合作·共赢·创新·发展

WIN-WIN COOPERATION AND INNOVATION

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BIG BRAND/HIGH QUALITY

MADE IN CHINA

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01 COMPANY PROFILE

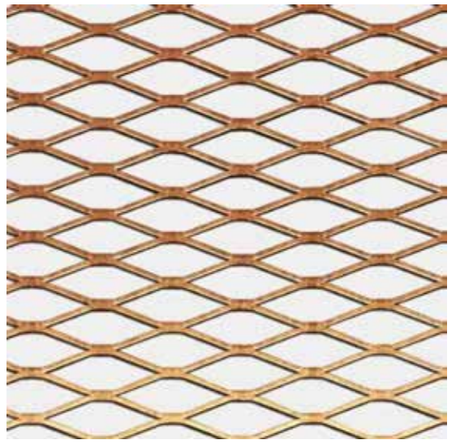
Hebei Boni Tech Co., Ltd is a manufacturer-direct source of wire mesh, construction materials and finished products, offering a one-stop-sup-pl ier used in the commercial, residential, and light industrial fields etc., BoNi company has grown on a significant scale year on year to become one of the largest and most well-equipped manufacturers of wire mesh in China. Relying on our extensive knowledge of the market and contin uous product innovation, we have developed a large range of products and offer expanded metal in steel, nickel, titanium, stainless steel, cop per, and aluminum in various sizes, widths, and meshes.

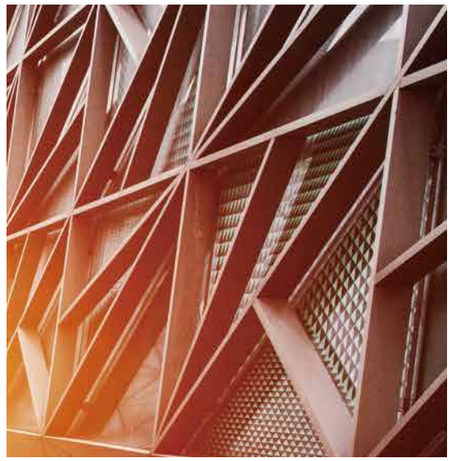
CATALOG

Copper Expanded Metal 01
Copper Expanded Metal Foils 03
Expanded Metal 05
Micro Expanded Metal 07
MMO Ru-Ir Coating Titanium Anode 09
MMO Titanium Anodel 11
Nickel Mesh Anode 13
Development History 15
Part of Workshop 17

Copper Expanded Metal

It is an extremely precision expanded metal mesh which can be created from a range of ductile materials. Designed for use in scientific applications and challeng -ing technology, micromesh is an extremely precise product that retains all of the benefits of expanded metal mesh.

