



METAL MINISTRY INC.
ISO 9001-2015



ALUMINIUM ALLOYS

(AEROSPACE, MARINE & DEFENSE ALLOYS)



Certificate of Registration

*This is to certify that
The Quality Management System of*

METAL MINISTRY INC

**Shop No-3, Ground Floor, Sidhivinayak Co-op HSG SOC-Durgadas
Building, Ardeshir Dadi Cross Lane, Near Cp Tank, Mumbai - 400004**

*has been assessed and found to be in compliance
with the requirements of the standard*

ISO 9001:2015

for the following scope :

**Manufacturer & Exporter of Stainless Steel, Nickel Alloy, Aluminum,
AS, CS & MS, Copper & Brass, Titanium & Exotic Alloy in Shapes of
Strips & Coils, Sheets & Plates, Pipe & Tubes, Round, Hex & Flat Bars,
Fittings & Flanges, Fasteners, Valves & Gaskets & All CNC & VMC
Components for Aerospace & Defense & Other Industry.**

CERTIFICATE No. : 20ZICK4622Q

**ISSUED DATE : 26/05/2020
EXPIRY DATE : 25/05/2023**

**1ST SURVEILLANCE : 25/05/2021
2ND SURVEILLANCE : 25/05/2022**



Authorised Signatory

**INTERNATIONAL QUALITY CERTIFICATION SERVICES UK LTD
272, Bath Street, Glasgow, G2 4JR, U.K.**



This Certificate is intellectual Property of IQCS and can be maintained through surveillance and renewal audits.
Certificate should be returned to IQCS in case of non compliance of certification procedure.
Authenticity of this certificate can be verified at www.ukacert.co.uk / www.iqcsert.co.uk
The Registration is not a Product Quality Certificate.



ALUMINIUM ALLOY STANDARDS

ALLOY	AA	ASTM USA	BS GB	BSOLD GB	DIN Germany	INTER	ISO Intl	JIS Japan	JISOLD Japan	NF France
1050 A	-1050	-1050	1050 A	1 B	Al99,5	1050 A	Al99,5	(A1050)	A1x1	1050 A
1200	1200		1200	1 C	Al99	1200	Al99.0	A1200	A1x3	1200
2007	2007				AlCuMgPb	2007	(Al Cu4PbMg)			
2011	2011	2011	2011	FC1	AlCuBiPb	2011	Al Cu6BiPb	A2011		2011
2014	2014	2014	(2014 A)	(H 15)	AlCuSiMn	2014	Al Cu4SiMg	A2014	A3x1	2014
2014 A	-2014		2014A	H15	(AlCuSiMn)	2014 A	Al Cu4SiMg(A)			
2017 A	-2017	-2017	2017 A		AlCuMg1	2017 A	AlCuMgSi(A)	(A2017)	A3x2	2017A
2024	2024	2024	2024	2L97	AlCuMg2	2024	Al Cu4Mg1	A2024	A3x4	2024
2030	2030				(AlCuMgPb)	2030	Al Cu4PbMg			2030
3003	3003	3003	-3103		AlMnCu	3003	AlMn1 Cu	A3003	A2x3	3003
3004	3004				Al Mn1Mg1		AlMn1Mg1			
3005	3005				Al Mn1Mg0.5		Al Mn 1Mg0.5			
3103	3103		3103	N 3	AlMn1	3103	Al Mn 1			
3105	3105				Al Mn0.5Mg0.5		AlMn0.5Mg0.5			
5005	5005	5005	5005	N41	(AlMg1)	5005	Al Mg1 (B)	A5005		5005
5005 A	-5005		-5005	N41	AlMg1	5005 A			A2x8	
5049	5049				AlMg2Mn0.8		Al Mg2Mn0.8			
5052	5052	5052			AlMg2.5	5052	Al Mg2.5	A5052	A2x1	5052
5083	5083	5083	5083	N8	AlMg4.5Mn	5083	Al Mg4.5Mn0.7	A5083	A2x7	5083
5086	5086	5086			AlMg4Mn	5086	Al Mg4	A5086		5086
5154 A	-5154		5154 A	N5		5154 A	Al Mg3.5(A)	(A5154)		
5182	5182				Al Mg5Mn		Al Mg4.5Mn0.4			
5251	5251		5251	N4	AlMg2Mn0.3	5251	Al Mg2			5251
5454	5454	5454	5454	N51	AlMg2.7Mn	5454	Al Mg3Mn	A5454	A2x9	5454
5754	5754				AlMg3	5754	Al Mg3			5754
6005 A	-6005				AlMgSi0.7	6005 A	Al SiMg (A)	(A6NO1)		6005 A
6016	6016									
6060	6060	-6063	-6063	(H9)	AlMgSi0.5	6060	AlMgSi	(A6063)	A2x5	6060
6061	6061	6061	6061	H20	AlMg1SiCu	6061	Al Mg1SiCu	6061	A2x4	6061
6063	6063	6063	6063	H9	(AlMg1Si0.5)	6063	Al Mg0.7Si	A6063	A2x5	
6082	6082		6082	H30	AlMgSi1	6082	Al Si 1 MgMn			6082
6106	6106						Al MgSiMn			
7010	7010		7010	DTD5130		7010	Al Zn6MgCu			
7020	7020	-7005	7020	H17	AlZn4.5Mg1	7020	AlZn4.5MG1	(A7N01)		7020
7050	7050				AlZn6CuMgZr		Al Zn6 CuMgZr			7050
7075	7075	7075	7075	2L95	AlZnMgCu1.5	7075	Al Zn5.5MgCu	A7075	A34x6	7075

