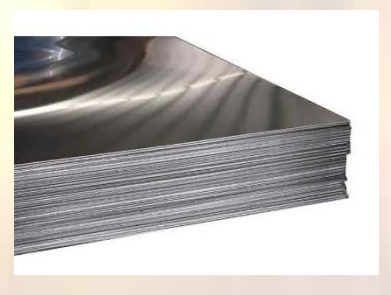
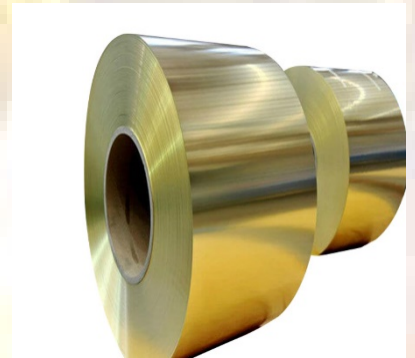
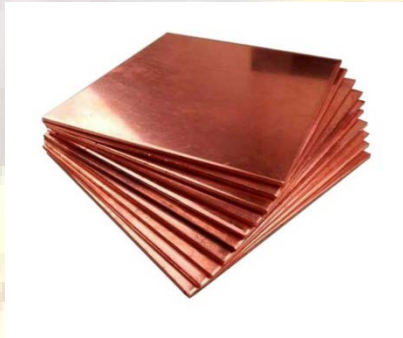
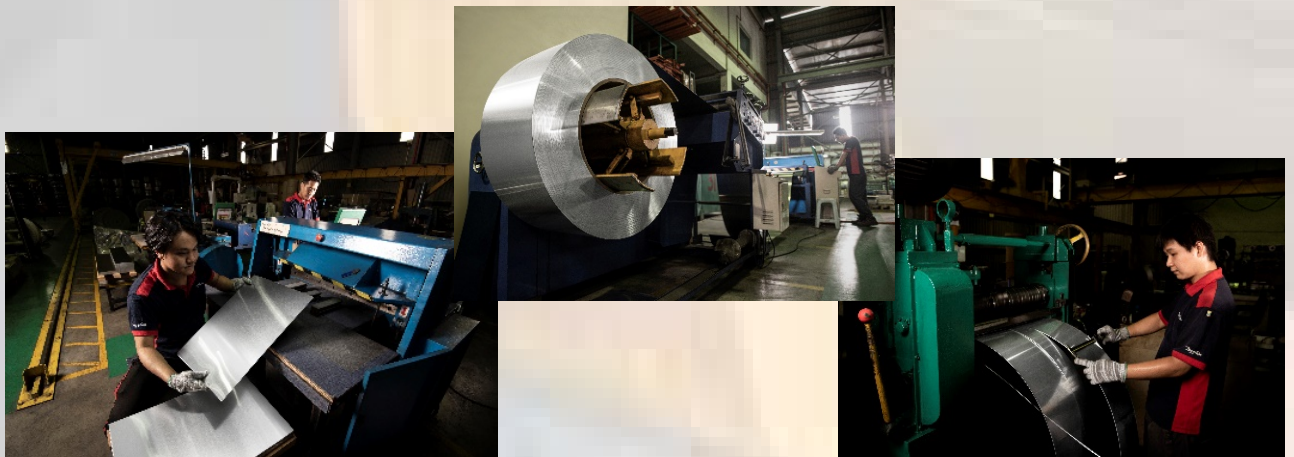


Metal Products



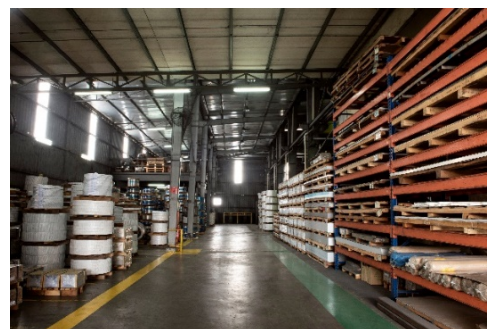
Slitting & Shearing Services



TOZZHIN ENTERPRISE SDN BHD

No. 9 & 11, Jalan Meranti Jaya 15, Taman Industri Meranti Jaya, 47100 Puchong, Selangor.
Tel: (603) 8068 3704/3705 E-mail: sales@tozzhin.com.my Website: www.tozzhin.com.my