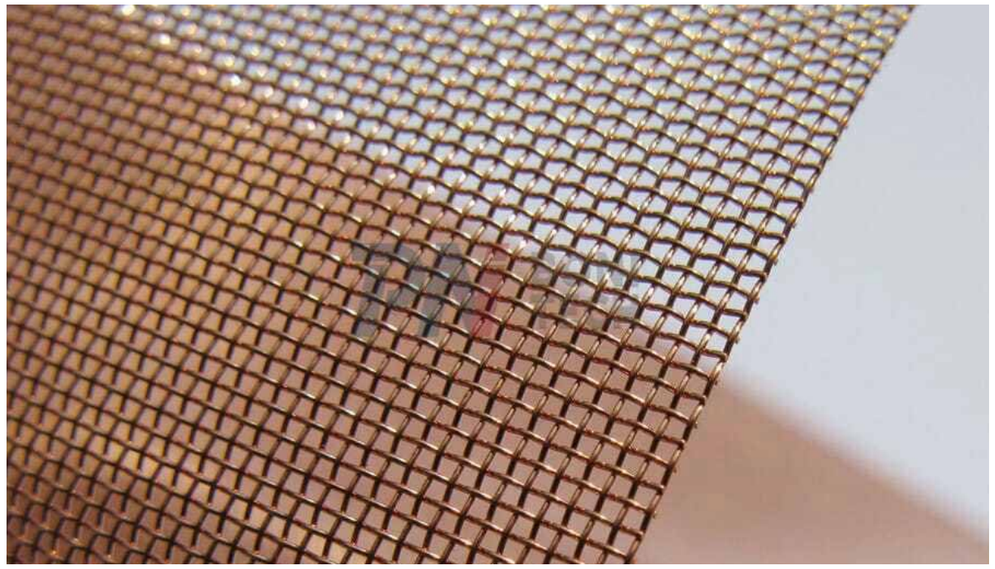


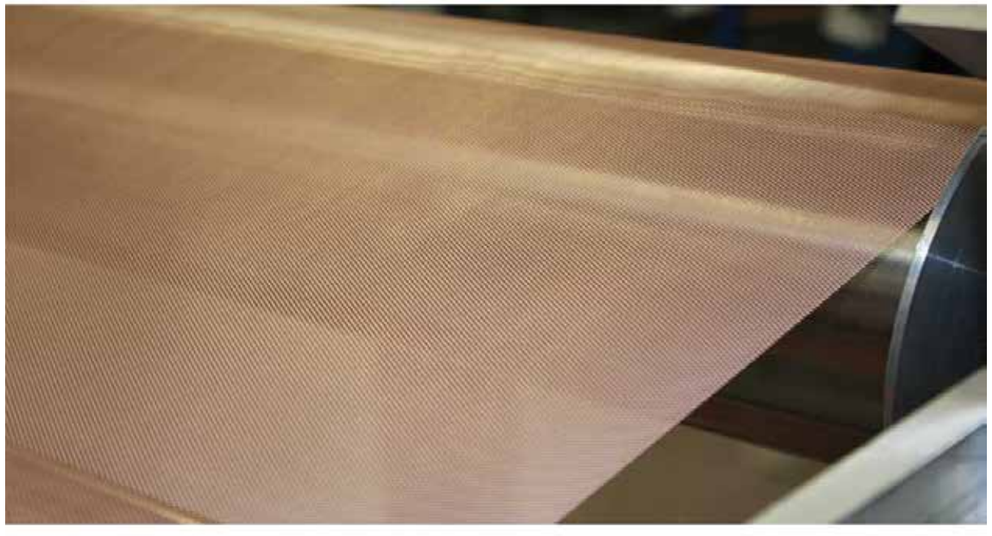


Application

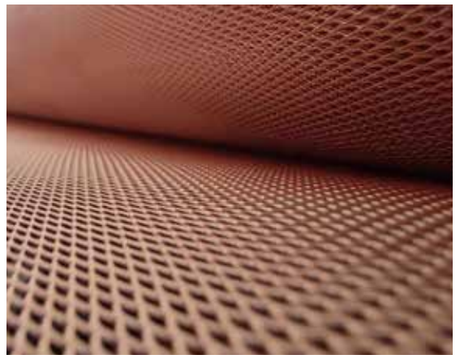
+ Faraday cage

Copper Expanded Metal Foils

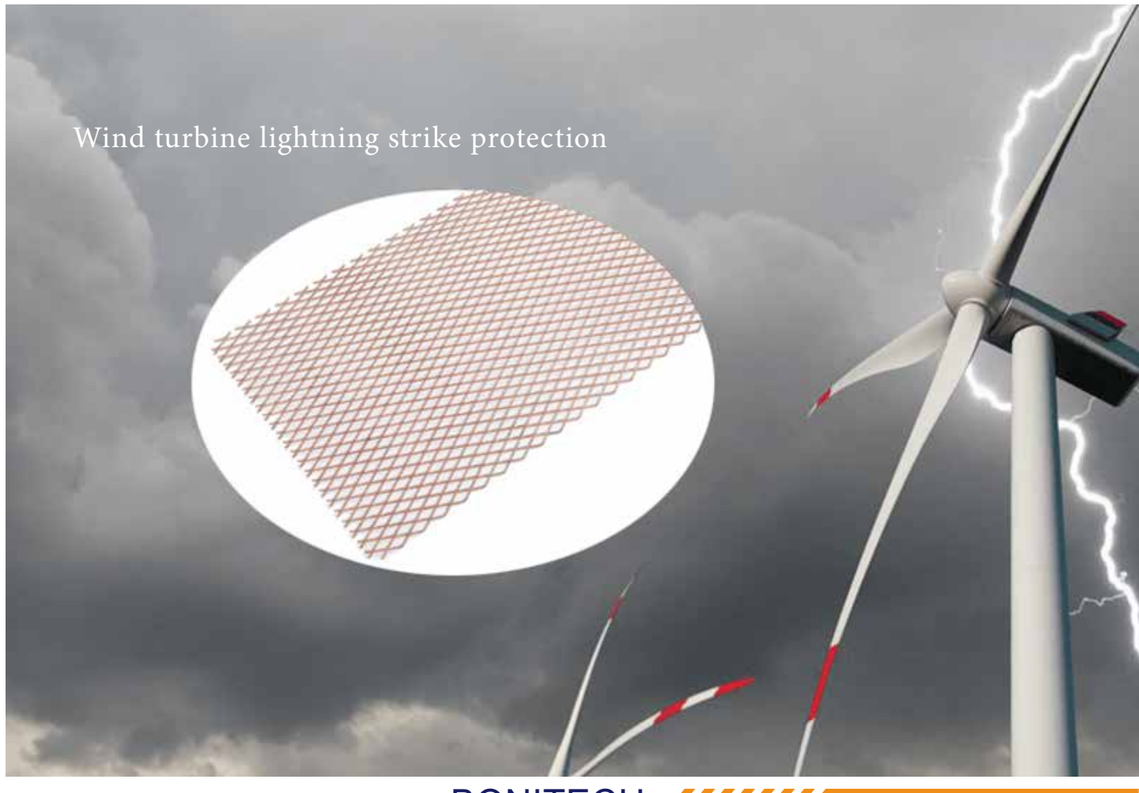




It is an extremely fine expanded metal mesh which can be created from a range of ductile materials. As the ideal material for Blade of Wind Turbine Lightning Strike Protection, when struck by lightning, an unprotected wind blade experie -nces an electric arc from the point of contact through conductive components to the root of the structure, and components may reach temperatures of up to 30,000°C and possibly cause the blade to explode.



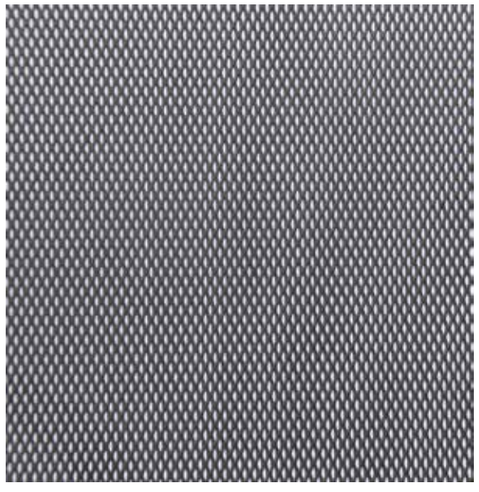
Application



Expanded Metal

Expanded metal is a type of sheet metal which has been cut and stretched to form a regular pattern (often diamond-shaped) of a metal mesh-like material.

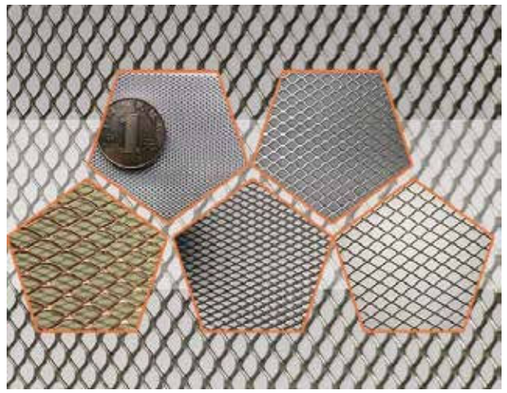
1.Increased pattern size improves cost-effectiveness.
2.Standard expanded metal provides strength and rigidity.
3.Exceptionally long life



Application

Micro Expanded Metal

It is an extremely fine expanded metal mesh which can be created from a range of ductile materials. Designed for use in scientific applications and challenging technology, micromesh is an extremely precise product that retains all of the benefits of expanded metal mesh.

