

FONDINOX S.p.A.
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Stainless steels and nickel base alloys

Sales offices all around Europe; contact us to get the closest to You.

METALLURGICAL EXPERIENCE

Products: STATIC CASTINGS

Extreme care and knowledge upon metallurgy and melting process, together with a profitable cooperation between our technicians and customers lead us to the production of tailored castings with the best performances and quality level. Our moulding system, with the use of organic non carburizing binders, prevents any reaction between sand mould and casting surface in order to guarantee the maximum corrosion resistance.



■ A QUALITY GUARANTEE

A wide experience in the field of corrosion resistant alloys. Foundry and metallurgical know how, particularly with regards to the more stringent corrosive working conditions of components. Collaboration with several research laboratories and institutes. Long history based on continuous partnership, collaboration and technical assistance of the most important special alloys producers like Outokumpu Oy, Sandvik Steel AB Sweden and Haynes Intl. lead us to the production of alloys under original licence.

■ APPLICATION FIELDS

Offshore and onshore extraction of oil and natural gas.
Petrochemical and chemical industry.
Thermal and nuclear power stations.
Valve and pump industry.
Sea water desalination.
Mining and metallurgical industry.
Desulfurization plants.
Dairy industries.
Military industries.
Shipbuilding.

■ DIMENSIONAL CAPACITIES

Static castings with net weight ranging from 0,5 to 6000 kgs.

■ 1966

Company was founded by the same ownership as today.

■ 1972

Company decided to be specialized in the sand foundry activity. Production of cast nickel base alloys was initiated.

■ 1981

Centricast items production.

■ 1984

Production of licenced patented alloys.

■ 2004

A new facility for machining with the name GM Inox S.r.l. has been established.

■ 2012

More than 45 years of experience at our customer full service.

A LIQUID FORGING PROCESS

Products: CENTRICAST PIECES

Material cleanliness due to centrifugation separation of inclusions, very fine microstructure due to rapid cooling of liquid metal in metallic mould, total freedom on analysis choice and a very rapid process cycle give an extremely competitive product with outstanding mechanical, creep and corrosion resistance behaviour.

■ CENTRIFUGALLY CAST TUBES

Tubes are supplied heat treated in as cast condition, partially or fully machined.

■ APPLICATIONS

Corrosion resistant alloys

Mechanical line pipes in chemical plants and offshore platforms. Conveyors rolls in pulp and paper, dairy, textile, printing industries, central and lateral bodies for HP ball valves, rings, nozzles, seats. Multistage pumps bodies, seals, collectors, line pipes for nuclear power stations, cryogenics, industrial gases production.

High temperature alloys

Radiant tubes, roll conveyors for metallurgical industry, muffles, retorts, line pipes and fittings for petrochemisrty.



■ DIMENSIONAL CAPACITIES

Outside diameter from 80 to 1500 mm.
Inside diameter higher than 45 mm.
Unitary lengths up to 5500 mm.
Wall thickness from 10 up to 150 mm.
Total production capacity: 2000 tons/year.



■ CENTRICAST VERTICAL ITEMS

Production of axialsymmetric items very near to final shape without weight and material loss, rough or fully finished machined.

■ APPLICATIONS

Corrosion resistant alloys

Balls and flanged bodies for HP ball valves, seat rings, flanged bushes, shaped rings. Conical parts for centrifuges (rotors, bowl shells), valve cages, hydraulic turbine seal and wear rings, high pressure filter housings.

High temperature alloys

Conical parts for roll conveyors, gas turbine components, components for petrochemistry (tees, manifolds, line pipes).

■ DIMENSIONAL CAPACITIES

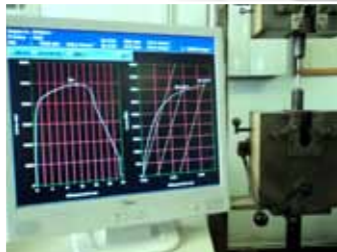
Outside diameter from 300 to 1400 mm.
Inside diameter higher than 140 mm.
Lengths up to 880 mm.
Wall thickness up to 250 mm.
Balls from 6" to 32", also with trunnions.
Total production capacity: 1000 tons/year.

■ ASSEMBLED COMPONENTS

Pieces manufactured with different technologies (sand castings, centrifugal castings) can be weld assembled obtaining a wide range of products.

