



lebronze alloys



A comprehensive range
for marine applications

Le Bronze Industriel started and developed the internal production of copper nickel for seawater corrosion resistance in collaboration with French Navy shipyards DCN in 1982.

Through our brand new facilities and fully integrated production process, from raw material through smelting, casting extrusion, drawing, forging, forming, stamping and machining, we manufacture the complete range of pipes, fittings, flanges covering all various international standards or dedicated specifications applicable to copper nickel products.

We provide seamless and/or welded pipes and BW fittings, hot stamped, forged and machined fittings and flanges from 1/4" till 48" in order to cover the complete package required for whatever naval project.

In addition to copper nickel for sea water systems, our range of aluminium bronzes are widely being used for specific military applications such as torpedo launching systems, subsea missile launchers, nuclear propulsion vacuum systems for which we manufacture semi-finished and fully engineered designed products under military licenses.

Finally, we can offer die-forged parts in special steels.

Nowadays Lebronze alloys Group is a referenced and preferred supplier with worldwide major navy or commercial shipyards, ship-owners, naval architects and engineering companies.

From casting to machining

Multiple technical solutions to manufacture your components:

- Continuous or semi-continuous casting
- Centrifugal casting - Sand casting
- Extrusion
- Forging
- Stamping Machining

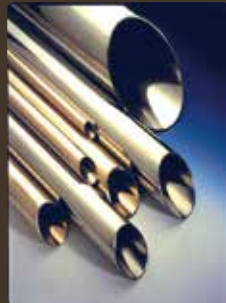


A global range of products

- Bars
- Pipes
- Propulsion propeller body
- Shafts, gears, bushes
- Machined and forged fittings
- Butt weld fittings
- Flanges
- Rigging screw bodies
- Tailor-made products based upon your own drawings.

Our applications

- Sea water cooling systems.
- Fire-fighting systems and ballast systems for: yachts, submarines, military vessels, torpedo launching systems, subsea missiles launchers, nuclear propulsion vacuum systems, underwater marine lightings housing, impact fixings, bolts and nuts, body valves, stern tube bearings, generator seals, cleats, deck hardware, chandlery such as wire rope tensioner, steering components and winches for sailboat.



Our references and approvals

Our approvals

Our ISO9001:2008 quality assurance system guarantees full traceability and our expertise is recognized and certified by major quality insurance companies such as Germanischer Lloyds, DNV, AFAQ or by customers themselves.

Our references

Our quality insurance systems guarantees full traceability and our expertise is recognized and certified by major quality insurance companies such as:

Aker Kvaener, Abu Dhabi Shipbuilding, Austal, Azimut Benedetti, BAE Systems Submarine Solutions, Bath Iron Works, CMN, DCNS, EISA, Itajai, Fincantieri, Garden reach Shipyard, General Dynamics, Hindustan Shipyard, Hudong Shipyard, Huntington Ingalls, Karachi Shipyard, Lurssenwerft, Mariotti, Mazagon Dock, MHI, Navantia, Northrop Grumman, Royal Schelde, ST MARINE, STX, Uljanik.