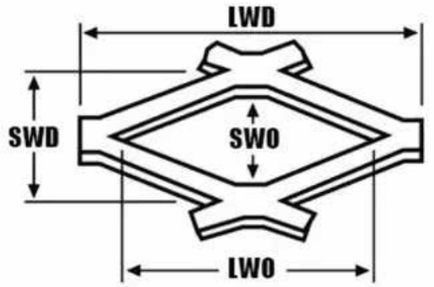


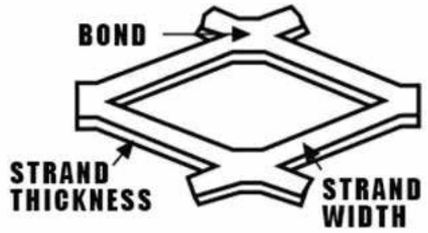
SWD
Short way of diamond

SWO
Short way of opening

LWD
Long way of diamond

LWO
Long way of opening



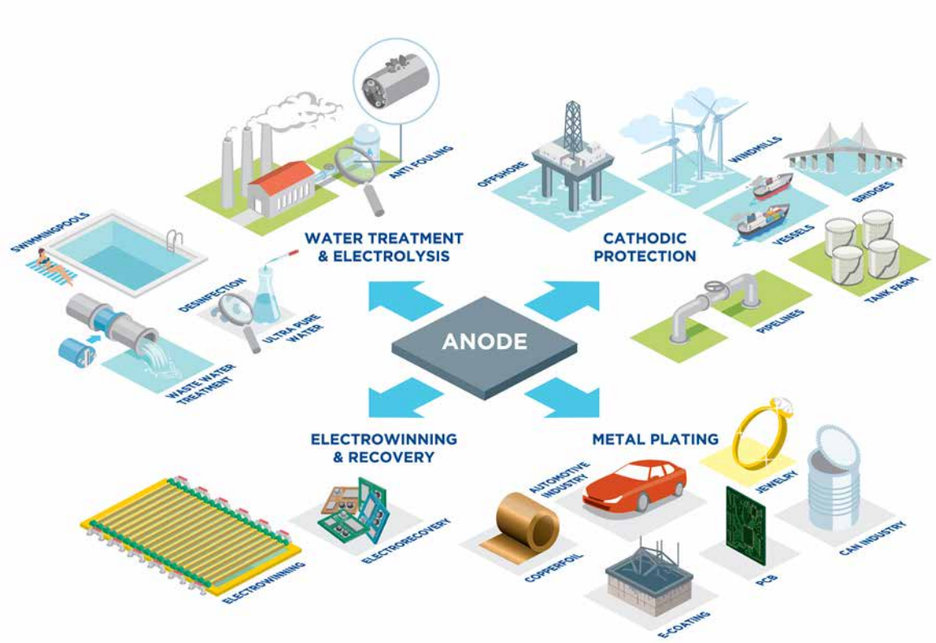


Application

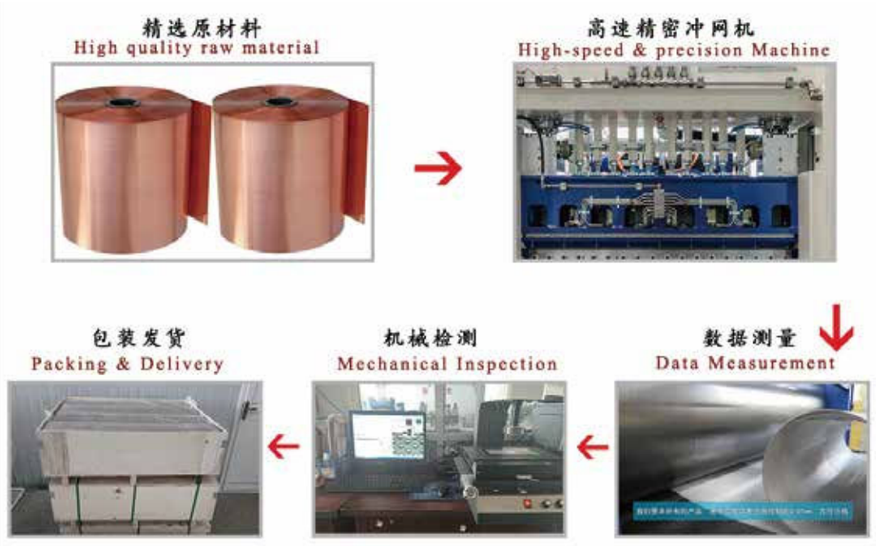
MMO Ru-Ir Coating Titanium Anode

Ruthenium-Iridium coated Titanium Anodes are a type of mixed-metal oxide (MMO) anode used in electroplating, water treatment, and other electronic applications. Ruthenium-Iridium coated Titanium Anodes are generally immediately available in most volumes and can be fabricated in forms such as sheet, mesh, perforated plate, rod, or wire. Typical and custom packaging is available, as is additional research, technical and safety (MSDS) data.

