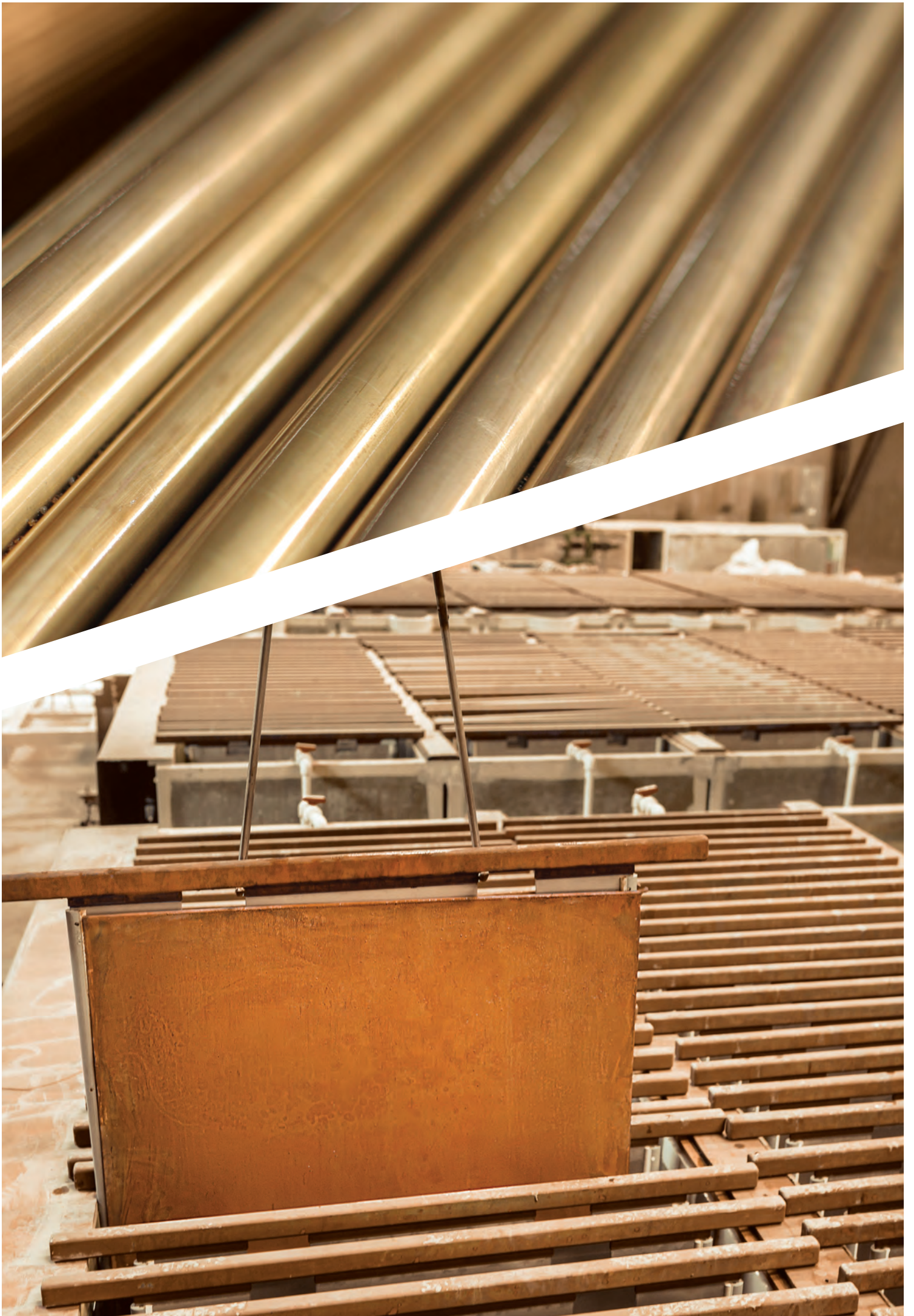




EGYPTIAN METAL WORKS

# EGYPTIAN METAL WORKS

المصرية لتشغيل المعادن





# EGYPTIAN METAL WORKS

Established in 1938, Egyptian Metal Works (EMW) - المصرية لتشغيل المعادن - is one of the oldest and largest family-owned companies in Egypt specialising in the manufacturing of copper and copper alloys.

EMW uses a combination of horizontal continuous-casting furnaces, extrusion press and combined drawing machines to produce brass bars which are sold locally and exported to manufactures of bathroom fixtures, keys, locks and door handles, gas and water meters, welding wire and other electrical and decorative elements.