Company Name	TOZZHIN ENTERPRISE SDN BHD
Business Address	No. 9 & 11, Jalan Meranti Jaya 15, Taman Industri Meranti Jaya, 47100 Puchong, Selangor. Tel: (603) 8068 3704/3705 Fax: (603) 8068 3035 E-mail: sales@tozzhin.com.my Website: www.tozzhin.com.my
Established	7 February 2002
Paid Up Capital	Paid Up capital: RM4,000,000 Authorised capital: RM5,000,000
Business Activity	Supply materials to the steel trader, stockist, steel fabricators and end user. Materials supplies comprising of Aluminium, Copper Alloy, Stainless Steel, High Carbon Steel, Pure Nickel and others. Slitting and Shearing of ferrous and non-ferrous material.



Tozzhin Enterprise Sdn Bhd was established since 2002. We are one of the leading steel stockist and coil center in Malaysia. From supplying ferrous to non-ferrous metal products, Tozzhin aim to serve every niche of steel consuming market by providing on time delivery, convenient quantity and good quality at competitive price.

From previous year record, Tozzhin has earned good reputation in providing reliable products and delivering prompt services and in longer term. Tozzhin aim to serve as one stop center for all industrial products needed in the local industrial market.

The Company has acquired ISO 9001: 2015. This guarantees international standard of Tozzhin industry. The Company is committed continuously to provide products and services that suit and satisfy customer requirements.

Our Quality Policy

We are committed to provide the most competitive and advantageous product to our customers through: -

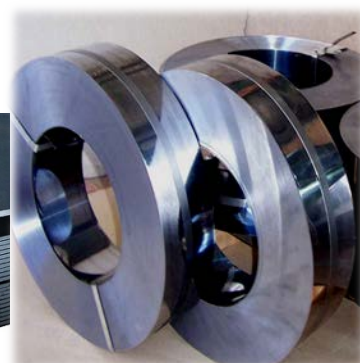
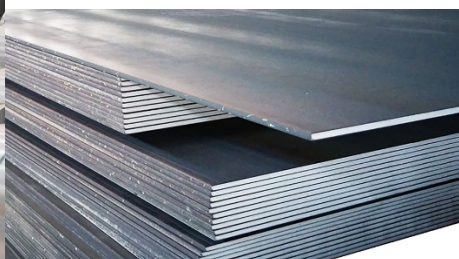
- To provide fast, on time delivery and quick response
- To provide products that fit to customers' application
- To strive for continuous improvement and defect prevention
- To comply with customers', ISO 9001 and applicable regulatory & statutory requirements
- To understand our context of the organization including all external & internal issues and the needs & expectations from the interested parties

with the aim to enhance total customer satisfaction.



Stainless steel is defined as a steel alloy with a minimum of 10.5% chromium content by mass so it does not rust. Due to reaction between oxygen in air and chromium content, it occurs thin film of metal coating and corrosion resistance. Stainless steel, therefore, is a commercial grade, common use, easily to purchase. It also is used in kitchen appliances, electronic components, automotive parts, construction building, building interior, food processing facilities, exterior for car parts etc.

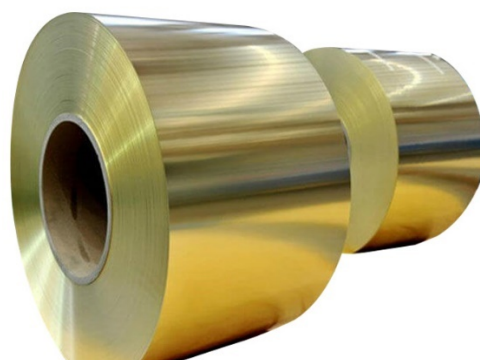
Grade	Temper	Hardness (HV)	Yield Strength (N/mm ²)	Tensile Strength (N/mm ²)	Elongation %
SUS301	1/2H	310 Min	510 Min	930 Min	10 Min
	3/4H	370 Min	745 Min	1130 Min	5 Min
	FH	430 Min	1030 Min	1320 Min	-
SUS 304	1/2H	250 Min	470 Min	780 Min	6 Min
	3/4H	310 Min	665 Min	930 Min	3 Min
	FH	370 Min	880 Min	1130 Min	-
SUS 321	SOFT	200 Max	205 Min	520 Min	40 Min
SUS 316	SOFT	200 Max	205 Min	520 Min	40 Min
SUS202	SOFT	218 Max	260 Min	620 Min	40 Min
SUS 316/L	SOFT	200 Max	175 Min	480 Min	40 Min
SUS 430	SOFT	200 Max	205 Min	420 Min	22 Min
SUS 409/L	SOFT	175 Max	170 Min	380 Min	20 Min