ALUMINIUM ALLOY TEMPERS

O	Very soft (fully annealed)	H14	½ hard
T	Heat-treated (hardening of aging applied)	H16	¾ hard
H	Strain-hardened (heat treated materials can not see)	H18	Full hard
T1	Directly shaped and natural aging	H19	Extra hardness
T2	Annealed	H2	Cold deformation + annealing
T3	The solution taken, and cold-treated	H21	1/8 hard
T4	Solution taken, and naturally aged	H22	¼ hard
T5	Directly shaped and artificial aging	H24	½ hard
T6	Solution taken, and artificially aged	H26	¾ hard
T7	Whether the solution, stabilized	H28	Full hard
T8	The solution taken, and cold-deformed and artificially aged	H29	Extra hardness
T9	The solution taken, and artificially aged and cold-deformed	H3	Cold deformation + stabilized
T10	Shaped, artificially aged and cold-deformed	H32	¼ hard and stable, although
T42	T4 and T6 mechanical properties after thermal fatigue or corrosion	H34	½ hard and stable, although
T62	resistance in case of change of the thermal process.	H36	¾ hard and stable, although
T351	Before aging relaxing additional voltage controlled by stretching.	H38	Fully rigid and stable even though
T651	Before aging relaxing additional voltage controlled by stretching.	H39	If extra hard and stable
T851	Before aging relaxing additional voltage controlled by stretching.	H4	Cold deformation + cooking
H1	Only cold deformation	H42	¼ hardness
H11	1/8 hard	H44	½ strength
H111	Low-level strain-hardened	H46	¾ hardness
H112	Uncontrolled strain hardened	H48	Full hard
H12	¼ hard	H49	Extra hardness

ALUMINIUM PLATES

1XXX SERIES ALLOYS

The chemical composition of the products is being realized in accordance with the EN573, ASTM B209, ASTM B928 standards, and the production process in accordance with the EN573, ASTM B209, ASTM B928 and **AMS**, DIN, and AA standards.

Alloy	Tempers	Thickness Range (mm)	Width Range (mm)	Length Range (mm)	Hardness (HB)
1050	Hx2, HX4, Hx6	0,5 - 12,5	1,000 - 1,540	2,500 - 4,000	20
		12,5 - 20,0	1,000 - 1,540	2,000 - 6,000	24
		20 40,0	1,000 - 1,540	2,000 - 8,000	29
	Hx8, Hx9	0,5 - 12,5	1,000 - 1,540	2,500 - 4,000	35
		12,5 - 20,0	1,000 - 1,540	2,000 - 6,000	39
		20,0 - 40,0	1,000 - 1,540	2,000 - 8,000	45

2XXX SERIES ALLOYS

* The chemical composition of the products is being realized in accordance with the EN573, ASTM B209, ASTM B928 standards, and the production process in accordance with the EN573, ASTM B209, ASTM B928 and **AMS**, DIN, and AA standards.