Alloys and Standards

WROUGHT COPPER ALLOYS				
ISO	European Standard	UNS	Lba	Comments
ALUMINIUM BRONZE (Cu-Al-Ni-Fe-Si-Sn) (C60800 to C604699)				
CuAl10Ni5Fe4	CW307G	C63000	NC4	ASTM B124- B150- B171, SAE J 463, AMS 4640, DIN 17665, wn 2.0966, DIN 17672, wn 2.0966, NFL 14705, ISO 428 et 1338, NFA 51-116, EN 12420, EN 12163, EN 12165, EN 12167
CuAl9Ni4,5Fe4		C63200	NC1	ASTM-B-150, ASTM-B-171, ASTM-B-124, MIL-B-24059, QQ-C-465, AMS 4640H
CuAl9Ni5Fe4			NC2	GAM MM11, GAM MM13, NFA 51-116, ISO 428, DIN 17665 wn 2.0966, NES 833
CuAl9Ni3Fe2			TM	GAM MM11 - GAM MM12 - GAM MM13, NFA 51-116
CuAl11Ni5Fe5	CW308G	C63020	NCS	NFA 51-116, NFL 14-706, DIN 17665 WN 20978 - DIN 17672 WN 20978, EN 12167 - EN 12163 - EN 12420
COPPER NICKELS (Cu-Ni-Fe) (C70000 to C73499)				
CuNi10Fe1Mn	CW352H	C70600	NAVINIC 10	Also fits ASTM B151, B171, B466/467, EEMUA 144, UNS C7060X, BS 2871, JIS 2871, JIS h3300 C7060
CuNi30Fe1Mn	CW354H	C71500	NAVINIC 30	Also fits ASTM B151, B171, B466, B467, BS2871, CN107, JIS H3300
CuNi14Al2			K5	Also fits ASNA 6127 NFL 14702
CuNi2Si / CuNi3Si	CW111C	C70260	NS5	DIN 17666 wn 2.0855 - DIN 17672 w 2.0855 - DIN 44759 cl A3.2, NFL 14-701, ISO 1187, EN 12163 - EN 12167 - EN 12420 - EN 12165, DTD 498- RWMA class 3
CAST COPPER ALLOYS				
ISO	European Standard	UNS	Lba	Comments
BRONZEQ (Cu-Sn) (C90000 to C91999)				
CuSn10	EN 1982 / CC 480 K	C 90700		ASTM B 427
CuSn12	EN 1982 / CC 483 K	C 90800		ASTM B 427
CuSn12Ni2	EN 1982 / CC 484 K	C 91700		ASTM B 427
LEADED BRONZE (Cu-Sn-Pb) (C92000 to C94500)				
CuSn7Zn2Pb3	EN 1982 / CC 492 K	C 92413		ASTM
CuSn7Zn4Pb7	EN 1982 / CC 493 K	C 93200		ASTM B 584
CuSn5Pb9	EN 1982 / CC 494 K	C 93500		ASTM B 584
CuSn5Zn5Pb5	EN 1982 / CC 491 K	C 93600		ASTM B 505
CuSn10Pb10	EN 1982 / CC 495 K	C 93700		ASTM B 584
CuSn5Pb20	EN 1982 / CC 497 K	C 94100		ASTM B 505
CuSn11Pb2	EN 1982 / CC 482 K			
ALUMINIUM BRONZE (Cu-Al-Ni-Fe-Si-Sn) (C95000 to C95999)				
CuAl8Mn			1981 DIN 1714 / 2.0962	
CuAl10Fe2	En 1982 / CC 331 G	C95200		ASTM B148
CuAl10Fe5Ni5	En 1982 / CC 333 G	C95520		ASTM B148
CuAl11Fe6Ni6	En 1982 / CC 334 G			
CuAl10Ni3Fe2	En 1982 / CC 332 G			

STEELS

Type	European Standard
Non-alloyed engineering steels	EN 10225-2. EN 10222-4. ASTM A105/A105N. ASTM A350
Non-alloyed quenched and tempered steels	EN 10083-2
Alloyed quenched and tempered steels	EN 10083-3
Stainless steels	EN 10088 ASTMA182

