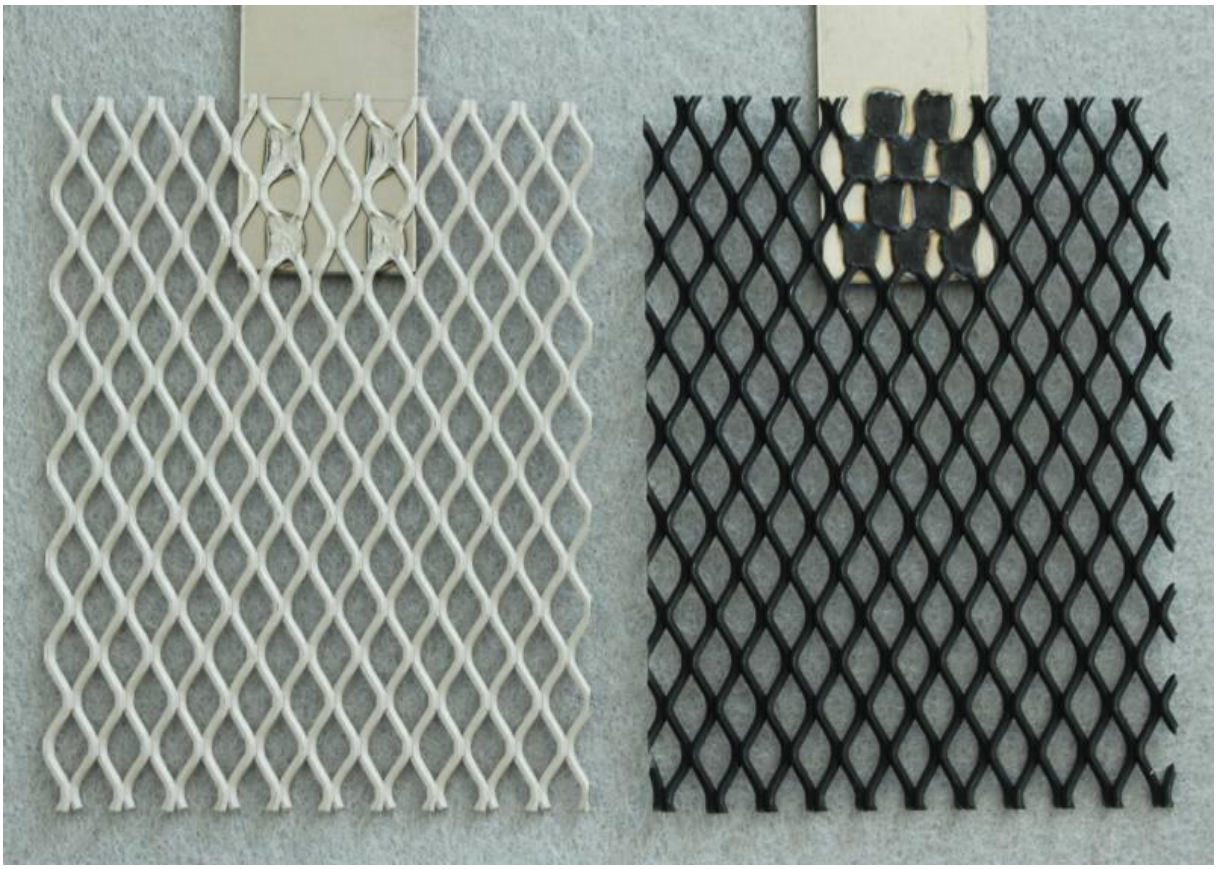
Anodes

Appearence

Titanium mesh coated with Platinum or mixed oxides

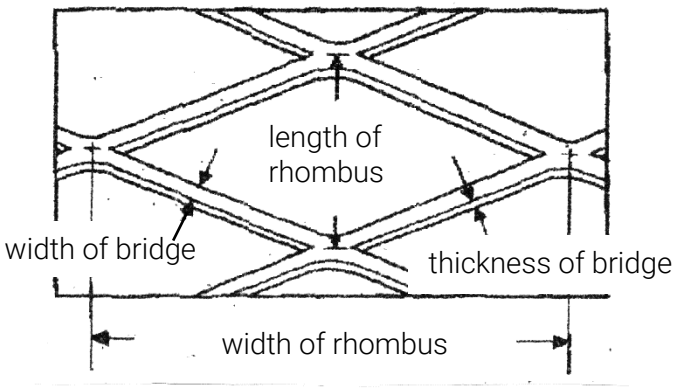


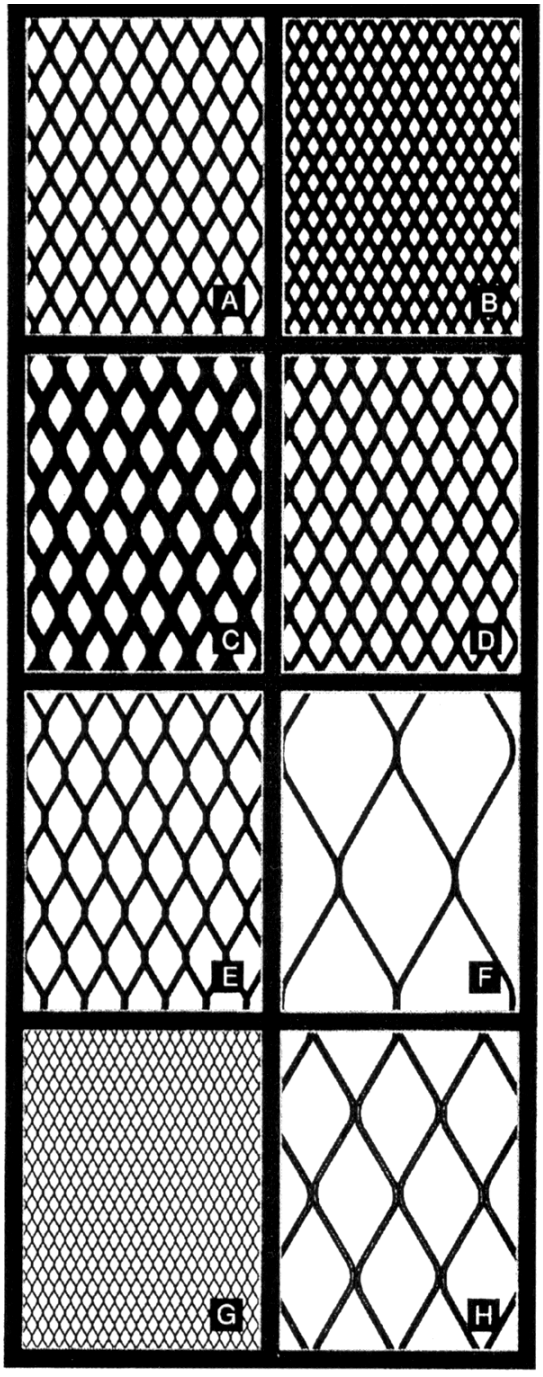
Pt/Ti Anode, Net Type A

Mixed Oxide Anode, Net Type A

Expanded Metals – mesh sizes

Type	length of rhombus [mm]	width of rhombus [mm]	width of bridge [mm]	thickness of bridge [mm]
A	10,00	5,00	1,00	1,00
B	6,00	3,00	1,00	1,00
C1	18,00	8,00	2,00	2,00
C2	12,50	7,00	2,00	2,00
D2	12,00	6,00	1,50	1,50
D3	16,00	8,00	2,00	2,00
E	16,00	8,00	1,00	1,00
F	39,00	16,00	1,00	1,00
G	4,00	2,00	0,50	0,50





Layer Characteristics

	Pt 1,5 µm	Pt 2,5 µm	MOX
Coating	Pt	Pt	Ir mixed oxides
Colour	grey	grey	black
Condition	Macroporous	Macroporous	Microporous
Layer	30 g Pt/m²	50 g Pt/m²	12,5 g Ir/m²