Application

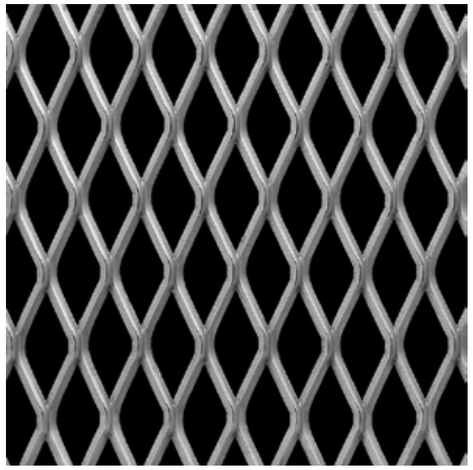


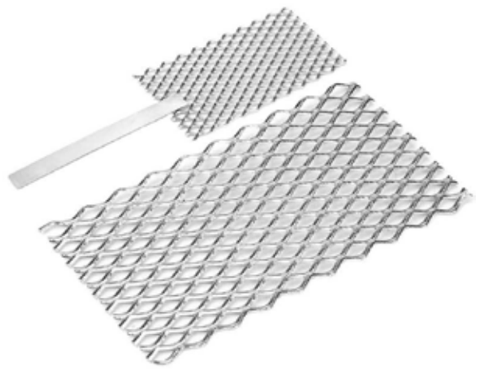
The Work Flow of Anode Mesh Electrode



MMO Titanium Anode

The anode is the electrode where the oxidation reaction occurs. Titanium Expanded Metal Mesh Anode is manufactured using an expanded metal substrate coated with mixed metal oxide (MMO). The surface area of the mesh is 1.2x or more than that of the equivalent solid plate electrode.





Application

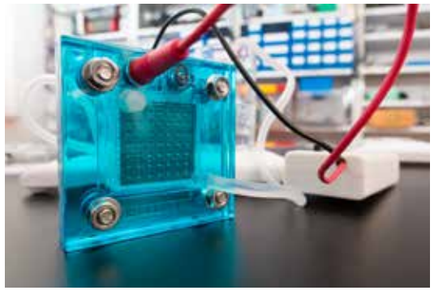
Sewage treatment works

Nickel Mesh Anode

Nickel Micro Expanded Metal Anode is made of nickel sheet or foil by precision expanding technique. The battery and fuel cell electrodes and current collector, like nickel-compartment/Ni-Hi/Li-ion battery electrode.

1.Demonstrated reliability
2.Exceptionally long life
3.Available in numerous configurations
4.Lightweight
5.Low cost

Application



Fuel cell

Air filter

DEVELOPMENT HISTORY

1996
Hongda started wire drawing factory against the background of wire mesh world zone development, with area 20000 square meters. Main production with black iron wire, galvanized iron wire and kinds of small coil wires.

1998
Enlarged factory and established welded wire mesh factory.

2001
Expanded scale and Expanded scale and bought out a chain link fence factory.

2002
Improved more production lines with barbed wire.

2004
With whole FENCE line products, products with high quality are well received and trusted by market.

2006
Initial exploration of overseas markets.

2007
The Foreign Trade Department was established and started to export.

2010
The export value reached 8 million U.S. dollars.

2012
Invested in some wire mesh factories to continue to expand the product category.

2013
Won the tender for Saudi Arabia Airport FENCE.

2015
Start platinum, Ruthenium and Iridium coating R&D

2016
Established micro expanded metal mesh factory with more than 10 production lines.

2017
The introduction of foreign advanced numericalcontrol equipment and the production of perforated metal.

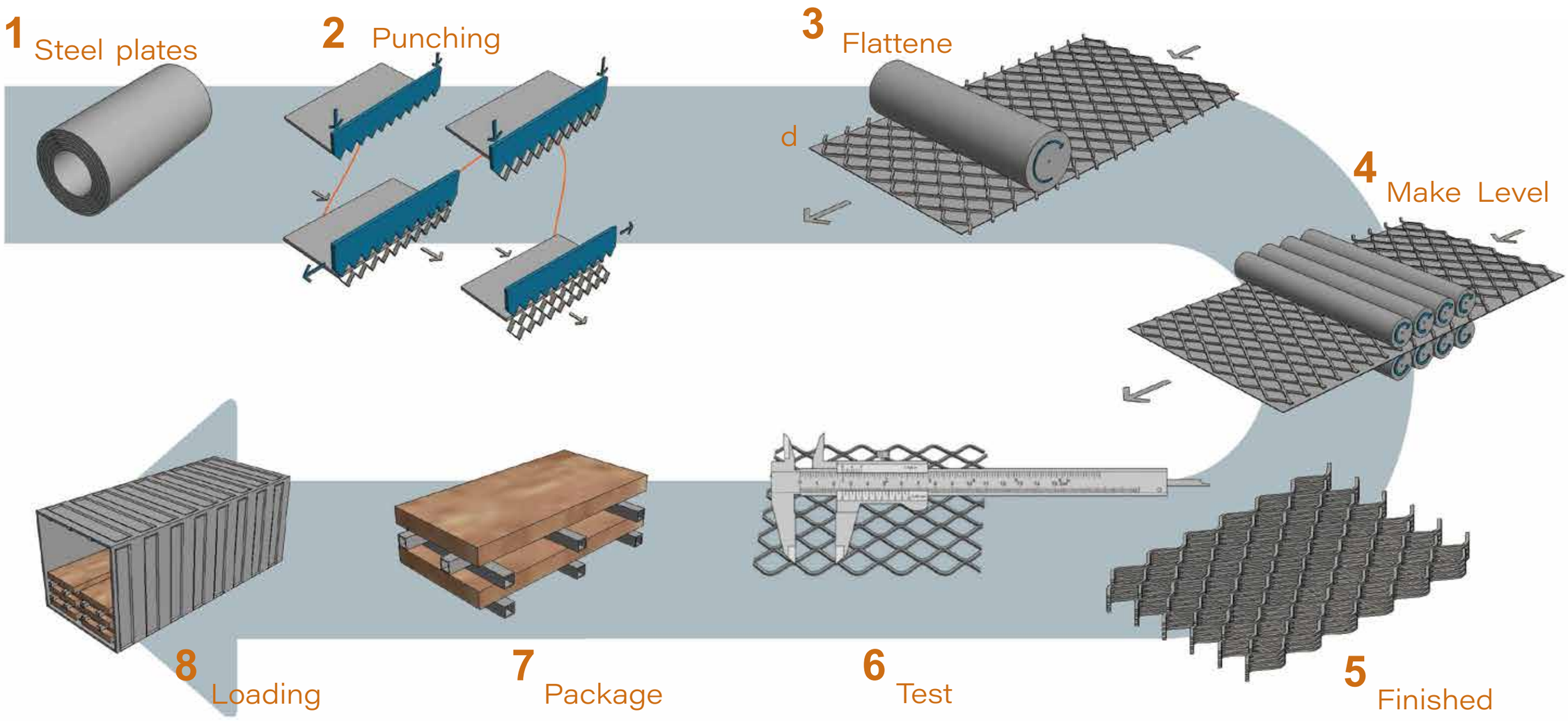
2018
New factory was established in Africa, to radiate the surrounding markets in Africa.