Brass is a non-ferrous, red metal and an alloy that is composed of copper and zinc. The proportions of copper and zinc can be varied in order to achieve different desired mechanical and electrical properties. Brass contains atoms of the two constituent elements that may replace each other within a single crystalline structure, and hence is referred to as a substitutional alloy. It is used for decoration for its bright gold-like appearance; for applications where, low friction is required such as locks, gears, bearings, ammunition, and valves; for plumbing and electrical applications; and extensively in musical instruments such as horns and bells for its acoustic properties.

Grade	Chemical Composition %					Electrical Conductivity - IACS%
	Cu	Pb	Fe	P	Zn	
C2600	68.5~71.5	≤ 0.05	≤ 0.05	-	Rem	25
C2680	64.0~68.0	≤ 0.05	≤ 0.05	-	Rem	24
C2720	62.0~64.0	≤ 0.07	≤ 0.07	-	Rem	23
C2801	59.0~62.0	≤ 0.10	≤ 0.10	-	Rem	23

Grade	Temper	Vickers Hardness	Tensile Strength (N/mm ²)	Elongation
C2600 (70/30)	O	≤ 90	≥ 343	≥ 40
	1/4H	90~105	333~412	≥ 40
C2680 (65/35)	1/2H	105~130	372~441	≥ 30
	3/4H	130~145	412~470	≥ 20
C2720 (63/37)	FH	145~160	431~490	≥ 14
C2801 (60/40)	O	-	≥ 320	≥ 35
	1/4H	85~105	353~441	≥ 25
	1/2H	105~130	412~490	≥ 15
	FH	≥ 130	≥ 470	-



Copper has good electrical conductivity, heat transfer, corrosion resistance and a wide range of moldability also are distinctive properties that make the copper so popular in the electrical, electronic and automotive industries. In addition, copper is an important ingredient with other metals. Such as brass is an alloy of copper with zinc and Bronze is an alloy copper and tin.

Grade	Chemical Composition %					Electrical Conductivity - IACS %
	Cu	Pb	Fe	P	Zn	
C1100	≥ 99.90	-	-	≤ 0.004	-	98
C1220	≥ 99.90	-	-	0.015~0.040	-	85

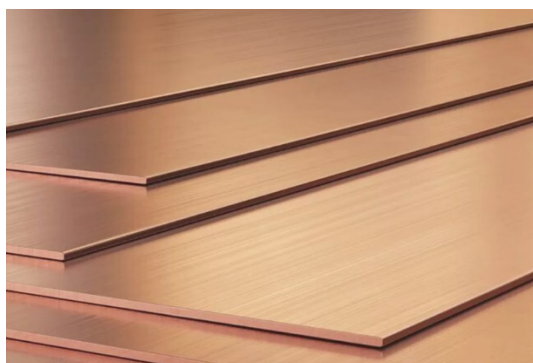
Grade	Temper	Vickers Hardness	Tensile Strength (N/mm ²)	Elongation
C1100	O	60 MAX	≥ 196	35 MIN
	1/4H	60~80	216~255	25 MIN
	1/2H	80~100	255~314	15 MIN
	FH	100~130	≥ 294	5 MIN
C1220	O	65 MAX	≥ 196	35 MIN
	1/4H	60~90	216~255	25 MIN
	1/2H	85~105	255~314	15 MIN
	H	≥ 100	≥ 294	5 MIN



Phosphor Bronze is composed of copper that is alloyed with tin and phosphorus, which is strong and ductile with high flexibility and suitable for using as raw materials in production of electrical equipment due to its conductivity and strength, such as connector terminal.

