



**COPPER ALLOYS SPECIALIST
SUPPORTING THE INDUSTRY**

www.fonderie-zwiebel.fr


ZWIEBEL

ZWIEBEL, YOUR PARTNER SINCE 1828



Léon ZWIEBEL 1848-1932

Based in the heart of Europe, a few kilometers from Strasbourg, ZWIEBEL has been specializing in the manufacture of copper alloy parts since 1828.

Both our sand foundry, machining and bar turning workshop enable us to make subcontracted industrial parts used in all sectors of activity.

The family business kept his human scale (60 employees) and has evolved over time based on the values that have always been its greatest strength.

The expertise and professionalism of its personnel, the unceasing will to modernize, and ability to react rapidly to your needs make ZWIEBEL a competent and reliable partner to enable you to respond to market requirements.

CERTIFICATE ISO 9001
VERSION 2015



€ 45 %
OF EXPORT

60
employees

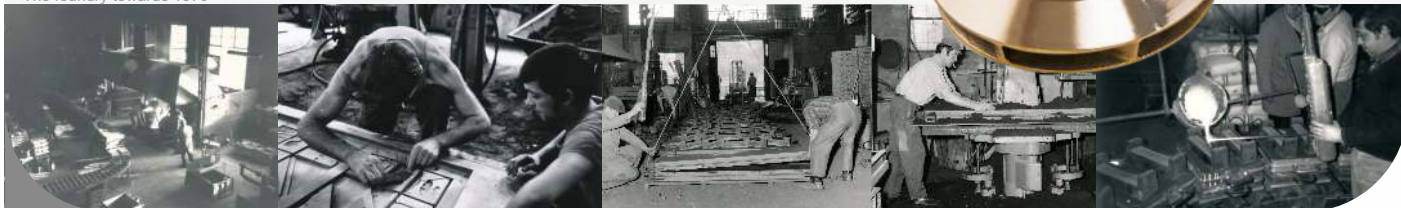
4000 m²
of covered surface area

300
customers in
Europe

More than
600 tons of metal
transformed
per year



The foundry towards 1970





MANUFACTURING MASTERY



THE DESIGN

Our experience and variety of proposed alloys gives us the opportunity to support you in your material choice.

Our technicians and engineers equipped with the CAO stations will advise you in the design of your products allowing its easier industrialization and costs optimization.

The development of business-specific software allows us to

master the technical data and assure the maximum traceability of our processes.

PATTERNMAKING AND STORAGE OF PATTERNS

Patternmaking workshop assures creation, reproduction, plating and maintenance of patterns.

Those are stored outside of the production zones in the controlled environment, events history is traced in our database.



CORING (PHENOLIC COLD BOX)



- 2 Coring machines Roper H12 automatic tool ducted
- 1 mixer with the quick screw type MICRO VR capacity 1t/h with additives management
- 1 batch mixer of 50 liters for special sands preparation (chromite, kerphalite...).
- 1 new sand silo 30t with pneumatic conveying
- Corning coring and Polyurethane Cold Box in outsourcing

CASTING GREEN SAND AND AIR SET



SQUEEZE/AIR HWS

- 1 HSP/1 Heinrich Wagner machine of 30 molds/h capacity
- Frame format 670x470x200



Chemical

- 1 rapid screw 6t/h BMF
- Standardization casting in 3 frame formats :
- 450x350/600x600/760x760
- Occasional use of format 1000x1000/1000x2000
- No-bake casting, horizontal or vertical joints

MELTING ELECTRICAL, FUEL OIL AND GAS



- 2 furnaces 500 kg (fuel oil)
- 1 furnace 500 kg (Natural gas)
- 2 furnaces crucible Push out induction (200kw)
- Hand casting on stretcher ladle 150kg

FINISHING FROM DESANDING TO FINISHING TOUCH



- 1 shot blasting machine SISSON LEHMANN plate type Ø2000mm
- 1 Pendulum saw (Ø500)
- 1 Table saw (Ø305)
- 2 Grinder reels (Ø500)
- 3 finishing workstations with pneumatic tools

MACHINING WORKSHOP CNC AND CONVENTIONAL



Strong technical know-how in the area of traditional and numeric machining. We have the latest and effective production means to satisfy your needs.

