SIA KMM Metāls

CONTINUOUS CASTING
PRODUCTS & TECHNOLOGY

LATVIA

MANAGEMENT SYSTEM

Since 2004 SIA KMM Metals management system is maintained and certified by Bureau Veritas Certification according to ISO 9001:2008, ISO 14001:2004 and OHSAS 18001:2007 requirements.

The quality control laboratory using modern equipment performs inspections and tests to insure compliance of the goods with standards and customer requirements. SIA KMM Metals Quality control laboratory issues Inspection Certificates and test reports upon request of the Client.

KMM

COMPANY INFO & TECHNOLOGY

MARS
CASTING TECHNOLOGIES

History

SIA KMM Metals is a private Company, established in 2002. Continuous casting foundry started in 2003. In last 5 years the concept of innovation in continuous casting was supported by the Board and KMM Company employed high degree skilled specialists with wide experience in a field of continuous casting. During this period a huge investment was made into know-how technologies and equipment to increase products quality and capacity of foundry. Nowadays KMM foundry is capable to manufacture up to 6000 t of wide range continuous casting copper alloys products per year.

Technology

All casting, melting including auxiliary equipment and foundry installations are presently in KMM foundry are worked out, designed and supplied to us by specialists of MARS Casting Technologies. Casting capacity of KMM foundry are maintained by 9 vertically downward continuous casting machines with 5 melting ovens.

Products

Dedicated to cast CuSn and CuSnZnPb bronzes in 2010 we have widened our range of products by CuAlNiFe bronze. Combining constant improvement of technology, modernising the equipment SIA KMM Metals turned into rapidly growing foundry with steady increase in a number of sales even despite of instability of worlds industry during 2009, where we achieved a volume of 4000 t per year just in bronze – red brasses.

Strategy

Our approach to the customer, ability to be the fastest foundry in Europe and quality control policy assured extension of our customers list, enabling us to invest into trend state- of the –art technology, providing benefits from our services to our Clients.

OUR ALLOYS

Rg5 Pbarm

EN 1982:2008	German DIN
CuSn5Zn5Pb2-C (CC499K)	DIN 50930-6

For drinking water applications no other single element should be more than 0.02 %. The sum of these single elements should not exceed 0.25%.

Chemical Composition in %		Cu	Sn	Pb	Zn	Ni	Al	Fe	P	S	Si	Sb	As	Cr	Bi	Cd
	min	84.0	4.0	-	4.0	-	-	-	-	-	-	-	-	-	-	-
	max	88.0	6.0	3.0	6.0	0.6	0.01	0.3	0.04	0.04	0.01	0.1	0.03	0.02	0.02	0.02

Mechanical Properties	Rm (Tensile strength min.)	Rp0.2 (Proof Strength min.)	A (Elongation min.)	H_B (Brinell hardness min.)
	250 N/mm²	110 N/mm2	13 %	65 HBW

engineering material with high elongation, corrosion water proof for air gas and water fittings
application: plain copper sanitary pipes, pipe fittings, bathroom fixtures, tubes for boilers and boiler accessories, designed for potable water, low-pressure valves, gasoline and oil-line fittings, fire extinguishing equipment fittings, etc.

Rg5

EN 1982:2008	German DIN	British BS	US ASTM
CuSn5Zn5Pb5-C (CC491K)	G-CuSn5ZnPb (DIN 1705, Nr.2.1096.01)	LG2 (BS 1400)	C83600 (ASTM B 505)

Chemical Composition in %		Cu (Including nickel)	Sn	Pb	Zn	Ni	Al	Fe	P	S	Si	Sb
	min	83.0	4.0	4.0	4.0	-	-	-	-	-	-	-
	max	87.0	6.0	6.0	6.0	2.0	0.01	0.3	0.1	0.1	0.01	0.25

Mechanical Properties	Rm (Tensile strength min.)	Rp0.2 (Proof Strength min.)	A (Elongation min.)	H_B (Brinell hardness min.)
	250 N/mm²	110 N/mm2	13 %	65 HBW

structural material, to some extent can be brazed, resistant to sea water
application: water and steam valve housings up to 226 °C, normally stressed pump bodies and thin-walled complex castings

Rg7

EN 1982:2008	German DIN	US ASTM
CuSn7Zn4Pb7-C (CC493K)	GC-CuSn7ZnPb (DIN 1705, Nr.2.1090.04)	C93200 (ASTM B 505)

Chemical Composition in %		Cu (Including nickel)	Sn	Pb	Zn	Ni	Al	Fe	P	S	Si	Sb
	min	81.0	5.2	5.0	2.0	-	-	-	-	-	-	-
	max	86.0	8.0	8.0	5.0	2.0	0.01	0.2	0.1	0.1	0.01	0.3