Field of Application

	Pt 1,5 µm	Pt 2,5 µm	MOX
Gold bathes, alkaline	✓	✓	
Gold bathes, alkaline cyanidic			✓
Gold bathes, weak acidic	✓	✓	
Gold bathes, strong acidic	✓	✓	
Rhodium bathes, strong acidic	✓	✓	
Platinum bathes, strong acidic	✓	✓	
Ruthenium bathes, strong acidic	✓	✓	
Palladium bathes, alkaline			✓
Silver bathes, alkaline cyanidic			✓
Bronze bathes, alkaline cyanidic			✓
Precious metal recovery			✓
Anodizing	✓	✓	

Operating Conditions

Anodic current density:	0 – 30 A/dm²
Type of current:	Direct, pulsed, reverse pulsed
Bath temperature:	20 – 80 °C

Lifetime of Anodes

The lifetime of an anode depends on type of bath, temeperature of bath and anodic current density.
Concentrated sulfuric acid, fluoride solutions and hydrochloric acid reduces the lifetime of anodes.
In shut down periods, anodes should be removed from the bathes, carefully rinsed with deionized water and blown dry.
Do not rub or scratch anodes, otherwise the surface is damaged.

If the voltage rises during operation, this can be a sign, that layer of the anode has been removed partly, the titanium is free and has been passivated.

Disposal and Recycling

To recover the precious metal from your anodes we recommend to recycle the anodes.

We willingly provide a recovery offer for you.

Surface Factor of mesh anodes

$$\text{SF (surface factor)} = \frac{\text{True surface}}{\text{Geometric surface}}$$

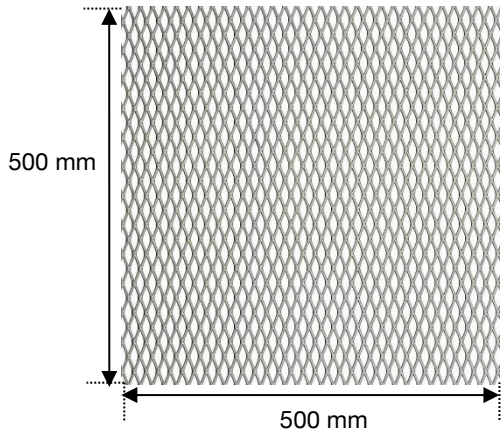
In other words:

If an anode has a surface factor of 1,7:
1 dm² of that anode has a total surface area of 1,7 dm².

Example 1: Calculation of surface factor:

Anode: Size: 500 x 500 mm = 25 dm² = geometric surface
True surface = 42,5 dm²

$$\text{SF (surface factor)} = \frac{42{,}5}{25} = 1{,}7$$

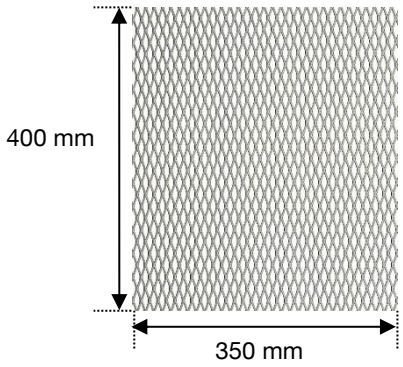


Example 2: Calculation of true surface:
Anode: Size: 350 x 400 mm = 14 dm² = geometric surface
Surface factor = 0,7

$$\text{SF (surface factor)} = \frac{\text{True surface}}{\text{Geometric surface}}$$

$$\text{True surface} = \text{Geometric surface} \times \text{SF (surface factor)}$$

$$\text{True surface} = 14 \times 0{,}7 = 9{,}8\ \text{dm}^2$$



FOR ANY FURTHER INFORMATION WE WILL BE PLEASED TO BE AT YOUR DISPOSAL PERSONALLY UNDER+ 43 (0)2287 71073 OR OFFICE@IWGPLATING.COM.

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