MATERIAL TESTING

- Internal laboratory equipped to perform chemical analysis, mechanical tests, corrosion tests (intercrystalline, pitting, crevice, SSCC, SCC, accelerated corrosion), microstructure analysis with optical microscopy and SEM. R&D Department for continuous improvement of cast alloys.



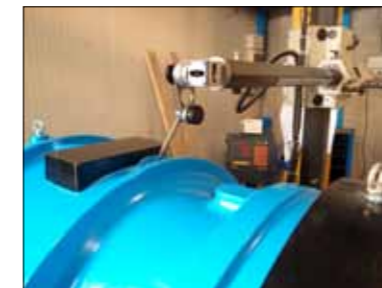
- PT carried out in dedicated area with controlled humidity, temperature and light intensity conditions.



- Fondinox S.p.A. is qualified according to ISO 9001 since 1996
TÜV AD 2000 W0
Lloyd's Register approval for naval applications
NORSOK qualifications for superaustenitic, duplex and superduplex, Inconel and Hastelloy alloys for cast thickness up to 250mm.
NDE personnel qualified according SNT-TC-1A/EN473 for PT, VT, RT.



- VT performed on the entire production by our trained and highly skilled operators.



- Dimensional control performed on all patterns and castings avoiding tolerance problems on products.



- Subcontracted RT shop working under exclusive agreement equipped with 6 bunkers and 2 linear accelerators up to 6 MeV.