EMW also uses rotary furnaces and 3 upcast machines, followed by rod-breakdown machines to produce oxygen-free annealed copper wire which is sold to cable manufacturers, as well as copper busbars used in the manufacturing of electrical distribution boards.

In 2016 EMW produced its first Grade-A copper cathodes in our new 7000 TPY Electrolytic refining tank-house, built with Isa-Process technology.

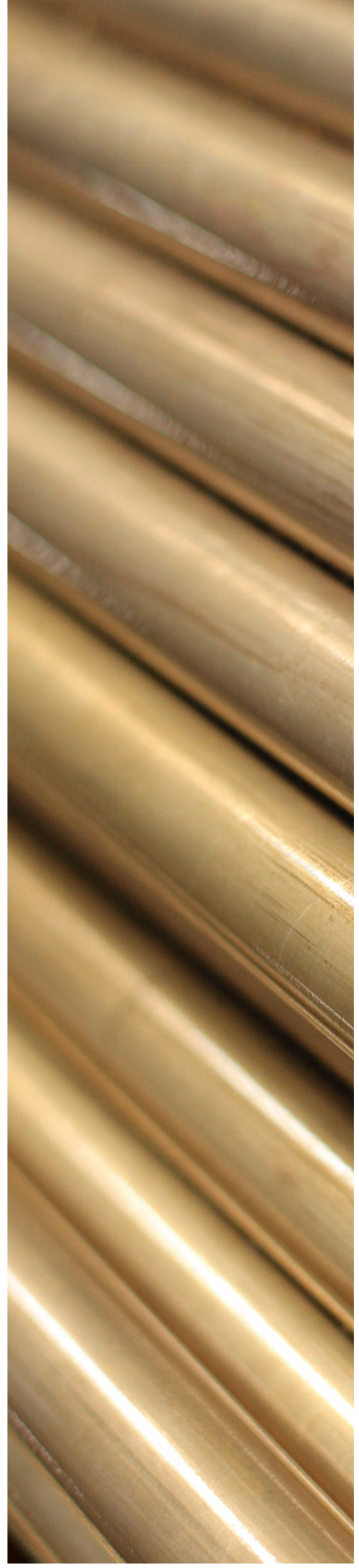
EMW employs over 200 people on a factory stretching over 40,000 metres in South Cairo and two storage and sales outlets in downtown Cairo.

Over the past several decades EMW has established itself as the number one local supplier to the most respected names in the field such as Ahram Security Group and ABB Egypt. Some of EMW's international clients include MI.GA.L and Gnutti Cirillo in Italy, Cherbros in Greece and others in Malaysia, Algeria, Qatar, Jordan and Saudi Arabia.

## BRASS BARS

### ROUND, HEXAGONAL, SQUARE AND PROFILES

SHAPE	PRODUCTION	SIZE
Round Bars	Drawn and Straightened	Dim. 3 - 40 mm
Round Bars	Straightened only	Dim. 40 - 60 mm
Round Bars	Extruded only	Dim. 60 - 100 mm
Hexagonal Bars	Drawn and Straightened	A/F 6 - 38 mm
Hexagonal Bars	Extruded only	A/F max. 90 mm
Square Bars	Drawn and Straightened	5 - 10 mm
Square Bars	Extruded	Max. 60 mm
Profiles	Drawn and Straightened or Extruded	As per costumers drawing
Brass Wire	Drawn and Straightened Straight or Coils	2.76 - 6 mm
Welding Wire (Si - Brass ) / (Si - Sn Brass)	Drawn and Straightened	2,2.5 and 3 mm



## COMPOSITION OF COPPER – ZINC – LEAD ALLOYS

STANDARD		BS - EN 12164:1998												
Material Designation		Composition in %												
Symbol	Number	Element	Cu	Al	As	Fe	Mn	Ni	Pb	Sn	Zn	Others total	Density g/cm <sup>3</sup> Approx.	
CuZn39Pb2	CW612N	Min.	59.0	-	-	-	-	-	1.6	-	Rem.	-	8.4	
		Max.	60.0	0.05	-	0.3	-	0.3	2.5	0.3	-	0.2		
CuZn40Pb2	CW617N	Min.	57.0	-	-	-	-	-	1.6	-	Rem.	-	8.4	
		Max.	59.0	0.05	-	0.3	-	0.3	2.5	0.3	-	0.2		
CuZn39Pb3	CW614N	Min.	57.0	-	-	-	-	-	2.5	-	Rem.	-	8.4	
		Max.	59.0	0.05	-	0.3	-	0.3	3.5	0.3	-	0.2		