Grade	Chemical Composition %						Electrical Conductivity – IACS %
	Sn + P + Cu	Pb	Fe	P	Zn	Sn	
C5191	≥ 99.5	≤ 0.05	≤ 0.10	0.05~0.25	≤ 0.20	5.5~7.0	13
C5210	≥ 99.7	≤ 0.05	≤ 0.10	0.05~0.25	≤ 0.20	7.0~9.0	12

Grade	Temper	Vickers Hardness (HV)	Tensile Strength (N/mm ²)	Elongation (%)
C5191	O	90~110	≥ 315	≥ 42
	1/4H	110~140	390~510	≥ 35
	1/2H	140~180	490~610	≥ 20
	FH	180~210	590~685	≥ 8
C5210	1/2H	170~190	470~610	≥ 27
	FH	190~220	590~705	≥ 20



Lead Frame Copper Alloy C194 is a first-generation high performance alloy used worldwide. C194 combines good electrical conductivity with high tensile strength, good solderability and plateability. Applications include connectors, semiconductor pins and leadframes, sockets and mass terminations.

Grade	Chemical Composition %					Electrical Conductivity- IACS % (20°C)
	Cu	Pb	Fe	P	Zn	
C194	Rem	0.03 MAX	2.1~2.6	0.015~0.15	0.05~0.20	≥ 60

Grade	Temper	Vickers Hardness (HV)	Tensile Strength (N/mm ²)	Elongation (%)
C194	O	90~110	310~380	≥ 25
	1/2H	115~137	365~435	≥ 5
	FH	125~145	415~485	≥ 2

BERYLLIUM COPPER

Beryllium Copper is copper that is alloyed of Beryllium and making it stronger than conventional copper, suitable for demanding application of strength but still need electrical conductivity and cooling properties such as terminal conductor parts and plastic mould.

Grade	Temper	Vickers Hardness (HV)	Tensile Strength (N/mm ²)	Yield Strength 0.2%offset (N/mm ²)	Elongation (%)
C1720	O	90-160	410- 540	-	35 MIN
	1/4H	145-220	510 - 620	-	10 MIN
	1/2H	180-240	590 - 695	-	5 MIN
	H	210-270	685 - 835	-	2 MIN

Special Copper Alloy having high strength and good workability, high heat resistance temper and easy plating. Application used for automobile terminals, electrical terminals

Grade	Chemical Composition %						Electrical Conductivity – IACS%
	Cu	Pb	Fe	P	Zn	Sn	
C50715	Rem	–	0.05~0.15	0.025~0.04	–	1.7~2.3	35

Grade	Temper	Vickers Hardness (HV)	Tensile Strength (N/mm ²)	Elongation (%)
C50715	1/2H	140~170	390~540	≥ 10
	3/4H	160~185	500~590	≥ 7
	FH	170~200	540~620	≥ 5

Aluminium is a silvery-white, lightweight metal. It is soft and malleable, Aluminium is used in a huge variety of products including cans, foils, kitchen utensils, window frame, automotive industry, aeroplane parts and etc.

Grade	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Others-Each	Others-Total	Al Min
A1100	0.95 Si + Fe		0.05~0.20	0.05	-	-	0.10	-	0.05	0.15	99.0

Grade	Temper	Tensile Strength (N/mm ²)	Yield Strength (N/mm ²)	Elongation (%)
A1100	O	75~110	25 Min	15 Min
	H14	120~145	95 Min	1 Min
	H16	135~165	120 Min	1 Min

Grade	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Others-Each	Others-Total	Al Min
A3003	0.6	0.7	0.05~0.20	1.0~1.5	-	-	0.10	-	0.05	0.15	Rem

Grade	Temper	Tensile Strength (N/mm ²)	Yield Strength (N/mm ²)	Elongation (%)
A3003	O	95~125	35 Min	18 Min
	H12	120~155	85 Min	2 Min
	H14	135~175	120 Min	1 Min