PRODUCED ALLOYS									
TYPE	Alloy	UNS/DIN Castings	UNS/DIN/OTHER Hot Finished Equivalent	STANDARD CHEMICAL COMPOSITION (wt%)					
				C	Cr	Ni	Mo	Others	
MARTENSITIC	A743 CA 15	J91150/1.4011	S41000/1.4006/410	0.10	12.5	<1.0	<0.5	-	
	420	J91153/1.4027	S42000/1.4021/420	0.20	13.0	<1.0	-	-	
	431	J91651/1.4059	S43100/1.4057/431	0.22	17.0	1.5	-	-	
	A743 CA6NM	J91540/1.4317	S41500/1.4313/13-4	<0.06	12.5	3.7	0.6	-	
	A747 CB7Cu-1	J92180/1.4540	S17400/1.4548/17-4PH	<0.06	16.5	4.0	-	3.0Cu, 0.25Nb	
	16.5.1	1.4405	1.4418	<0.07	16.0	5.2	1.2	-	
	A351 CF8	J92600/1.4308	S30400/1.4301/304	<0.08	19.0	9.5	<0.5	-	
AUSTENITIC	A351 CF3	J92700/1.4309	S30403/1.4306/304L	<0.03	18.5	9.5	<0.5	-	
	A351 CF8M	J92900/1.4408	S31600/1.4401/316	<0.08	19.0	10.5	2.3	-	
	A351 CF3M	J92800/1.4409	S31603/1.4404/316L	<0.03	18.5	11.0	2.3	-	
	A351 CF8C	J92710/1.4552	S34700/1.4550/347	<0.08	19.0	10.5	<0.5	Nb>8x%C	
	316Nb	J92971/1.4581	S31640/1.4580/316Nb	<0.08	19.0	10.5	2.3	Nb>8x%C	
	316LM	1.4437	1.4430	<0.03	17.0	12.0	2.7	-	
	A351 CG8M	J93000	S31700/1.4449/317	<0.08	19.5	11.0	3.5	-	
	A351 CG3M	J92999	S31703/1.4438/317L	<0.03	19.5	11.0	3.5	-	
	1.4439	1.4446	S31726/1.4439	<0.03	17.5	13.5	4.5	0.17N	
	A351 CK20	J94202/1.4840	S31008/1.4951/310S	<0.20	25.0	20.5	<0.5	-	
	A351 CG6MMN	J93790	S20910/Nitronic 50	<0.06	22.0	12.5	2.0	5.0Mn, 0.3N, 0.2Nb, V	
	A351 CF10SMnN	J92972	S21800/Nitronic 60	<0.10	17.0	8.5	-	8.0Mn, 4.0Si, 0.14N	
	316HP	-	-	<0.07	21.0	9.0	2.3	0.12N	
	316LHP	-	-	<0.03	21.0	9.0	2.3	0.12N	
	SUPERAUSTENITIC	1.4500	J95150/1.4500	-	<0.08	20.0	25.0	3.0	2.0Cu, Nb>8x%C
		A351 CN7M	N08007	Alloy 20	<0.07	20.0	29.0	2.5	3.2Cu
		1.4539	1.4538	1.4539/904L	<0.02	20.0	25.0	4.5	1.5Cu
Sanicro 28		-	N08028/1.4563	<0.03	27.0	31.0	3.5	1.0Cu	
A351 CT15C		N08151/1.4859	N08810/1.4958/Alloy 800H	<0.15	20.0	32.5	-	1.0Nb	
A351 CK3MCuN		J93254/1.4557	S31254/1.4547/F44	<0.025	20.0	18.5	6.5	0.7Cu, 0.20N	
A351 CN3MN		J94651	N08926/1.4529	<0.03	21.0	24.5	6.5	0.2N, Cu	
UNS S34565		-	S34565/1.4565	<0.03	24.0	17.5	4.5	6.0Mn, 0.4N, Nb	
654 SMO		-	S32654/1.4652/654SMO	<0.025	24.0	22.0	7.5	0.5N, 3.5Mn	
HEAT RESISTANT		A297 HC	J92605/1.4822	446	0.38	28.5	4.0	-	1.8Si
	A297 HD	J93005/1.4823	-	0.42	26.5	4.5	-	1.7Si	
	A297 HF	J92603/1.4826	308	0.30	20.5	10.0	-	-	
	1.4825	1.4825	302	0.25	18.0	9.0	-	1.7Si	
	1.4826	1.4826	-	0.40	22.0	10.0	-	1.7Si	
	1.4835	-	S30815/1.4835	<0.12	21.0	11.0	-	1.7Si, 0.15N	
	A297 HH	J93503/1.4837	309	0.40	25.0	12.5	-	1.7Si	
	A297 HI	J94003/1.4846	-	0.40	25.0	21.5	-	1.0Si	
	A297 HK40	J94204/1.4848	310	0.40	25.0	20.0	-	1.7Si	
	310S	J94302/1.4840	-	<0.08	25.0	20.5	-	Si<1.5	
	A297 HL	N08604	-	0.40	21.0	20.0	-	Si<2.0	
	A297 HN	J94213	-	0.35	21.0	25.0	-	Si<2.0	
	1.4859	N08151/1.4859	-	0.10	20.0	32.0	-	1.0Si, 1.0Nb	
	A297 HP35	1.4857	-	0.40	25.0	34.0	-	1.7Si	
	A297 HT	N08605	330	0.55	17.0	35.0	-	1.7Si	
	A297 HU	N08004	331	0.40	18.0	37.5	-	Si<1.7	
	A297 HP35Nb	1.4852	-	0.40	25.0	34.0	-	1.7Si, 1.3Nb	
	2.4879	2.4879	-	0.45	28.5	48.5	-	5.0W, 1.5Si	
	17Cr53NiW	-	-	<0.50	17.0	53.0	-	1.5W, 1.0N, 1.5Si	
	24Cr24NiNb	1.4855	IN319	0.33	24.0	24.0	-	1.5Nb, 1.3Si	
	25Cr55NiNb	-	-	0.37	22.5	53.0	-	1.5Nb, Si<2.5	
	A297 HW	N08001	-	0.55	12.0	60.0	-	Si<2.5, Mn<2.0	
	A297 HX	N06006	-	0.55	17.0	66.0	-	Si<2.5	
	UMCO50	2.4778	-	0.09	28.0	-	-	49.5Co, 1.0Si	
	UMCO51	2.4779	-	0.03	28.5	-	-	50.0Co, 1.0Si	
	50Cr50NiNb	2.4813	IN657	<0.10	50.0	Bal	-	1.5Nb, 0.4Si	

