * 60.8T	
5	0020-94130	WxZ Shower Head MOD2 300mm (Non Welding)	AMAT ISPRINT (300mm)	7,057	Φ 1	Φ 381 * 268T	



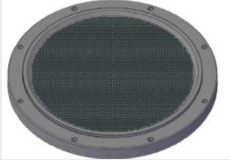

2. Shower Head 2nd NEW (II)

➤ The following Shower Head could be provided by RenoNix.

No.	M/N	Description (Type)	Equipment	Hole Q'TY	Hole Size	Product Size	Photos
6	0041-31335	Shower Head V3 Shower Lower 300 TI N (Non Welding)	AMAT ENDURA2 MOCVD TXZ (300mm)	4,649	Φ 0.4	Φ 433.8 * 60.7T	
7	3M87-029 068-11	TI Shower Head ASSY 300mm (2-PIECE ASSY)	TEL TRIAS HT (300mm)	1,647	Φ 0.6	Φ 364 * 31T	
8	3M87-029 068-11	Ti Shower Head ASSY 300mm (Non Welding)	TEL TRIAS HP (300mm)	1,137	Φ 1	Φ 339.9 * 23.5T	
9	3M10-1500 79-11	Sensor Plate, Shower Spacer 300 TiN S (2-PIECE ASSY)	TEL TRIAS TiN (300mm)	208	Φ 1.6	Φ 433.8 * 60.7T	
9-1	3M10-2026 26-13	Shower Head V3 Shower Lower 300 Ti N	TEL TRIAS TiN (300mm)	208	Φ 1.6	Φ 381 * 268T	

2. Shower Head 2nd NEW (III)

➤ The following Shower Head could be provided by RenoNix.

No.	M/N	Description (Type)	Equipment	Hole Q'TY	Hole Size	Product Size	Photos
10	3220200133	Shower Head MAHA HP2 (Welding Type)	WONIK IPS HP2, SP, SPX (300mm)	8,405	Φ 1	Φ 389 * 71T	
11	050-1125	Shower Head 300mm Flat	TES CHALLENGER (300mm)	4,949	Φ 1.2	Φ 358 * 25.5T	
12	M200-005-003	Shower Head BJM1000	ENGENETECH BLUEJAY 3000	4,920	Φ 0.5	Φ 408.9 * 26T	
13	0020-30797	Shower Head	AMAT P5000 ARC	4,920	Φ 0.4 Φ 1	Φ 205.6 * 20.3T	

RenoNix Major Customer

ON Semiconductor®



Dongbu HiTek
Agricultural Business

SILTERRA

UMC-SG

SSMC



em microelectronic



TSI
SEMICONDUCTORS



 **长电科技**
JCET CHANGJIANG ELEC. TECH.

HEJIAN



Contact Point

**We're Capable of Most of service for PVD,CVD, ETCH areas.
If you have any inquiry or interest , please feel free to contact us.**



RenoNix Co., Ltd

**272, Naehyangan-gil, Jeongnam-myeon,
Hwaseong-city, Gyeonggi-do, Korea (18523)**

Tel : +82 31 354 9494

Fax : +82 31 354 9323

Email : renonix@irenonix.com

Website : www.irenonix.com

RenoNix China (Wuxi) Office

**53-602 Meiman Garden, New District,
Wuxi, Jiangsu Province, China (214000)**

HP : +86 137 7115 2844

Email : Alvin.ryoo@irenonix.com

renonix@163.com

Website : www.irenonix.com