Grade	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Others-Each	Others-Total	Al Min
A5052	0.25	0.40	0.10	0.10	2.2~2.8	0.15~0.35	0.10	-	0.05	0.15	Rem

Grade	Temper	Tensile Strength (N/mm ²)	Yield Strength (N/mm ²)	Elongation (%)
A5052	O	175~215	65 Min	14 Min
	H32	215~265	155 Min	3 Min
	H34	235~285	175 Min	3 Min

High Carbon Steel has the quality of yield strength such as impact strength, tensile strength, compressive strength and shear strength. It compounds ferrous and non-ferrous metal such as molybdenum, tang stain, and vanadium. Tozzhin provides both medium carbon steel, S45C and S50C and high carbon steel S55C and SK5. The company also provides alloys steel and other steel contents such as molybdenum, manganese, silicon, chromium, nickel and vanadium.

Grade	C	Si	Mn	P	S	Cu	Ni	Cr	Mo
SK5M	0.80~0.90	0.35 Max	0.50 Max	0.03 Max	0.03 Max	0.25 Max	0.25 Max	0.30 Max	-
SK7M	0.60~0.70	0.35 Max	0.50 Max	0.03 Max	0.03 Max	0.25 Max	0.25 Max	0.30 Max	-

Grade	C	Si	Mn	P	S	Cu	Ni	Cr	Mo
S45CM	0.42~0.48	0.15~0.35	0.60~0.90	0.03 Max	0.035 Max	0.30 Max	0.20 Max	0.20 Max	-
S50CM	0.47~0.53	0.15~0.35	0.60~0.90	0.03 Max	0.035 Max	0.30 Max	0.20 Max	0.20 Max	-
S55CM	0.52~0.58	0.15~0.35	0.60~0.90	0.03 Max	0.035 Max	0.30 Max	0.20 Max	0.20 Max	-

PURE NICKEL

Pure Nickel has unique characteristics, some of which include excellent mechanical properties, low gas content, low vapor pressure, magnetic properties, high thermal and electrical conductivity. These properties and its chemical composition make Nickel fabricable and highly resistant to corrosive environments. This nickel alloy can be hot formed to any shape and formed cold by all methods. Pure Nickel has many different industrial applications, some of which include electronic & electrical components, wires for heating elements, battery components etc.

Grade	Temper	Ni	Cu	C	Fe	Mn	S	Si
NI 200	1/2H	99.9 Min	0.20 Max	0.15 Max	0.40 Max	0.30 Max	0.01 Max	0.30 Max
NI 201	1/2H	99.0 Min	0.20 Max	0.02 Max	0.40 Max	0.30 Max	0.01 Max	0.30 Max

The company has slitting machines to slit material Stainless Steel, Copper Alloy, Aluminium, High Carbon Steel. We slit coils to different width based on customer requirement specification.

PRODUCTION SCOPE:

Coil to Coil

Steel Grade	Thickness range (mm)	Width Range (mm)	Coil ID (mm)	Coil OD (mm)
Stainless Steel	0.10 – 1.50	5 – 625	300, 400, 500	900 Max
Copper Alloy	0.20 – 1.50	5 – 625	300, 400, 500	900 Max
Aluminium	0.25 – 3.00	5 – 625	300, 400, 500	900 Max



The company has shearing machines to shear material Stainless Steel, Copper Alloy, Aluminium, High Carbon Steel. We produce cut sheet based on customer requirement specification.

PRODUCTION SCOPE:

Sheet to Sheet

Steel Grade	Thickness range (mm)	Width Range (mm)	Length Range (mm)
Stainless Steel	0.10 – 1.50	100 – 1219	1219 Max
Copper Alloy	0.20 – 1.50	100 – 1219	1219 Max
Aluminium	0.25 – 3.00	100 – 1219	1219 Max

Coil to Sheet

Steel Grade	Thickness range (mm)	Width Range (mm)	Length Range (mm)
Stainless Steel	0.10 – 1.50	30 – 580	1219 Max
Copper Alloy	0.20 – 1.50	30 – 580	1219 Max
Aluminium	0.25 – 3.00	30 – 580	1219 Max