2019
The woven cloth workshop was put into production.

Part of Workshop

APPENDIX

Manufacturing Process



Raised Expanded Copper Mesh

(Annex for reference only/Support for custom)

Item	Sheet Size				Bond				OPENING SIZE				STRAND SIZE				Open Area %	Sheet Thickness	
	SWD		LWD		SWD		LWD		SWO		LWO		Width		Thickness				
	feet	m	feet	m	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm		inch	mm
BG-RECM-01	4, 8	1.22, 2.44	8, 4	2.44, 1.22	0.500	12.70	1.20	30.48	0.438	11.13	0.938	23.83	0.072	1.83	0.036	0.91	80	0.140	3.56
BG-RECM-02	4, 8	1.22, 2.44	8, 4	2.44, 1.22	0.500	12.70	1.20	30.48	0.440	11.18	0.938	23.83	0.088	2.24	0.048	1.22	72	0.172	4.37
BG-RECM-03	4, 8	1.22, 2.44	8, 4	2.44, 1.22	0.500	12.70	1.20	30.48	0.375	9.53	0.938	23.83	0.086	2.18	0.060	1.52	65	0.175	4.45
BG-RECM-04	4, 8	1.22, 2.44	8, 10, 4	2.44, 3, 1.22	0.500	12.70	1.20	30.48	0.312	7.92	0.938	23.83	0.096	2.44	0.092	2.34	57	0.204	5.18
BG-RECM-05	4, 8	1.22, 2.44	8, 4	2.44, 1.22	0.500	12.70	1.20	30.48	0.250	6.35	0.800	20.32	0.188	4.78	0.092	2.34	25	0.275	6.99
BG-RECM-06	4, 8	1.22, 2.44	8, 4	2.44, 1.22	0.923	23.40	2.00	50.80	0.813	20.65	1.750	44.45	0.099	2.51	0.060	1.52	78	0.210	5.33
BG-RECM-07	4, 8	1.22, 2.44	8, 4	2.44, 1.22	0.923	23.40	2.00	50.80	0.750	19.05	1.688	42.88	0.096	2.44	0.092	2.34	76	0.205	5.21
BG-RECM-08	4, 8	1.22, 2.44	8, 4	2.44, 1.22	0.923	23.40	2.00	50.80	0.750	19.05	1.625	41.28	0.144	3.66	0.092	2.34	72	0.290	7.37
BG-RECM-09	4, 8	1.22, 2.44	8, 4	2.44, 1.22	0.923	23.40	2.00	50.80	0.688	17.48	1.563	39.70	0.148	3.76	0.134	3.40	68	0.312	7.92
BG-RECM-10	4, 8	1.22, 2.44	8, 4	2.44, 1.22	1.000	25.40	2.25	57.15	1.000	25.40	2.063	52.40	0.096	2.44	0.060	1.52	82	0.192	4.88
BG-RECM-11	4, 8	1.22, 2.44	8, 4	2.44, 1.22	1.000	25.40	2.25	57.15	0.875	22.23	1.563	39.70	0.125	3.18	0.074	1.88	75	0.225	5.72
BG-RECM-12	4, 8	1.22, 2.44	8, 4	2.44, 1.22	1.000	25.40	2.25	57.15	0.907	23.04	1.563	39.70	0.109	2.77	0.105	2.67	78	0.225	5.72
BG-RECM-13	4, 8	1.22, 2.44	8, 10, 4	2.44, 3, 1.22	1.000	25.40	2.25	57.15	0.750	19.05	1.563	39.70	0.155	3.94	0.135	3.43	62	0.375	9.53
BG-RECM-14	4, 8	1.22, 2.44	8, 10, 4	2.44, 3, 1.22	1.000	25.40	2.25	57.15	0.725	18.42	1.563	39.70	0.180	4.57	0.135	3.43	60	0.390	9.91
BG-RECM-15	8	2.44	4	1.22	1.000	25.40	2.25	57.15	0.576	14.63	1.563	39.70	0.275	6.99	0.183	4.65	45	0.550	13.97
BG-RECM-16	4, 8	1.22, 2.44	8, 4	2.44, 1.22	1.330	33.78	3.00	76.20	1.313	33.35	2.625	66.68	0.067	1.70	0.048	1.22	90	0.140	3.56
BG-RECM-17	4, 8	1.22, 2.44	8, 4	2.44, 1.22	1.330	33.78	3.00	76.20	1.250	31.75	2.625	66.68	0.107	2.72	0.060	1.52	85	0.230	5.84
BG-RECM-18	4, 8	1.22, 2.44	8, 4	2.44, 1.22	1.330	33.78	3.00	76.20	1.188	30.18	2.500	63.50	0.104	2.64	0.092	2.34	85	0.242	6.15
BG-RECM-19	4, 8	1.22, 2.44	8, 4	2.44, 1.22	1.330	33.78	3.00	76.20	1.188	30.18	2.500	63.50	0.137	3.48	0.092	2.34	80	0.284	7.21
BG-RECM-20	4, 8	1.22, 2.44	8, 4	2.44, 1.22	1.330	33.78	3.00	76.20	1.000	25.40	2.375	60.33	0.200	5.08	0.135	3.43	74	0.350	8.89
BG-RECM-21	4, 8	1.22, 2.44	8, 4	2.44, 1.22	1.330	33.78	3.00	76.20	0.830	21.08	2.375	60.33	0.240	6.10	0.135	3.43	72	0.460	11.68
BG-RECM-22	4, 8	1.22, 2.44	8, 4	2.44, 1.22	1.330	33.78	3.00	76.20	1.125	28.58	2.375	60.33	0.142	3.61	0.134	3.40	76	0.312	7.92
BG-RECM-23	8	2.44	4	1.22	1.330	33.78	3.00	76.20	1.000	25.40	2.313	58.75	0.201	5.11	0.198	5.03	69	0.433	11.00
BG-RECM-24	8, 10	2.44, 3	3, 4	0.914, 1.22	1.330	33.78	5.33	135.38	0.940	23.88	3.440	87.38	0.264	6.71	0.183	4.65	60	0.540	13.72
BG-RECM-25	8	2.44	4, 3	1.22, 0.914	1.330	33.78	5.33	135.38	0.940	23.88	3.440	87.38	0.300	7.62	0.215	5.46	55	0.618	15.70

