METAL

AL7075 T651

Basic Physical Properties

		Chemical Composition (%)										
Melt No	Element	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Each	Total	Al
	Standard Value	≤ 0.40	≤ 0.50	1.2~2.0	≤ 0.3	2.1~2.9	.18~.28	5.1~6.1	≤ 0.2	≤ 0.2	≤0.15	Remain
G00643	Actual Value	0.07	0.16	1.58	0.13	2.67	0.20	5.88	0.03	0.03	≤0.15	

Mechanical Properties	Tensile Strength (Rm/Mpa)	Elongation (Rp0.2/Mpa)	Elongation at Break (A/%)
Standard Value	540	460	8
Actual Value	590~591	519	10.5~11.5

METAL

AL7075 T6

Basic Physical Properties

Product Name	Alloy Aluminum Plate
Specification (Thickness x Width x Length)	Diameter 25
Quantity	
Weight (kg)	3180

		Chemical Composition (%)								Others		Al	Mechanical Properties		
Element		Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Each	Total		Y.S.	T.S.	Elongation
Standard	min			1.2		2.1	0.18	5.1				Remain			
	max	0.4	0.5	2.0	0.3	2.9	0.28	6.1	0.2	0.05	0.01				
Stretch Plate		0.08	0.22	1.5	0.1	2.45	0.2	5.8	0.05	≤0.05	≤0.1		599	199	9

METAL

AL2024

Basic Physical Properties

		Chemical Composition (%)								Others		Al	Mechanical Properties		
Element		Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Each	Total		Y.S.	T.S.	Elongation
Standard	min			3.8	0.3	1.2						Remain			
	max	0.5	0.5	4.9	0.9	1.8	0.10	0.25	0.15	0.05	0.01				
Stretch Plate		0.11	0.25	4.67	0.59	1.64	0.01	0.13	0.03	≤0.05	≤0.1		415-421	302-307	9.0-0.5

Hardness: 50

METAL

AL6061

Basic Physical Properties

		Metal Analysis											Tensile Strength			Hardness
Element		Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Zr	Al	Y.S.	T.S.	Elongation	HB
Standard	min	0.4		0.15		0.8	0.04						240	290	8	
	max	0.8	0.7	0.4	0.15	1.2	0.35		0.25	0.15		Remain				
Actual		0.66	0.36	0.21	0.03	1	0.1		0.06	0.029			265	305	13	

REMARKS:

[1] There is no any requirement to the hardness in the technique specification ,the actual hardness value is for reference only.

[2] While there was no standard value in the tensile test,it means that the technique specification did not provide any mechanical property value for the given dimension, the actual value is for reference only.

STATEMENT: We hereby certify that material described herein has manufactured and tested with satisfactory result in accordance with the requirements of the above material specification.

METAL

AL6061 T6

Basic Physical Properties

Product Name	Alloy Aluminum Plate
Specification (Thickness x Width x Length)	Diameter 110
Quantity	25
Weight (kg)	2486

		Chemical Composition (%)								Others		Al	Mechanical Properties		
Element		Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Each	Total		Y.S.	T.S.	Elongation
Standard	min	0.4		0.15		0.8						Remain			
	max	0.8	0.7	0.4	0.2	1.2	0.35	0.25	0.15	0.05	0.01				
Stretch Plate		0.08	0.22	0.22	0.03	1.01	0.1	0.04	0.03	≤0.05	≤0.1		243	257	10

METAL

AL6061-T65

Basic Physical Properties

Product Name	Alloy Aluminum Plate
Dimension	55 x 1220 x 2440
Technical Standard	YS/T 439-2001
Chemical Composition Standard	GB/T 3190-1996

Chemical Composition (%)

Melt No	Element	Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Al
	Standard Value	0.4-0.8	≤0.7	0.15-0.4	≤0.3	0.8-1.2	0.18-.28		0.25	0.15	remainder
100918-2	Actual Value	0.6	0.43	0.23	0.04	1.1	0.26		0.15	0.002	

Mechanical Properties

Sampling Method	Tensile Strength		Yield Strength		Elongation		Hardness	
	Standard value	Actual value	Standard value	Actual value	Standard value	Actual value	Standard value	Actual value
Longitudinal	≥265	365	≥230	220	≥9	10		HB150-156

Microstructure	Macrostructure	Ultrasonic	Surface Control	Hydrogen Content

METAL

AL6063

Basic Physical Properties

Chemical Composition (%)

Melt No	Element	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Al
	Standard Value	0.2-0.6	≤0.35	≤0.10	≤0.35.10	0.45-0.9	≤0.10	≤0.10	≤0.10	remainder
100918-2	Actual Value	0.52	0.25	0.025	0.012	0.76	0.026	0.021 0	.012	

Mechanical Properties

2457K	Tensile Strength		Yield Strength		Elongation		Hardness	
	Standard value	Actual value	Standard value	Actual value	Standard value	Actual value	Standard value	Actual value
Longitudinal	≥230	258	≥180	196	≥5	7		61HB
Microstructure		Macrostructure		Ultrasonic		Surface Control		Hydrogen Conte

