Testing Laboratory

Accreditation Certificate

Accreditation No.RTL00070

JFE Techno-Research Corporation
Kurashiki Division Analysis for Production Control Dept.

1-chome, Kawasaki-dori, Mizushima, Kurashiki-city,
Okayama, 712-8074 Japan

meets the following criteria. On the basis of this, Japan Accreditation Board (JAB) grants accreditation to the said testing laboratory.

Applicable accreditation criteria	: JIS Q 17025:2018 (ISO/IEC 17025:2017)
Scope of accreditation	: **Chemical testing** (As described in the appendix)
Premises covered by accreditation	: As described in the appendix.
Expiry date of accreditation	: May 31, 2022

Revised	September 22, 2021
Renewed	October 2, 2017
Initial accreditation	November 5, 1997

Y. Iizuka

Y. Iizuka, President
Japan Accreditation Board

Issue No. : RTL00070-20210922

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Accreditation Certificate Appendix

Type of Laboratory	Testing Laboratory
Name of Laboratory	JFE Techno-Research Corporation Kurashiki Division Analysis for Production Control Dept.
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1) Premises on which testing activities are performed

Name of Premises	JFE Techno-Research Corporation Kurashiki Division Analysis for Production Control Dept.	
Address of Premises	Postal code	712-8074
	Address	1-chome, Kawasaki-dori, Mizushima, Kurashiki- city , Okayama., Japan
Testing service at permanent facilities or on site testing service		■ Testing service at permanent facilities □ On site testing service

Scope of Accreditation

FIELD	M26 Chemical Testing
CODE OF CIT*1	M26.A1
NAME OF CIT	Metal:Iron and steel, Related products

*1 CIT: Classification of Item to be Tested
*2 TCT: Technical Classification of Test

CODE & NAME OF TCT*2	PROPERTIES MEASURED	TEST METHOD STANDARD / STANDARD OPERATING PROCEDURE
B2.1 Molecular absorption spectrometry: Infrared spectrometry	0.001 % ≦ C ≦ 4.5 %	JIS G 1211-3
B2.1 Molecular absorption spectrometry: Infrared spectrometry	0.0005 % ≦ C ≦ 0.01 %	JIS G 1211-4
B1.1 Gravimetric analysis: Precipitation gravimetric analysis	0.10 % ≦ Si ≦ 3.19 %	JIS G 1212 4(1)
B2.1 Molecular absorption spectrometry: Ultraviolet-visible spectrometry	0.01 % ≦ Si ≦ 1.0 %	JIS G 1212 4(3)

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CODE & NAME OF TCT*2	PROPERTIES MEASURED	TEST METHOD STANDARD / STANDARD OPERATING PROCEDURE
B2.1 Molecular absorption spectrometry: Ultraviolet-visible spectrometry	0.01 % ≦ Mn ≦ 7.09 %	JIS G 1213 4 b)
B2.1 Molecular absorption spectrometry: Ultraviolet-visible spectrometry	0.005 % ≦ P ≦ 0.05 %	JIS G 1214 4 a)
B2.1 Molecular absorption spectrometry: Infrared spectrometry	0.001 % ≦ S ≦ 0.06 %	JIS G 1215-4 (except 10.1, 10.2)
B1.2 Volumetric analysis Ⅰ: Complexometric titration	0.1 % ≦ Ni ≦ 30.0 %	JIS G 1216 4(2)
B2.1 Molecular absorption spectrometry: Ultraviolet-visible spectrometry	0.02 % ≦ Mo ≦ 5.74 %	JIS G 1218 3(2)
B2.1 Molecular absorption spectrometry: Ultraviolet-visible spectrometry	0.001 % ≦ Mo ≦ 0.02 %	JIS G 1218 3(3)
B2.1 Molecular absorption spectrometry: Ultraviolet-visible spectrometry	0.005 % ≦ V ≦ 0.50 %	JIS G 1221 4 c)
B2.1 Molecular absorption spectrometry: Ultraviolet-visible spectrometry	0.0009 % ≦ B ≦ 0.0106 %	JIS G 1227 4 d)
B4.3 Specific thermal conductivity measurement	0.0008 % ≦ N ≦ 0.032 %	JIS G 1228 4 d)