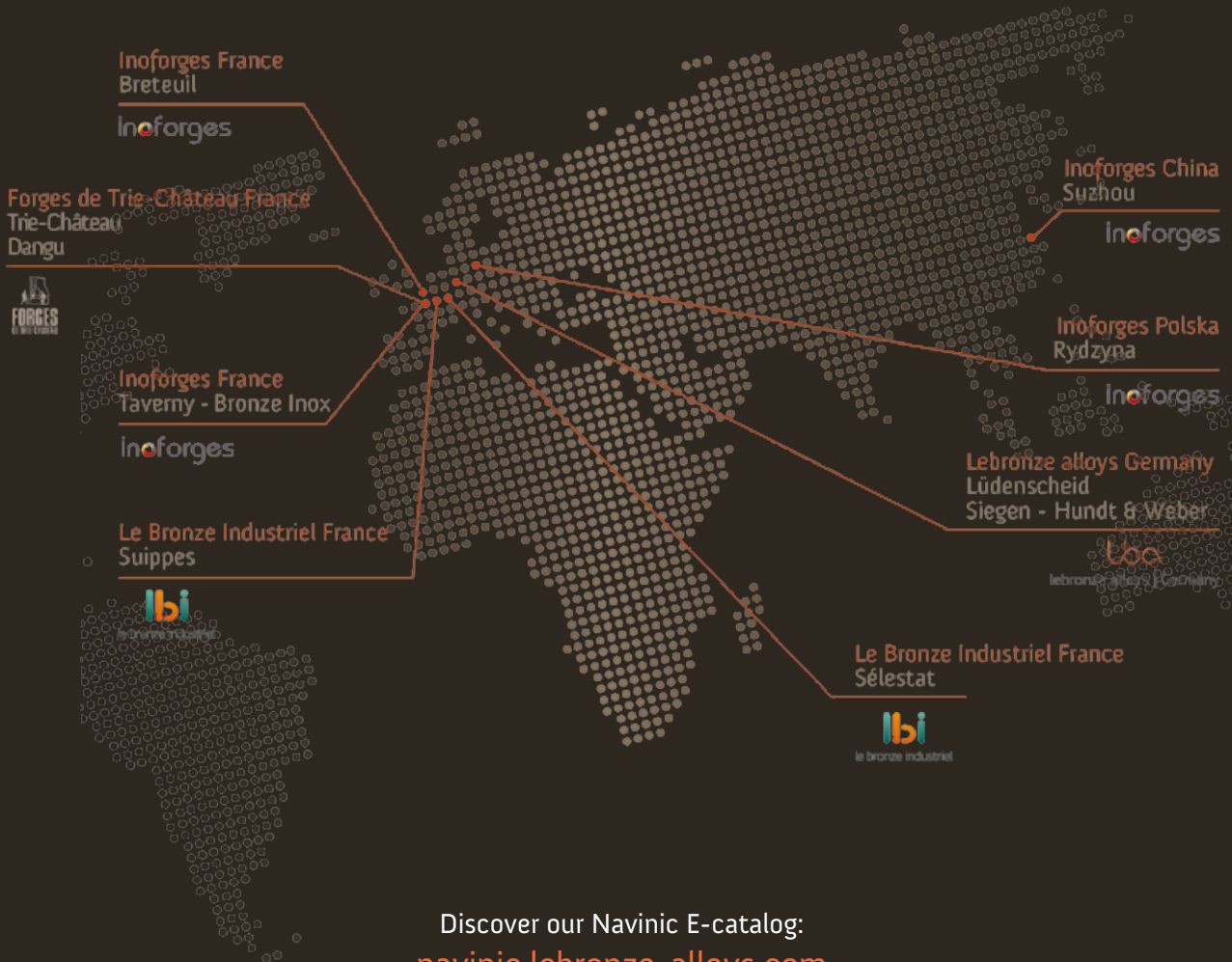


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Lebronze alloys group was born from the integration of different companies specializing mainly in copper alloys but also aluminium alloys and specialty steels.

Thanks to a multidisciplinary know-how, the group is today at the heart of heavy industries such as Aerospace, Oil & Gas, Power, Railway but also in sectors manufacturing smaller equipment and products.

Our 10 complementary facilities all offer industrial technologies (foundry, extrusion, forging, hot stamping, wire drawing, machining, centrifugal casting). The group's commitment is to find appropriate and optimized solutions for every sector's requirements.



Discover our Navinic E-catalog:
navinic.lebronze-alloys.com

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