Alloy	Tempers	Thickness Range (mm)	Width Range (mm)	Length Range (mm)	Hardness (HB)
2011	T4, T451	0,5 - 12,5	1,000 - 1,540	2,500 - 4,000	112
		12,5 - 40,0	1,000 - 1,540	2,000 - 6,000	112
		40,0 - 100,0	1,000 - 1,540	2,000 - 8,000	111
	T651	0,5 - 12,5	1,000 - 1,540	2,500 - 4,000	135
		12,5 - 40,0	1,000 - 1,540	2,000 - 6,000	138
		40,0 - 60,0	1,000 - 1,540	2,000 - 8,000	135
		60,0 - 80,0	1,000 - 1,540	2,000 - 8,000	131
		80,0 - 120,0	1,000 - 1,540	2,000 - 8,000	126
2014	T4,T451	0.5-12.5	1,000 - 1,540	2,500 - 4,000	112
		12.5-40.0	1,000 - 1,540	2,000 - 6,000	112
		40.0-100.0	1,000 - 1,540	2,000 - 8,000	111
	T651	0.5-12.5	1,000 - 1,540	2,500 - 4,000	135
		12.5-40.0	1,000 - 1,540	2,000 - 6,000	138
		40.0-60.0	1,000 - 1,540	2,000 - 8,000	135
		60.0-80.0	1,000 - 1,540	2,000 - 8,000	131
		80.0-100.0	1,000 - 1,540	2,000 - 8,000	126
2017A	T4, T451	0,5 - 12,5	1,000 - 1,540	2,000 - 4,000	111
		12,5 - 40,0	1,000 - 1,540	2,000 - 6,000	110
		40,0 - 60,0	1,000 - 1,540	2,000 - 7,500	108
		60,0 - 80,0	1,000 - 1,540	2,000 - 7,500	105
		80,0 - 120,0	1,000 - 1,540	2,000 - 5,000	105
		120 - 130	1,000 - 1,540	2,000 - 5,000	101
2024	T3, T351	0,5 - 12,5	1,000 - 1,540	2,000 - 4,000	124
		12,5 - 40,0	1,000 - 1,540	2,000 - 6,000	122
		40,0 - 80,0	1,000 - 1,540	2,000 - 8,000	120
		80,0 - 100,0	1,000 - 1,300	2,000 - 7,500	115
		100,0 - 120,0	1,000 - 1,300	2,000 - 6,000	110
		120 - 130	1,000 - 1,300	2,000 - 5,000	104

5XXX SERIES ALLOYS

* The chemical composition of the products is being realized in accordance with the EN573, ASTM B209, ASTM B928 standards, and the production process in accordance with the EN573, ASTM B209, ASTM B928 and **AMS**, DIN, and AA standards.

Alloy	Tempers	Thickness Range (mm)	Width Range (mm)	Length Range (mm)	Hardness (HB)
5083	O, H111, H321	0,5 - 12,5	1,000 - 3,000	2,500 - 4,000	75
		12,5 - 50,0	1,000 - 3,000	2,000 - 6,000	75
	O, H111, H321	50,0 - 80,0	1,000 - 3,000	2,000 - 8,000	73
		80,0 - 120,0	1,000 - 3,000	2,500 - 7,000	70
		120,0 - 300,0	1,000 - 3,000	2,000 - 4,000	69
	F	12,0 - 50,0	1,000 - 3,000	2,000 - 6,000	-
50,0 - 152,0		1,000 - 3,000	2,000 - 4,000	-	
5186 5186	O, H111 O, H111	4,0 - 12,5	1,000 - 3,000	2,000 - 12,000	65
		4,0 - 12,5	1,000 - 3,000	2,000 - 12,000	65
5754	O, H1111, H22, Hx4	0,5 - 10,0	1,000 - 3,000	2,000 - 4,000	52
		10,0 - 12,5	1,000 - 3,000	2,000 - 6,000	52
		12,5 - 50,0	1,000 - 3,000	2,000 - 8,000	52
		50,0 - 80,0	1,000 - 3,000	2,000 - 7,000	52
		80,0 - 152,0	1,000 - 3,000	2,000 - 4,000	52

6XXX SERIES ALLOYS

* The chemical composition of the products is being realized in accordance with the EN573, ASTM B209, ASTM B928 standards, and the production process in accordance with the EN573, ASTM B209, ASTM B928 and **AMS**, DIN, and AA standards.