Machining workshop has 7 CNC machine :

- 2 MORI SEIKI Ø 420/250/400 mm
- 2 MORI SEIKI Ø 420/350/1100 mm
- 2 INDEX ABC Ø 65/150/150 mm
- 2 INDEX G300 Ø215/250/250 mm

Together with 2 conventional turning machines :

- RAMO Ø 600/450/1450 mm
- CAZENEUVE Ø 400/450/600 mm

Milling machine HURON (table 1435x460mm).

Drilling machine SERM CP40L (table 635x255 mm).

For bar turning we have 2 bar suppliers with capacity of 3000mm and 2 others with capacity of 1000mm.

The tools are gauged with use of pre-adjustment table ZOLLER SMILE 420

Some of the CNC machines are equipped with the integrated measuring arms.

CONTROL METROLOGY



With 800 instruments in stock, metrology service has the controlling means which are calibrated periodically.

These are mainly the traditional controlling equipment:

- Caliper
- Depth Gauge
- External Micrometers
- Internal Micrometers and Bore Verification
- Gauge Blocks

In the cabin, control is done using the height gauge TESA MICROHITE on the marble 1000x630; height capacity 600mm.

Two roughness meters MAHR, hardness meter and ultrasonic thickness meter are completing our large instruments offer.

OUR MAIN ALLOYS

Grades	Chemical composition										Norm	
	Cu	Sn	Pb	Zn	Ni	P	Al	Fe	Mn	Si	Numerical designation	FR or EU

BRONZE

Cu Sn8 Ni3 P	All the others	7,0-9,0	0,5-3,0	≤ 3,0	2,0-4,0	≤ 1,0	≤ 0,01	≤ 0,2	-	≤ 0,01	-	-
Cu Sn10-C	88,0-90,0	9,0-11,0	≤ 1,0	≤ 0,5	≤ 2,0	≤ 0,2	≤ 0,01	≤ 0,2	≤ 0,1	≤ 0,02	CC480K	NF EN 1982
Cu Sn12-C	85,0-88,5	11,0-13,0	≤ 0,7	≤ 0,5	≤ 2,0	≤ 0,6	≤ 0,01	≤ 0,2	≤ 0,2	≤ 0,01	CC483K	NF EN 1982
Cu Sn12 Ni2-C	84,5-87,5	11,0-13,0	≤ 0,3	0,4	1,5-2,5	0,05-0,40	≤ 0,01	≤ 0,2	≤ 0,2	≤ 0,01	CC484K	NF EN 1982
Cu Sn14	≥ 83,5	≥ 12,5	-	≤ 1,0	-	-	-	-	-	-	-	NF A 53-707

BRONZE WITH LEAD

Cu Sn5 Zn5 Pb2-C	84,0-88,0	4,0-6,0	0,2-3,0	4,0-6,0	0,1-0,6	≤ 0,04	≤ 0,01	≤ 0,3	-	≤ 0,01	CC499K	NF EN 1982
Cu Sn5 Zn5 Pb5-C	83,0-87,0	4,0-6,0	4,0-6,0	4,0-6,0	≤ 2,0	≤ 0,1	≤ 0,01	≤ 0,3	-	≤ 0,01	CC491K	NF EN 1982
Cu Sn7 Zn4 Pb7-C	All the others	6,0-8,0	5,0-7,0	2,0-5,0	≤ 1,5	-	≤ 0,01	≤ 0,2	-	≤ 0,01	CC493K	NF EN 1982
Cu Sn10 Pb10-C	78,0-82,0	9,0-11,0	8,0-11,0	≤ 2,0	≤ 2,0	≤ 0,10	≤ 0,01	≤ 0,25	≤ 0,2	≤ 0,01	CC495K	NF EN 1982