NOTE:
SWD - Short Way of Design; LWD - Long Wat of Design.
Usually SWD is before the LWD, eg. 4 × 8 sheet dimensions means 4' in SWD direction and 8' in LWD direction.
SWO - Short Way of Opening; LWO - Long Way of Opening.
STRAND THICKNESS - Gauge thickness of the base panel.

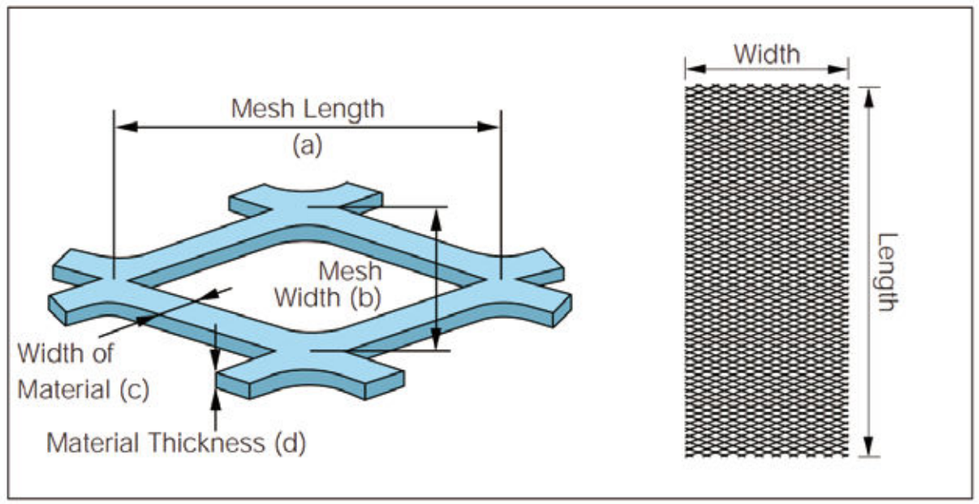
Flattened Expanded Copper Mesh

(Annex for reference only/Support for custom)

Item	Sheet Size				Bond				OPENING SIZE				STRAND SIZE				Open Area %	Sheet Thickness	
	SWD		LWD		SWD		LWD		SWO		LWO		Width		Thickness				
	feet	m	feet	m	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm		inch	mm
BG-FECM-01	4, 8	1.22, 2.44	8, 4	2.44, 1.22	0.500	12.70	1.25	31.75	0.375	9.53	1.000	25.40	0.079	2.01	0.029	0.74	65	0.029	0.74
BG-FECM-02	4, 8	1.22, 2.44	8, 4	2.44, 1.22	0.500	12.70	1.25	31.75	0.312	7.92	1.000	25.40	0.097	2.46	0.039	0.99	60	0.039	0.99
BG-FECM-03	4, 8	1.22, 2.44	8, 4	2.44, 1.22	0.500	12.70	1.25	31.75	0.312	7.92	1.000	25.40	0.096	2.44	0.050	1.27	63	0.050	1.27
BG-FECM-04	4, 8	1.22, 2.44	8, 4	2.44, 1.22	0.500	12.70	1.25	31.75	0.265	6.73	1.000	25.40	0.107	2.72	0.070	1.78	52	0.070	1.78
BG-FECM-05	4, 8	1.22, 2.44	8, 4	2.44, 1.22	0.923	23.44	2.10	53.34	0.750	19.05	1.750	44.45	0.111	2.82	0.048	1.22	74	0.048	1.22
BG-FECM-06	4, 8	1.22, 2.44	8, 4	2.44, 1.22	0.923	23.44	2.10	53.34	0.688	17.48	1.781	45.24	0.106	2.69	0.070	1.78	74	0.070	1.78
BG-FECM-07	4, 8	1.22, 2.44	8, 4	2.44, 1.22	0.923	23.44	2.10	53.34	0.637	16.18	1.755	44.58	0.160	4.06	0.070	1.78	68	0.070	1.78
BG-FECM-08	4, 8	1.22, 2.44	8, 4	2.44, 1.22	0.923	23.44	2.10	53.34	0.563	14.30	1.688	42.88	0.165	4.19	0.120	3.05	63	0.120	3.05
BG-FECM-09	4, 8	1.22, 2.44	8, 4	2.44, 1.22	1.000	25.40	2.30	58.42	0.813	20.65	2.250	57.15	0.098	2.49	0.050	1.27	78	0.050	1.27
BG-FECM-10	4, 8	1.22, 2.44	8, 4	2.44, 1.22	1.000	25.40	2.30	58.42	0.790	20.07	2.000	50.80	0.125	3.18	0.070	1.78	80	0.070	1.78
BG-FECM-11	4, 8	1.22, 2.44	8, 4	2.44, 1.22	1.000	25.40	2.30	58.42	0.785	19.94	2.000	50.80	0.156	3.96	0.085	2.16	74	0.085	2.16
BG-FECM-12	4, 8	1.22, 2.44	8, 4	2.44, 1.22	1.000	25.40	2.30	58.42	0.750	19.05	1.900	48.26	0.160	4.06	0.110	2.79	58	0.110	2.79
BG-FECM-13	4, 8	1.22, 2.44	8, 4	2.44, 1.22	1.330	33.78	3.20	81.28	1.062	26.97	2.750	69.85	0.119	3.02	0.048	1.22	83	0.048	1.22
BG-FECM-14	4, 8	1.22, 2.44	8, 4	2.44, 1.22	1.330	33.78	3.20	81.28	1.062	26.97	2.750	69.85	0.116	2.95	0.070	1.78	80	0.070	1.78
BG-FECM-15	4, 8	1.22, 2.44	8, 4	2.44, 1.22	1.330	33.78	3.20	81.28	0.900	22.86	2.560	65.02	0.188	4.78	0.110	2.79	63	0.110	2.79
BG-FECM-16	4, 8	1.22, 2.44	8, 4	2.44, 1.22	1.330	33.78	3.20	81.28	1.000	25.40	2.563	65.10	0.158	4.01	0.110	2.79	75	0.110	2.79