Mechanical Properties	Rm (Tensile strength min.)	Rp0.2 (Proof Strength min.)	A (Elongation min.)	H_B (Brinell hardness min.)
	260 N/mm²	120 N/mm2	12 %	70 HBW

material for plain bearings in mechanical engineering with medium loads, very good emergency running, high wear and sea water resistance,
application: bearings of cranes and elevators, minor machine tool bearings, bearings for packing machines and electric motor, piston pin bushes for load, guide bushes in hydraulic cylinders, slip and friction rings and discs, valve and gate seat rings, marine shaft covers and cylinders, liner bushes, bottom bushes

Gb12

EN 1982:2008	German DIN	British BS	US ASTM
CuSn12-C (CC483K)	GC-CuSn12 (DIN 1705, Nr.2.1052.04)	PB2 (BS 1400)	C90800 (ASTM B 427)

Chemical Composition in %		Cu	Sn	Pb	Zn	Ni	Al	Fe	Mn	P	S	Si	Sb
	min	85.0	10.5	-	-	-	-	-	-	-	-	-	-
	max	89.0	13.0	0.7	0.5	2.0	0.01	0.2	0.2	0.6	0.05	0.01	0.15

Mechanical Properties	Rm (Tensile strength min.)	Rp0.2 (Proof Strength min.)	A (Elongation min.)	H_B (Brinell hardness min.)
	300 N/mm²	150 N/mm2	6 %	90 HBW

material with good antifriction properties, highest wear resistance
application: machine tool spindle bearings, which require the highest precision, precision turning lathes, grinders and gears, piston pin bushes, press bearings, high stress spindle nuts, high speed worm wheels and rims;

Gb10

EN 1982:2008	German DIN	British BS	US ASTM
CuSn10-C (CC480K)	G-CuSn10 (DIN 1705, Nr. 2.1050.01)	CT1 (BS 1400)	C90500 (ASTM B 505)

Chemical Composition in %		Cu (Including nickel)	Sn	Pb	Zn	Ni	Al	Fe	Mn	P	S	Si	Sb
	min	88.0	9.0	-	-	-	-	-	-	-	-	-	-
	max	90.0	11.0	1.0	0.5	2.0	0.01	0.2	0.1	0.2	0.05	0.02	0.2

Mechanical Properties	Rm (Tensile strength min.)	Rp0.2 (Proof Strength min.)	A (Elongation min.)	H_B (Brinell hardness min.)
	280 N/mm²	170 N/mm2	10 %	80 HBW

material with high elongation, corrosion and sea water resistant
application: housing and pump cases, guide and running wheels and impellers for pumps and water turbines, etc.

Gb12Ni

EN 1982:2008	German DIN	British BS	US ASTM
CuSn12Ni2-C (CC484K)	GC-CuSn12Ni (DIN 1705, Nr.2.1060.04)	CT2 (BS 1400)	C91700 (ASTM B 427)

Chemical Composition in %		Cu	Sn	Pb	Zn	Ni	Al	Fe	Mn	P	S	Si	Sb
	min	84.5	11.0	-	-	1.5	-	-	-	-	-	-	-
	max	87.5	13.0	0.3	0.4	2.5	0.01	0.2	0.2	0.4	0.05	0.01	0.1

Mechanical Properties	Rm (Tensile strength min.)	Rp0.2 (Proof Strength min.)	A (Elongation min.)	H_B (Brinell hardness min.)
	300 N/mm²	180 N/mm2	10 %	95 HBW

AlBr

EN 1982:2008	German DIN	British BS	US ASTM
CuAl10Fe5Ni5-C (CC333G)	GC-CuAl10Ni (DIN 1714, Nr.2.0975.04)	AB2	C95800 (ASTM B 505)

Chemical Composition in %		Cu	Sn	Pb	Zn	Ni	Al	Fe	Mn	Si	Cr	Bi	Mg
	min	76.0	-	-	-	4.0	8.5	4.0	-	-	-	-	-
	max	83.0	0.1	0.03	0.5	6.0	10.5	5.5	3.0	0.1	0.05	0.01	0.05

Mechanical Properties	Rm (Tensile strength min.)	Rp0.2 (Proof Strength min.)	A (Elongation min.)	H_B (Brinell hardness min.)
	650 N/mm²	280 N/mm2	13 %	150 HBW

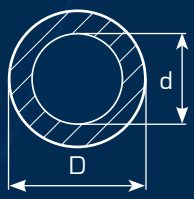
tarnish-resistant and show low rates of corrosion in atmospheric conditions, low oxidation rates at high temperatures, and low reactivity with sulfurous compounds and other exhaust products of combustion, material are also resistant to corrosion in sea water
application: plain bearings and landing gear components on aircraft, engine components (especially for seagoing ships), underwater fastenings in naval architecture, and ship propellers, o and petrochemical industries (i.e. tools for use in non-sparking environments)

The equivalence between the standards is not absolute and some variations in composition can exist.

