SEMI F73-1214

Test Method for Scanning Electron Microscopy(SEM) Evaluation of Wetted Surface Condition of Stainless Steel Components

Test Report

Applicant Name: **Linlin Xie**

Product Name: **316L stainless steel products**

BEIJING JU RUI ZHONG BANG HT-TECH CO.LTD

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Test Report

Applicant Name:	**Linlin Xie**
Applicant Address:	**No.1261, Enterprise Development Service Center, Xiji Town, Tongzhou District, Beijing**
Manufacturer:	**Precess (Beijing)Semiconductor Co.,Ltd.**
Product description:	**316L stainless steel products**
Product Number:	**1**
Trademark:	**/**
Report Number:	**MG20241230-25596-4**
Date of Issue:	**2024.12.31**

Evaluated by: **Reviewed by:**

Yihao Jiang	2024.12.31	lixia yang	2024.12.31
signature	**date**	**signature**	**date**

BEIJING JU RUI ZHONG BANG HT-TECH CO.LTD

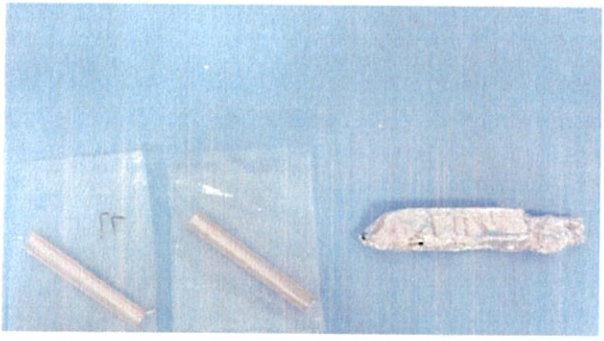
signature **date**

1. Description of Test Samples

1.1 General Description of the Product

316L stainless steel products

1.2 Sample Photo



2. Measurement Conditions

2.1 List of Test and Measurement Instruments

Equipment	Equipment type	Equipment number	Calibration date/ Next Calibration date
SEM	Sigma 300	SA-347	2024/9/12~2025/9/12

2.2 Referenced Standards

Test Items	Reference standards
Microscopic surface defects and contaminants	SEMI F73

2.3 Summary of Method

2.3.1 Obtain a SEM photo of a representative area of the wetted surface of sample at a MAG of 200×. Increase the MAG to 1000× and take another SEM photo within this area, and another at a pre-selected MAG within the range 3000 to 3600× photo at two additional representative areas, not necessarily within the 200× MAG region.

2.3.2 If inclusions or contaminants are noted on any 3000 to 3600× MAG photos, EDS spectra of representative example(s) may be obtained.

2.3.3 Perform grid overlay defect counting on the three 3000 to 3600× MAG photos.Report results in tabular form; provide photos and EDS spectra with identification of elements

detected.