NOTE:
SWD - Short Way of Design; LWD - Long Wat of Design.
Usually SWD is before the LWD, eg. 4 × 8 sheet dimensions means 4' in SWD direction and 8' in LWD direction.
SWO - Short Way of Opening; LWO - Long Way of Opening.
STRAND THICKNESS - Gauge thickness of the base panel.

Expanded Material Terminology



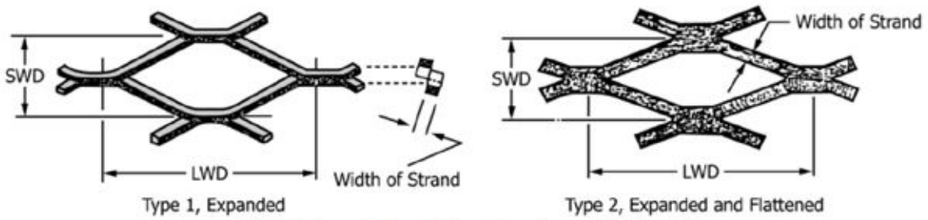


FIG. 2 Diamond Description—Regular and Flattened

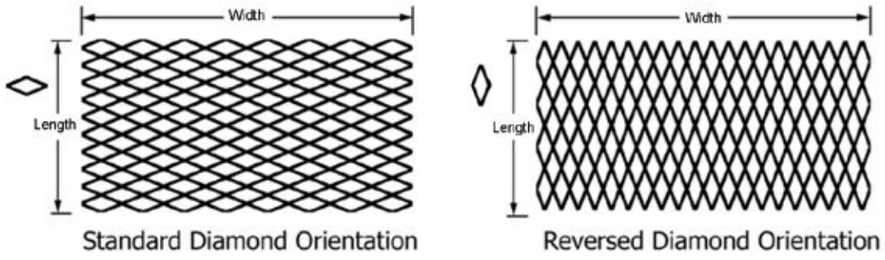


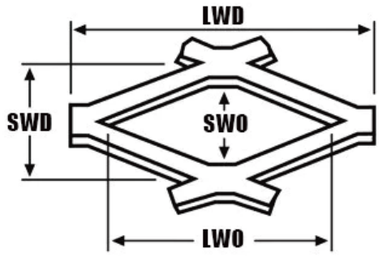
FIG. 3 Mesh Description—Standard and Reversed Diamond

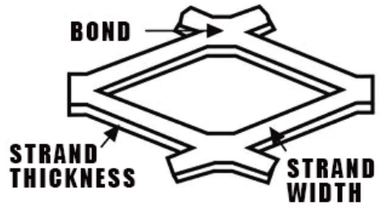
SWD
Short way of diamond

SWO
Short way of opening

LWD
Long way of diamond

LWO
Long way of opening





LWD (Long way of the diamond)

Measured from the center of the joint to the center of the adjacent joint. This dimension is fixed, and is always parallel to the width of the coil and corresponds with the diamond dimension.

SWD (short way of the diamond)

Is the length of the short axis way of the diamond, measured from the center of the joint to the center of the joint. For each fixed LWD dimension, there is a range of SWD dimensions available.

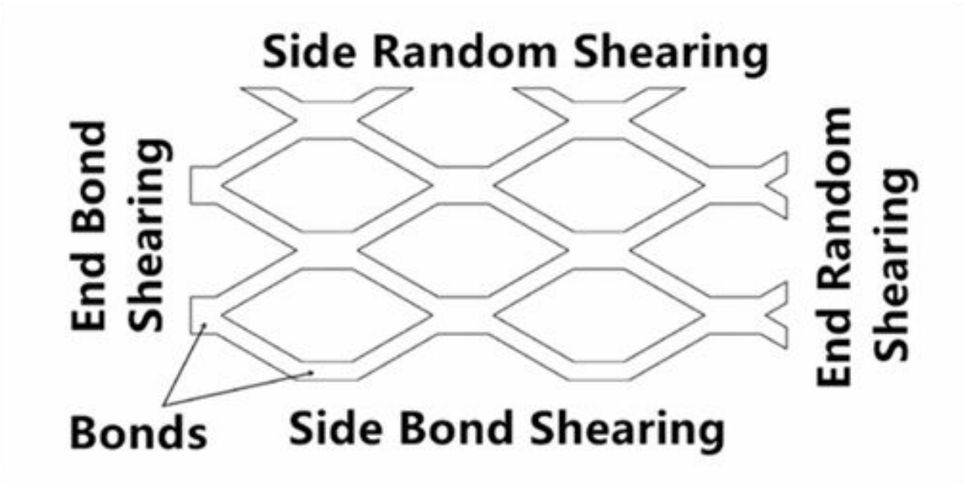
Strand width (reference)

The strand width is the amount of metal slit from the parent metal in forming the mesh. This is closely controlled and is directly related to the weight, overall thickness and open area as shown in the above illustration.

Expanded material

Is simultaneously slit and stretched by shaped tools which determine the form and number of openings. Strand dimensions (width and thickness), overall thickness of the piece and weight per square inch are controlled variables specified by the requirements needed for your application.

Other Fabricating



End shearing

- **End bond shearing**

One end is cut on the bond parallel to the SWD,the other end usually has open diamonds.