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CODE & NAME OF TCT*2	PROPERTIES MEASURED	TEST METHOD STANDARD / STANDARD OPERATING PROCEDURE
B2.4 Atomic emission spectrometry:Spark discharge atomic emission spectrometry	*1	JIS G 1253
B3.1 X-ray fluorescence analysis	*2	JIS G 1256
B2.2 Atomic absorption spectrometry:Flame atomic absorption spectrometry	0.01 % ≦ Ni ≦ 1.0 %	JIS G 1257-3
B2.2 Atomic absorption spectrometry:Flame atomic absorption spectrometry	0.01 % ≦ Cr ≦ 1.3 %	JIS G 1257-4
B2.2 Atomic absorption spectrometry:Flame atomic absorption spectrometry	0.01 % ≦ Cu ≦ 0.6 %	JIS G 1257-6
B2.2 Atomic absorption spectrometry:Flame atomic absorption spectrometry	0.005 % ≦ Al ≦ 0.1 %	JIS G 1257-10-1
B2.2 Atomic absorption analysis:Flameless atomic absorption spectrometry	0.0005 % ≦ As ≦ 0.0030 %	JIS G 1257-19-1
B2.4 Atomic emission spectrometry:ICP-AES	*3	JIS G 1258-1
B2.4 Atomic emission spectrometry:ICP-AES	*4	JIS G 1258-2
B2.4 Atomic emission spectrometry:ICP-AES	*5	JIS G 1258-3
B2.4 Atomic emission spectrometry:ICP-AES	0.0101 % ≦ Nb ≦ 0.49 %	JIS G 1258-4

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B2.2 Atomic absorption spectrometry:Flame atomic absorption spectrometry	10 mg/kg ≦ Cd ≦ 100 mg/kg 10 mg/kg ≦ Pb ≦ 1000 mg/kg	IEC 62321-5
B2.2 Atomic absorption spectrometry: Cold vapor atomic absorption spectrometry	4 mg/kg ≦ Hg ≦ 1000 mg/kg	IEC 62321-4
B2.1 Molecular absorption spectrometry: Ultraviolet-visible spectrometry	Cr(VI) ≧ 0.05 μ g/cm^2	JIS H 8625 Annex 2 4.1

(Note)

*1 : 0.01 % ≦ C ≦ 1.03 %, 0.02 % ≦ Si ≦ 3.02 %,
0.034 % ≦ Mn ≦ 1.88 %, 0.006 % ≦ P ≦ 0.128 %,
0.0021 % ≦ S ≦ 0.036 %, 0.01 % ≦ Cu ≦ 0.44 %,
0.01 % ≦ Ni ≦ 9.94 %, 0.01 % ≦ Cr ≦ 15.27 %,
0.001 % ≦ Mo ≦ 2.08 %, 0.0010 % ≦ B ≦ 0.0031 %,
0.003 % ≦ V ≦ 1.50 %, 0.007 % ≦ Al ≦ 1.06 %,
0.011 % ≦ Nb ≦ 0.223 %, 0.006 % ≦ Ti ≦ 0.35 %,
0.003 % ≦ Co ≦ 0.20 %

*2 : 0.03 % ≦ Si ≦ 3.02 %, 0.034 % ≦ Mn ≦ 1.88 %,
0.006 % ≦ P ≦ 0.128 %, 0.0021% ≦ S ≦ 0.036 %,
0.010 % ≦ Ni ≦ 9.94 %, 0.01 % ≦ Cr ≦ 15.27 %,
0.001 % ≦ Mo ≦ 2.08 %, 0.01 % ≦ Cu ≦ 0.44 %,
0.003 % ≦ V ≦ 1.50 %, 0.006 % ≦ Ti ≦ 0.35 %

*3 : 0.01 % ≦ Si ≦ 0.60 %, 0.01 % ≦ Mn ≦ 2.00 %,
0.003 % ≦ P ≦ 0.10 %, 0.01 % ≦ Ni ≦ 4.00 %,
0.01 % ≦ Cr ≦ 3.00 %, 0.01 % ≦ Mo ≦ 1.20 %,
0.01 % ≦ Cu ≦ 0.50 %, 0.002 % ≦ V ≦ 0.50 %,
0.003 % ≦ Co ≦ 0.20 %, 0.006 % ≦ Ti ≦ 0.30 %,
0.005 % ≦ Al ≦ 0.10 %

*4 : 0.01 % ≦ Mn ≦ 7.09 %, 0.01 % ≦ Ni ≦ 30.0 %,
0.01 % ≦ Cr ≦ 24.68 %, 0.01 % ≦ Mo ≦ 5.47 %,

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CODE & NAME OF TCT*2					PROPERTIES MEASURED					TEST METHOD STANDARD / STANDARD OPERATING PROCEDURE
	0.01 %	≦ Cu	≦	1.47 %,	0.10 %	≦ W	≦	10.0 %,		
	0.01 %	≦ V	≦	3.25 %,	0.01 %	≦ Co	≦	12.46 %,		
	0.006 %	≦ Ti	≦	1.23 %,	0.0101 %	≦ Nb	≦	0.49 %		
*5 :	0.10 %	≦ Si	≦	1.02 %,	0.01 %	≦ Mn	≦	7.09 %,		
	0.003 %	≦ P	≦	0.10 %,	0.02 %	≦ Ni	≦	10.0 %,		
	0.03 %	≦ Cr	≦	24.68 %,	0.10 %	≦ Mo	≦	3.0 %,		
	0.01 %	≦ Cu	≦	1.47 %,	0.01 %	≦ V	≦	1.0 %,		
	0.01 %	≦ Co	≦	1.0 %,	0.006 %	≦ Ti	≦	2.5 %,		
	0.005 %	≦ Al	≦	1.23 %						

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