## MECHANICAL PROPERTIES OF COPPER – ZINC – LEAD ALLOYS

STANDARD		BS – EN 12164: 1998					
Symbol	Number	Diameter mm	Tensile strength N/mm <sup>2</sup> Min.	Elongation	Hardness HB or Hv Approx.		
CuZn39Pb2	CW612 N	2 - 6	490	6	140		
CuZn40Pb2	CW617 N	18 - 40	430	8	120		
CuZn39Pb3	CW614 N	12 - 80	360	20	90		



## COPPER WIRE 1.24 MM

Size (mm)	1.24
Diameter (mm)	1.22 : 1.26
Area (mm) <sup>2</sup>	1.20
Copper Content (%)	min. 99.98
Elongation (%)	min. 25
Conductivity (Ms/m)	min. 56
Resistivity at 20c° (Ω/m)	0.01479



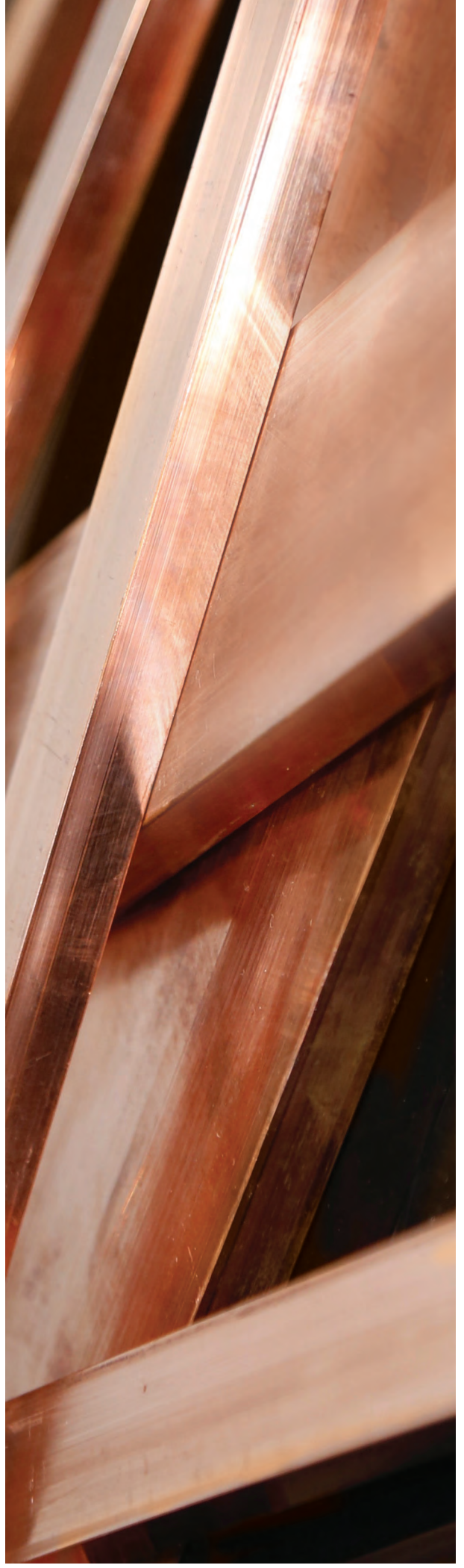
## COPPER WIRE ACCORDING TO ES:11 -2008

Copper Content (%)	Low Value for Load Cutting (N)	Resistivity at 20c° ( $\Omega$ /Km)		Weight for Length Unit (Kg/Km)	Diameter Wire			Cross Section Area (mm <sup>2</sup> )
		Max. Value ( $\Omega$ /Km)	Min. Value ( $\Omega$ /Km)		Max Value (mm)	Min. Value (mm)	Name Value (mm)	
min. 99.98	583	12.66	12.41	12.73	1.364	1.337	1.35	1.43
min. 99.98	1997	3.694	3.620	43.64	2.525	2.475	2.5	4.91
min. 99.98	2687	2.745	2.690	58.72	2.929	2.871	2.90	6.61