- **End random shearing**

The shearing direction is parallel to the SWD.The end random cut normally leaves open diamonds at the ends.

Side shearing

- **Side bond shearing**

Side bond cut is made along the length of the metal sheet on the center line of the bond over the specific width.

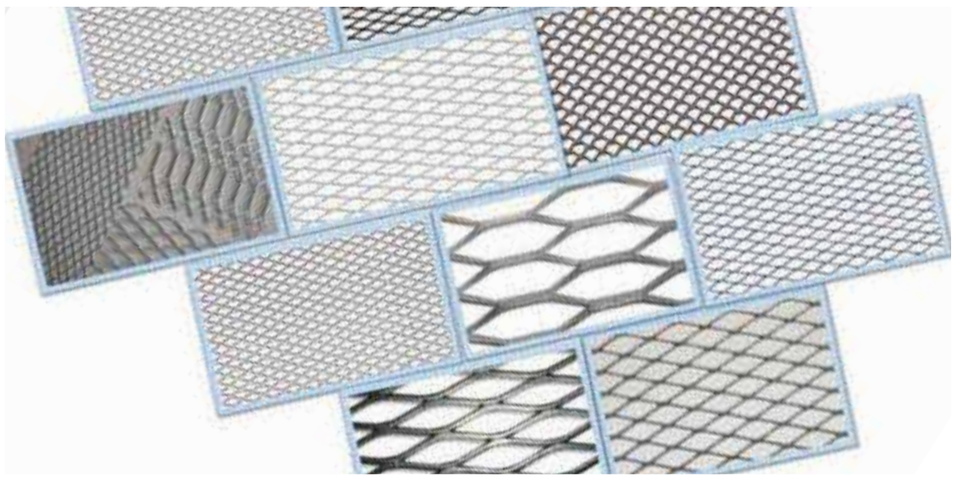
- **Side random shearing**

Side random shearing is cut that is parallel to the LWD dimension of the metal sheet,leaving opening diamonds.

Expanded Metal

Usage Area

- Elevator Boards
- Asphalt Accessories
- Suspended Ceiling
- Fattening Forms
- Applionces Industry
- Office Supplies
- Enviromental Requlation
- Decoration
- Storage
- Screens
- Filters
- Sports Facilities
- Ornamental Items
- Tunnel Donatien
- Iron Tables
- Ship Industry
- Air Condition
- Heat and Sound Insulation
- Construction Sector
- Rails And Protectors
- Coating
- Grilles
- Stairs and steps
- Housing Renovation
- Kitchenware
- Seating Groups
- Landscape
- Platforms
- Shelf
- Baskets
- Plaster Tops

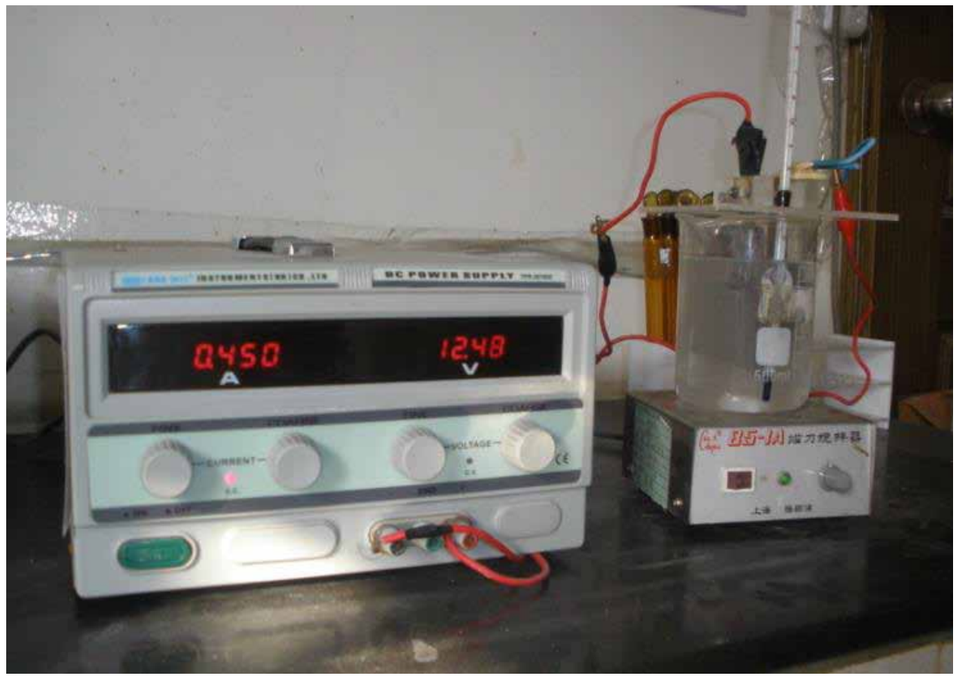


Quality and Testing

Enhanced life test of coated electrode

X ray fluorescence spectrometer

Urea electrolysis plant



Ultrasonic cleaning device

DC resistance bridge

Roughness tester

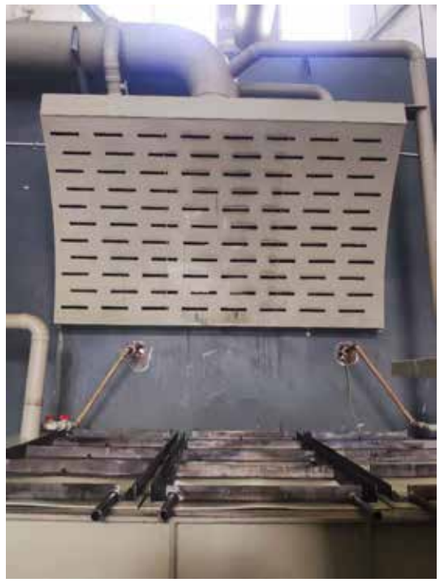
Plant sewage treatment equipment

MVR brine evaporation crystallization system

Coating Electrode

Automatic sand blasting machine

Pickling bath



Coating workshop