Alloy	Tempers	Thickness Range (mm)	Width Range (mm)	Length Range (mm)	Hardness (HB)
6061	T6, T651	1,0 - 10,0	1,000 - 2,000	2,500 - 4,000	88
	T651	10,0 - 12,5	1,000 - 2,000	2,000 - 6,000	88
		12,5 - 40,0	1,000 - 2,000	1,000 - 6,000	88
		40,0 - 80,0	1,000 - 2,000	2,500 - 8,000	88
	120,0 - 300,0	80,0 - 100,0	1,000 - 2,000	2,500 - 7,500	88
		100,0 - 250,0	1,000 - 2,000	2,500 - 5,000	84
6082	T6, T651 T651	1,0 - 10,0	1,000 - 1,540	2,000 - 4,000	91
		10,0 - 12,5	1,000 - 1,540	2,000 - 6,000	91
		12,5 - 60,0	1,000 - 1,540	2,000 - 6,000	89
	T6, T651	60,0 - 100,0	1,000 - 1,540	2,000 - 7,500	89
		100,0 - 150,0	1,000 - 1,540	2,000 - 5,000	84
		150,0 - 250,0	1,000 - 1,540	2,000 - 5,000	83

7XXX SERIES ALLOYS

* The chemical composition of the products is being realized in accordance with the EN573, ASTM B209, ASTM B928 standards, and the production process in accordance with the EN573, ASTM B209, ASTM B928 and **AMS**, DIN, and AA standards.

Alloy	Tempers	Thickness Range (mm)	Width Range (mm)	Length Range (mm)	Hardness (HB)
7050	T7451	20,0 - 100,0	1,000 - 1,300	2,000 - 4,000	-
7075	T6, T651	2,0 - 12,5	1,000 - 1,200	2,000 - 4,000	160
		12,5 - 25,0	1,000 - 1,200	2,000 - 8,000	161
		25,0 - 50,0	1,000 - 1,200	2,000 - 8,000	158
		50,0 - 60,0	1,000 - 1,200	2,000 - 8,000	155
		60,0 - 80,0	1,000 - 1,200	2,000 - 7,000	147
		80,0 - 90,0	1,000 - 1,200	2,000 - 6,000	144
		90 - 150	1,000 - 1,200	2,000 - 5,000	135
	T7351	6,0 - 12,5	1,000 - 1,200	2,000 - 4,000	140
		12,5 - 25,0	1,000 - 1,200	2,000 - 8,000	140
		25,0 - 50,0	1,000 - 1,200	2,000 - 8,000	140
		50,0 - 60,0	1,000 - 1,200	2,000 - 8,000	133
		60,0 - 80,0	1,000 - 1,200	2,000 - 7,000	129
		80,0 - 100,0	1,000 - 1,200	12,000 - 5,000	126
T7651	6,0 - 12,5	1,000 - 1,200	2,000 - 4,000	146	

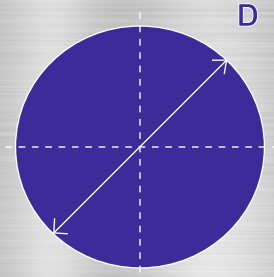
ALUMINIUM TREAD PLATES

Alloy	Tempers	Thickness Range (mm)	Width Range (mm)	Length Range (mm)
1050	H14	1,5 - 2,5	1,000 - 2,000	2,000 - 6,000
		2,0 - 3,0	1,000 - 2,000	2,000 - 6,000
		2,5 - 3,5	1,000 - 2,000	2,000 - 6,000
		3,5 - 4,0	1,000 - 2,000	2,000 - 6,000
		4,0 - 5,0	1,000 - 2,000	2,000 - 6,000
20,0 - 100,0	20,0 - 100,0	1,5 - 2,5	1,000 - 2,000	2,000 - 6,000
		3,5 - 5,0	1,000 - 2,000	2,000 - 6,000
		5,0 - 6,5	1,000 - 2,000	2,000 - 6,000
		8 - 9,5	1,000 - 2,000	2,000 - 6,000

ALUMINIUM RODS



Alloy	Thickness(D) Range(mm)	Length Range(mm)
2XXX	8,0 - 40	1,000 - 3,000
6XXX	8,0 - 533	1,000 - 3,000
7XXX	8,0 - 508	1,000 - 3,000

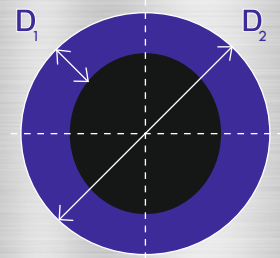


* Other grades & sizes are possible by request.