2.4 Acquirsion parameters

Accelerating voltage: 20KeV

Working distance: 10mm

The incidence angle of the electron beam to the sample surface: 90°

Sample preparation: by the manufacturer

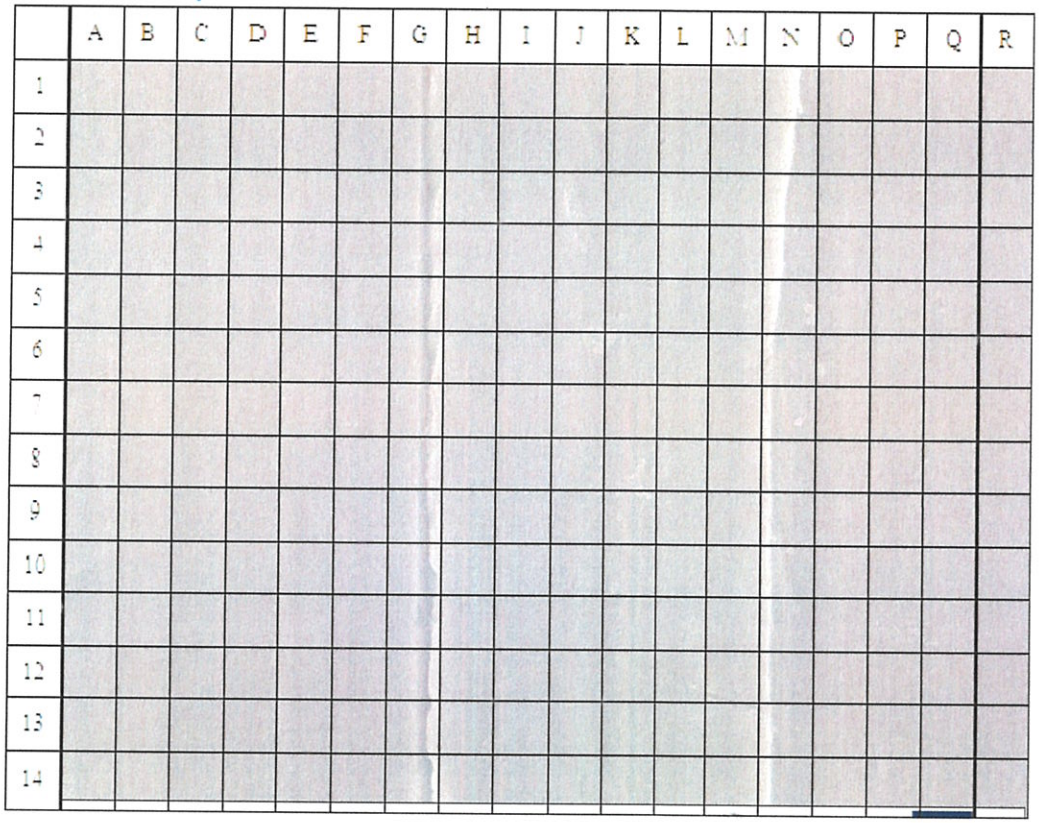
3. Test Result

3.1 Defect counting results

Sample	Micro No.	Defect count	Comments (location indexing optional)	Average count	Maximun count
1	1	42	scratch: D1～D14、G1～G14、N1～N14、	47.6	70
	2	38	scratch: D1～D14、H1～H14、6K～K10、M1～N5、		
	3	60	scratch: A1～A14、H1～H14、K1～K14、L1～L14、N10～P13、		
	4	28	scratch: D1～D14、O1～O14、		
	5	70	scratch: B1～B14、E1～E14、H1～H14、K1～K14、M1～M14		

3.2 SEM photos

1



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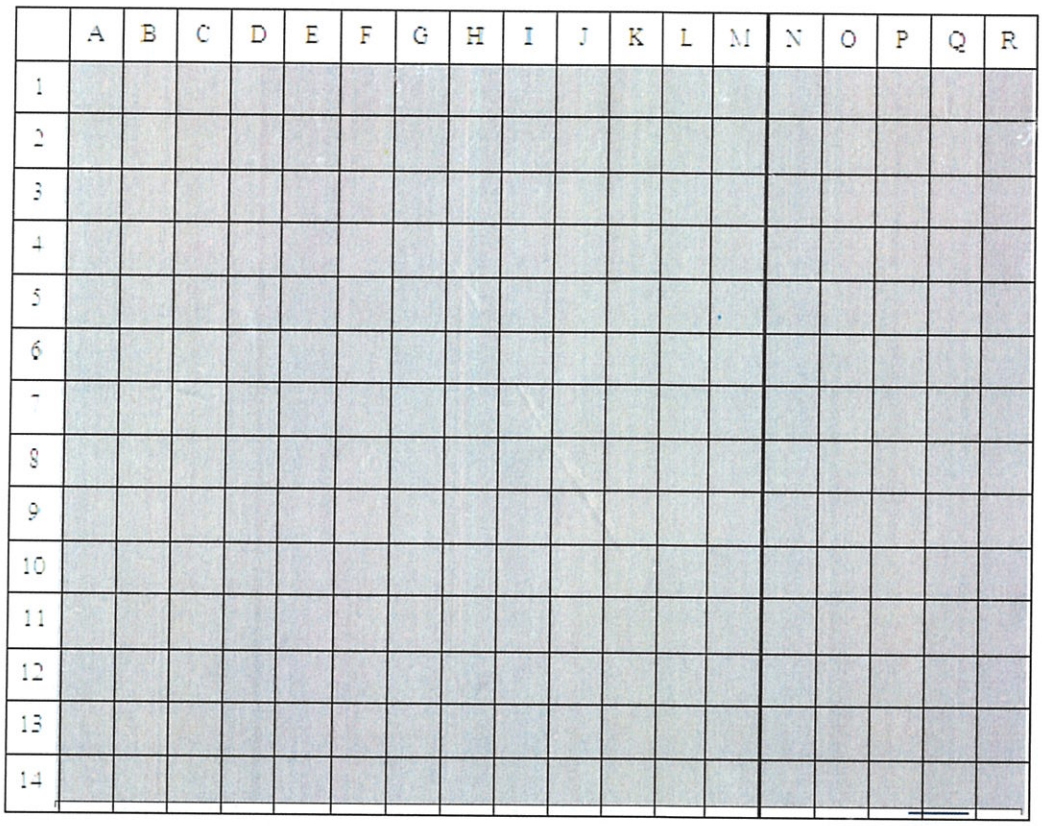

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End of Test Report