METAL

AL6063 T6

Basic Physical Properties

		Chemical Composition (%)								
Melt No	Element	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Al
	Standard Value	0.2-0.6	≤0.35	≤0.10	≤0.35	0.45-0.9	≤0.10	≤0.10	≤0.10	remainder
	Actual Value	0.52	0.25	0.025	0.012	0.76	0.026	0.021	0.012	

Mechanical Properties

Sampling Method	Tensile Strength		Yield Strength		Elongation		Hardness	
	Standard value	Actual value	Standard value	Actual value	Standard value	Actual value	Standard value	Actual value
Longitudinal	≥230	258	≥180	196	≥5	7		61HB

Microstructure	Macrostructure	Ultrasonic	Surface Control	Hydrogen Content

METAL

AL6082 T6

Basic Physical Properties

		Metal Analysis											Tensile Strength			Hardness
Element		Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Zr	Al	Y.S.	T.S.	Elongation	HB
Standard	min	0.7			0.4	0.6							255	300	9	
	max	1.3	0.5	0.1	1.0	1.2	0.25		0.2	0.1		Remain				
Actual		1.02	0.33	0.03	0.56	0.91	0.03		0.06	0.03			285	340	10	

REMARKS:

[1] There is no any requirement to the hardness in the technique specification ,the actual hardness value is for reference only.

[2] While there was no standard value in the tensile test,it means that the technique specification did not provide any mechanical property value for the given dimension, the actual value is for reference only.

METAL

AL5052 H112

Basic Physical Properties

Product Name	Alloy Aluminum Plate
Specification (Thickness x Width x Length)	20 x 1500 x 300
Quantity	10
Weight (kg)	2486

		Chemical Composition (%)								Others		Al	Mechanical Properties		
Element		Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Each	Total		Y.S.	T.S.	Elongation
Standard	min				2.2	0.15						Remain			
	max	0.25	0.4	0.1	0.1	2.8	0.35	0.1	0.1	0.05	0.01				
Stretch Plate		0.08	0.22	0.03	0.05	2.45	0.17	0.07	0.01	≤0.05	≤0.1		200	125	18

METAL

AL5083

Basic Physical Properties

		Chemical Composition (%)								Al	Tensile Strength			Hardness
Element		Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti		Y.S.	T.S.	Elongation	HB
Standard	min						2.2	0.15		Remain	125	275	12	
	max	0.25	0.4	0.1	0.1	2.8	0.35	0.1	0.1					
Stretch Plate		0.08	0.22	0.03	0.05	2.45	0.17	0.07	0.01		176	306	23	

REMARKS:

[1] There is no any requirement to the hardness in the technique specification, the actual hardness value is for reference only.

[2] While there was no standard value in the tensile test,it means that the technique specification did not provide any mechanical property value for the given dimension, the actual value is for reference only.

STATEMENT: We hereby certify that material described herein has manufactured and tested with satisfactory result in accordance with the requirements of the above material specification.

METAL

AL2017

Basic Physical Properties

		Metal Analysis											Tensile Strength			Hardness
Element		Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Zr	Al	Y.S.	T.S.	Elongation	HB
Standard	min	0.2		3.5	0.4	0.4							260	390	13	
	max	0.8	0.7	4.5	1.0	0.8	0.1		0.25			Remain				
Actual		0.5	0.16	3.7	0.6	0.58	0.02		0.07				265	412	√	√

REMARKS:

[1] There is no any requirement to the hardness in the technique specification ,the actual hardness value is for reference only.

[2] While there was no standard value in the tensile test,it means that the technique specification did not provide any mechanical property value for the given dimension, the actual value is for reference only.

STATEMENT: We hereby certify that material described herein has manufactured and tested with satisfactory result in accordance with the requirements of the above material specification.

METAL

ADC12

Basic Physical Properties

	Si	Fe	Mg	Cu	Mn	Al	HB
Combination	0.7~0.8	0.7~0.8	0.9~1.1	0.2~0.3	0.18~0.23	0.7~0.8	80°~90°

METAL

A380

Basic Physical Properties

	Si	Fe	Cu	Mn	Mg	Zn	Cr	Ti	Ni	Sn	Al
Combination	0.534	0.811	0.24	0.24	0.59	0.267	0.0339	0.0104	0.016	0.0075	97.3
Main Requirements	0.4-0.8	0.7	0.15-0.4	0.15	0.8-1.2	0.25	0.04-.35	0.02	0.05≤	0.05≤	

METAL

LM24

Basic Physical Properties

		Chemical Composition (%)									
Melt No	Element	Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Al
	Standard Value	≤ 0.40	≤ 0.50	1.2~2.0	≤ 0.3	2.1~2.9	.18~.28		5.1~6.1	≤ 0.2	remainder
100918-02	Actual Value	0.08	0.33	1.48	0.04	2.59	0.21		5.67	0.0	

Mechanical Properties

Sampling Method	Tensile Strength		Yield Strength		Elongation		Hardness	
	Standard value	Actual value	Standard value	Actual value	Standard value	Actual value	Standard value	Actual value
Longitudinal	≥560	545-560	≥460	470-520	≥6	9-11		HB150 - 156