ALUMINIUM TUBES



Alloy	Wall Thickness(D) Range (mm) (D1)	Outer Diameter (mm) (D2)	Length Range (mm)
2XXX	5,0 - 80,0	25,0 - 550,0	2,000 - 6,000
6XXX	1,0 - 80,0	8,0 - 550,0	2,000 - 6,000
7XXX	5,0 - 80,0	25,0 - 550,0	2,000 - 6,000

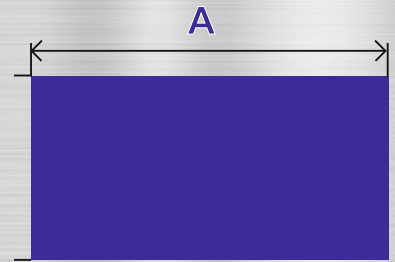


* Other grades & sizes are possible by request.

ALUMINIUM FLAT BARS



Alloy	Thickness(D) Range(mm)	Width (B) Range (mm)	Length Range(mm)
2XXX	20,0 - 480,0	5 - 400,0	3,000 - 6,000
6XXX	20,0 - 480,0	5 - 400,0	3,000 - 6,000
7XXX	20,0 - 480,0	5 - 400,0	3,000 - 6,000

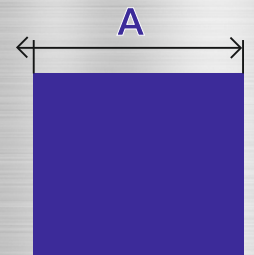


* Other grades & sizes are possible by request.

ALUMINIUM SQUARE BARS



Alloy	Thickness(D) Range(mm)	Length Range(mm)
2XXX	12 - 304,8	1,000 - 3,000
5XXX	10 - 50	1,000 - 3,000
6XXX	12 - 406,4	1,000 - 3,000
7XXX	12 - 304,8	1,000 - 3,000

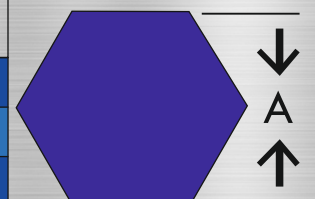


* Other grades & sizes are possible by request.

ALUMINIUM HEXAGONAL BARS

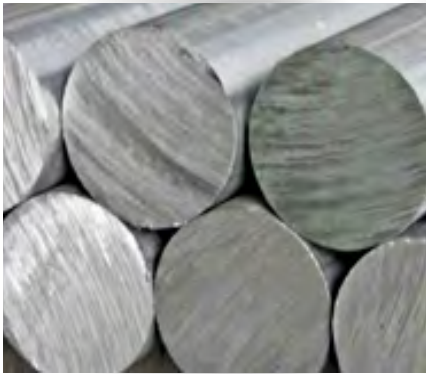


Alloy	Thickness(D) Range(mm)	Length Range(mm)
2XXX	8 - 80	3,000 - 6,000
3XXX	8 - 80	3,000 - 6,000
5XXX	8 - 80	3,000 - 6,000
7XXX	8 - 80	3,000 - 6,000
8XXX	8 - 80	3,000 - 6,000



* Other grades & sizes are possible by request.

SERVICES



BAR CUT

In Metal Ministry Inc aluminum we have many bar cutting machines in our machinery and they cut bars and fish plates at 1 mm precision.

PVC COATING

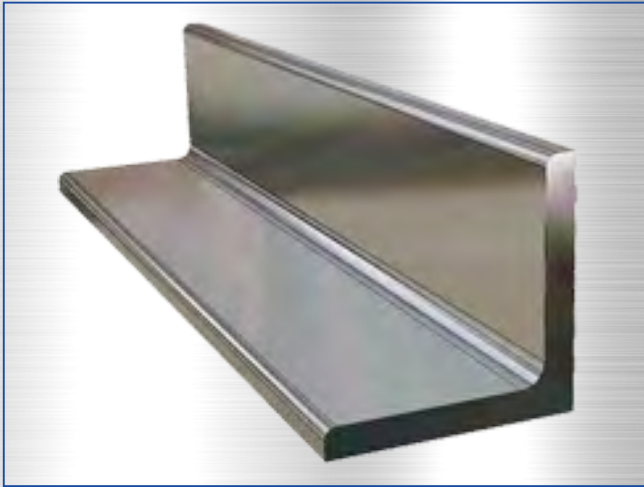
Metal Ministry Inc provides PVC protective coating in sheet materials up to 6 mm against possible scratches that occur due to cuts inline with their customers needs.



TECHNICAL CONSULTING

Metal Ministry Inc Aluminum provides technical support to its customers at the highest level ,with the Expert Engineer staff within its body.

ALUMINIUM PROFILES



L PROFILES

We have angle profiles made of 6061, 6063, 6082, 5754 alloys available in various sizes. Please contact us for dimensions.