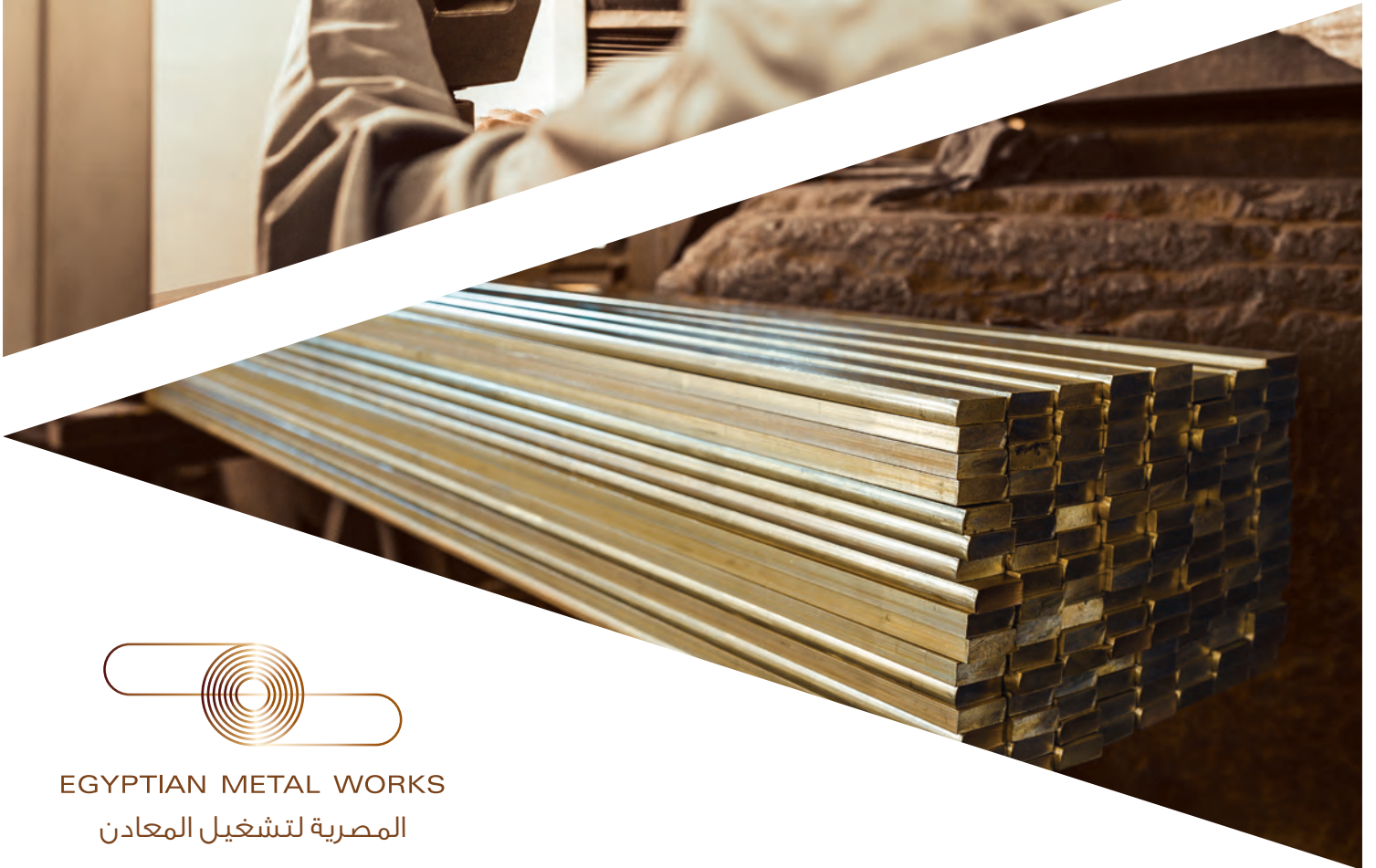
## COPPER BUSBARS

Standard	BS.EN.13601
Visual Inspection	Smooth and bright surface
Conductivity	≥56 Ms/m
Hardness	75 - 95 HB (hard)
Copper Content	min. 99.98%
Dimensions	According to Din 1768
Bending	Excellent at 90° or more
Shape	Sharp or round edge
Production	Drawn and straightened
Size	Varying dimensions starting from 3 X 10 mm to 120 X 10 mm









EGYPTIAN METAL WORKS  
المصرية لتشغيل المعادن



**EGYPTIAN METAL WORKS**

**Add:** 74 Al Gomhoreya Street, Cairo, Egypt 11511

**Tel.:** +(202) 5010303 / **Fax:** +(202) 5010304

**Email:** [info@egyptianmetalworks.com](mailto:info@egyptianmetalworks.com)

**Website:** [www.egyptianmetalworks.com](http://www.egyptianmetalworks.com)