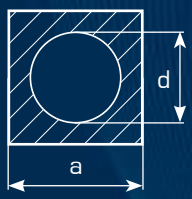
KMM

COMPANY PRODUCTS

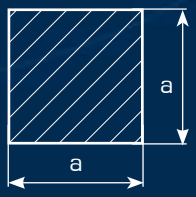
Size (mm):
D = 13.0–152.0



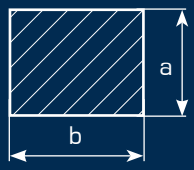
Size (mm):
D = 21.0–152.0,
d = 9.0–112.0



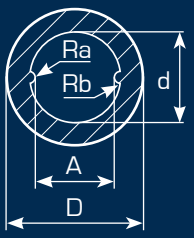
Size (mm):
a = 22.0–52.0,
d = 9.0–32.0



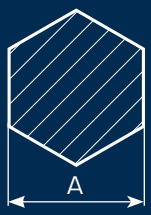
Size (mm):
a = 22.0–52.0



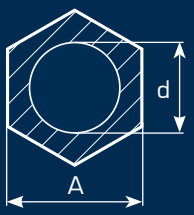
Size (mm):
a = 17.0–42.0
b = 32.0–72.0



Size (mm):
on request

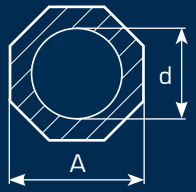


Size (mm):
A = 17.0–38.0



Size (mm):
A = 22.0–38.0
d = 9.0–25.0

Size (mm):
A = 34.0



Size (mm):
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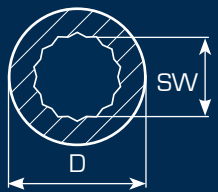
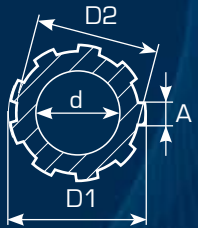
d = 9.0–21.0



Size (mm):
D = 24.5–67.0
SW = 12.1; 17.1;
22.1; 27.1; 32.1;
42.1



Size (mm):
D1 = 31.0; 38.0
D2 = 28.0; 35.0
A = 5; d = 14.5;
17.5; 20.0; 23.3

CONTINUOUS CASTING & FINISHED PARTS

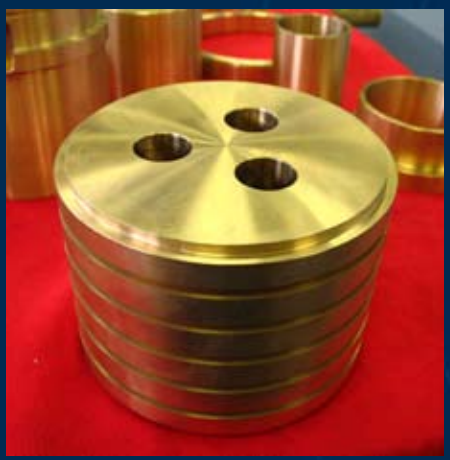
In 2007 KMM extended the range of products by opening new department for manufacturing CNC machined finished parts.

KMM advanced CNC Turning machines are designed to produce high- precision parts with µ tolerances, complying with highest customer demands.

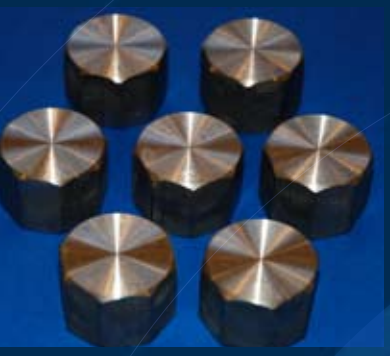
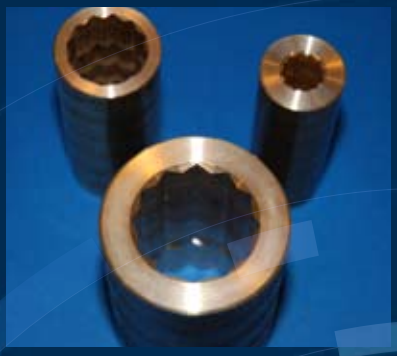
Our CNC Department offers machining, milling, drilling, round and flat grinding, heat treatment (annealing, hardening).

We fulfil orders in accordance with clients' drawings and defined quality requirements in series from one hundred up to million pieces.

Assortment of parts includes a large variety of different fittings, bushes, axlebearings, lined bearings, needles and other rounded billets. This production has a wide application range, such as aviation, vehicles, computer, plumbing fittings, optical instruments and other. Goods are to be machined from all kinds of materials from steels including high alloy and stainless steels, brass, aluminum, bronze, copper alloys and others.



CNC



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