BRASS

Cu Zn21 Si3P-C	75,0-77,0	≤ 0,3	≤ 0,1	All the others	≤ 0,2	0,02-0,1	≤ 0,05	≤ 0,3	≤ 0,05	2,7-3,5	CC768S	NF EN 1982
Cu Zn34 Mn3 Al2 Fe1-C	55,0-66,0	≤ 0,3	≤ 0,3	All the others	≤ 3,0	≤ 0,03	1,0-3,0	0,5-2,5	1,0-4,0	≤ 0,1	CC764S	NF EN 1982
Cu Zn36 Pb-C	62,0-64,0	≤ 0,3	0,2-1,6	All the others	≤ 0,2	-	0,5-0,7	≤ 0,3	≤ 0,1	-	CC770S	NF EN 1982
Cu Zn39 Pb2	58,0-60,0	≤ 0,2	1,5-2,5	All the others	-	-	-	≤ 0,35	-	-	-	NF A 51-105

COPPER-ALUMINUM

Cu Al10 Ni3 Fe2-C	80,0-86,0	≤ 0,2	≤ 0,1	≤ 0,5	1,5-4,0	-	8,5-10,5	1,0-3,0	≤ 2,0	≤ 0,2	CC332G	NF EN 1982
Cu Al10 Fe5 Ni5-C	76,0-83,0	≤ 0,1	≤ 0,03	≤ 0,5	4,0-6,0	-	8,5-10,5	4,0-5,5	≤ 3,0	≤ 0,1	CC333G	NF EN 1982

Grades	Chemical composition										Norm	
	Cu	Bi	O	Pb	Cr	Cd	Zn				Numerical designation	FR or EU

COPPER

Cu a1	mini 99,90	-	-	-	-	-	-	-	-	-	-	NF A 51-050
Cu-ETP	mini 99,90	≤ 0,0005	≤ 0,04	≤ 0,005	-	-	-	-	-	-	CR004A	NF EN 1976
Cu Cr1-C	All the others	-	-	-	0,4-1,2	-	-	-	-	-	CC140C	NF EN 1982
Cu CrF35	All the others	-	-	-	0,4-1,2	≤ 0,5	≤ 0,2	-	-	-	-	DIN 17655

other alloys on demand



CONTINUOUS CONTROL OF OUR PROCESSES

We conduct several controls during the realization phase to reach maximum quality.

Our principal tools:

- Spectrometer
- Durometer
- Sand laboratory control
- Sheathed pyrometer

OUR MAIN **ACTIVITY** AREAS



WATER METERS



PUMPS



RAILWAY INDUSTRY

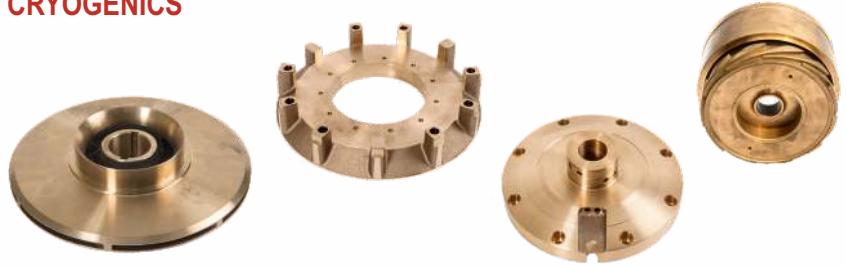


WATER INDUSTRY





CRYOGENICS



MECHANICAL INDUSTRY



ELECTRICAL INDUSTRY



OFFSHORE MARINE



ART / DESIGN



POSTAL ADDRESS

ZWIEBEL
SAINT JEAN SAVERNE
BP 50002
F-67701 SAVERNE CEDEX

DELIVERY ADDRESS

ZWIEBEL
20 Grand Rue
Dépôt n° 2
F-67700 SAINT JEAN SAVERNE

CONTACT

Tel. +33 (0)3 88 71 53 10
E-mail : commercial@zwiebel.fr



www.fonderie-zwiebel.fr