RECTANGULAR/SQUARE PIPES

We have Rectangular/Square Pipes made of 6061, 6063, 6082, 5754 alloys available in various sizes. Please contact us for dimensions.



SPECIAL PROFILES

Other profiles are supplied according to the demands of customers. Please contact us for dimensions & Charts

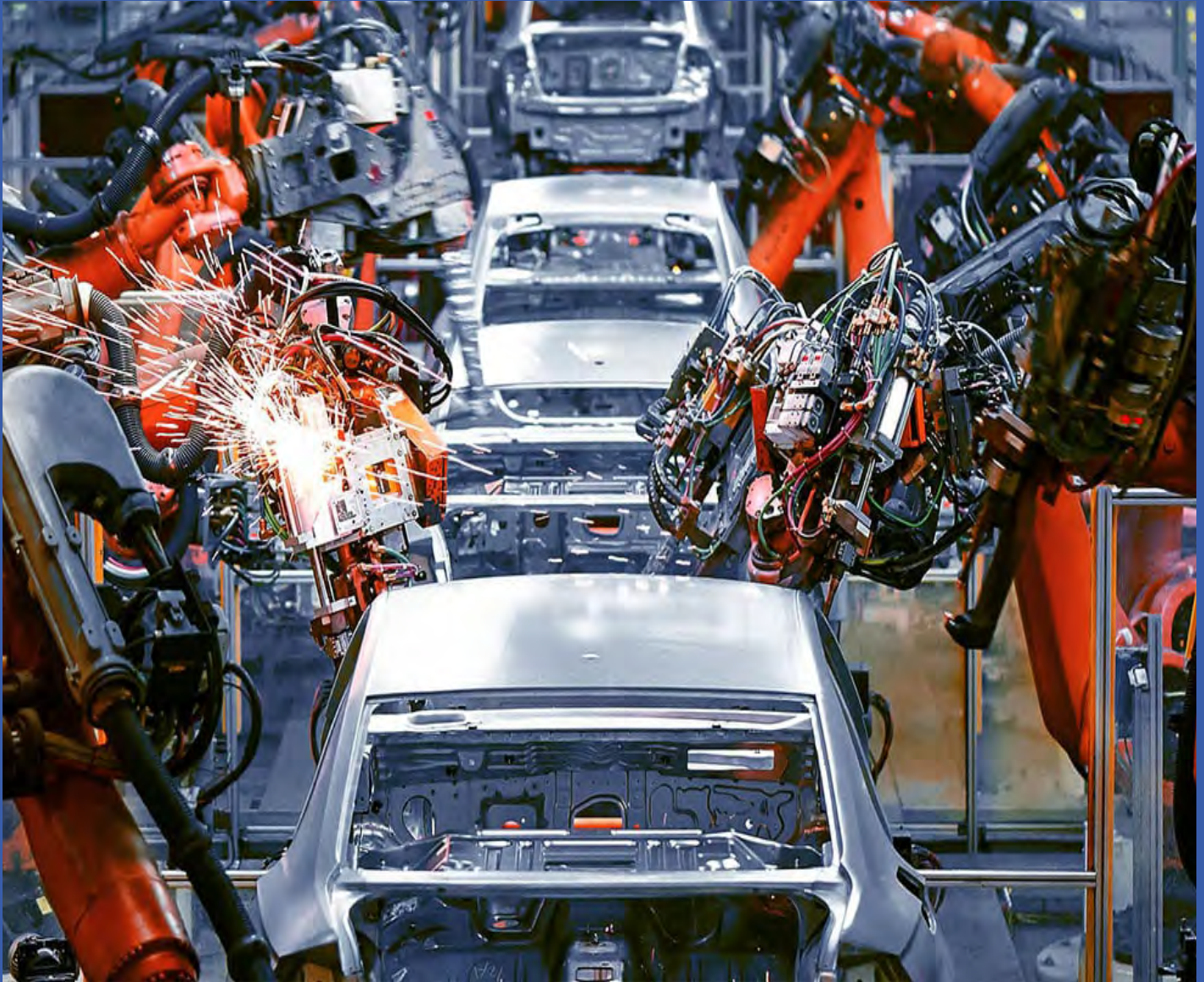
MARINE INDUSTRY



AEROSPACE INDUSTRY



AUTOMOTIVE INDUSTRY



PLASTIC PACKAGING, MACHINE & PATTERN INDUSTRY



TANKERS



OUR CLIENTELE





METAL MINISTRY INC.



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