TYPE	Alloy	UNS/DIN Castings	UNS/DIN/OTHER Hot Finished Equivalent	STANDARD CHEMICAL COMPOSITION (wt%)				
				C	Cr	Ni	Mo	Others
DUPLIX/SUPERDUPLIX	A890 1A/CD4MCu	J93370	-	<0.04	25.5	5.4	2.0	3.0Cu
	A890 1B/CD4MCuN	J93372	-	<0.04	25.5	5.4	2.0	3.0Cu, 0.17N
	A890 2A/CE8MN	J93345	-	<0.08	24.0	9.5	3.75	0.2N
	A890 3A/CD6MN	J93371	329	<0.06	25.0	5.0	2.2	0.2N
	A890 4A/CD3MN	J92205/1.4470	S31803/1.4462/F51	<0.03	22.2	5.5	3.0	0.2N, Cu<1.0
	A890 5A/CE3MN	J93404/1.4469	S32750/1.4410/F53	<0.03	25.0	7.0	4.5	0.2N
	A890 6A/CD3MWCuN	J93380/1.4471	S32760/F55	<0.03	25.0	7.5	3.5	0.7Cu, 0.7W, 0.25N
	1.4515	1.4515	-	<0.03	25.5	6.0	3.0	1.0Cu, 0.17N
	1.4517	1.4517	-	<0.03	25.5	6.0	3.0	3.0Cu, 0.17N
	329	-	S32900/329	<0.08	25.0	5.5	1.5	-
	ALLOY 25-5LC	-	-	<0.03	25.0	7.0	2.5	0.12N
	ALLOY 25-5Cu	-	-	<0.03	25.0	6.0	2.5	2.0Cu, 0.18N
	1.4362	-	S32304/1.4362/2304	<0.03	23.0	4.5	0.4	0.4Cu, 0.15N
	1.4469	J93404/1.4469	-	<0.03	26.0	7.0	4.0	0.17N, Cu<1.3
	NICKEL BASE	A494 CZ100	N02100/2.4066	N02200/2.4066/Nickel 200	<1.0	-	>95.0	-
A494 M35		N24135/2.4365	N04400/2.4369/Monel 400	<0.35	-	Bal	-	29.0Cu, Fe<3.5
A494 M30H		N24030/2.4367	N05500/2.4375/Monel K500	<0.30	-	Bal	-	30.0Cu, 3.2Si; Fe<3.5
A494 CY40		N06040/2.4816	N06600/2.4816/Alloy 600	<0.40	15.5	Bal	-	Fe<11.0, Si<3.0
A494 CU5MCuC		N08826	N08825/2.4858/Alloy 825	<0.05	21.5	41.0	3.0	3.0Cu, 0.9Nb, Fe<3.0
A494 CW6MC		N26625/2.4856	N06625/2.4856/Alloy 625	<0.06	21.5	Bal	9.0	3.75Nb, Fe<5
A494 CW2M		N26455/2.4610	N06455/2.4610/HC-4	<0.02	16.0	Bal	16.0	Fe<2.0
A494 CW6M		N30107	-	<0.07	18.5	Bal	18.5	Fe<3.0
A494 CW12MW		N30002/2.4686	N10276/2.4819/HC-276	<0.12	16.5	Bal	17.0	4.25W, 0.3V, Fe<7.5
A494 CX2MW		N26022/2.4602	N06022/2.4602/HC-22	<0.02	21.5	Bal	13.5	3.0W, Fe<6.0
A494 CX2M		N26059/2.4607	N06059/2.4605/Alloy 59	<0.02	23.0	Bal	15.5	Fe<1.5
HC2000-C		2.4675	N06200/2.4675/HC-2000	<0.02	23.0	Bal	16.0	1.6Cu, Fe<3.0
A494N7M		N30007/2.4617	-	<0.07	<1.0	Bal	31.5	Fe<3.0
A494 N12MV		N30012/2.4882	N10665/2.4617/HB-2	<0.12	<1.0	Bal	28.0	Fe<6.0
HB2		N30012/2.4810	N10665/2.4617/HB-2	<0.02	<1.0	Bal	28.0	Fe<2.0
HB3	2.4600	N10675/HB-3	<0.02	2.0	Bal	30.0	Fe<2.0	
ALLOYS PRODUCED UNDER PATENT (* Under Trade Mark ** Under Exclusive Licence)								
PAT.	PROPRIETARY Alloy	UNS/DIN Castings	Wrought	STANDARD CHEMICAL COMPOSITION (wt%)				
				C	Cr	Ni	Mo	Others
Fordinox	316 HP	-	-	<0.07	21.0	9.0	2.3	0.12N
	316LHP	-	-	<0.03	21.0	9.0	2.3	0.12N
	ALLOY 25-5LC	-	-	<0.03	25.0	7.0	2.5	0.12N
	ALLOY 25-5Cu	-	-	<0.03	25.0	6.0	2.5	2.0Cu, 0.18N
Sandvik	SAF 2304	-	SAF 2304	<0.03	23.0	4.0	-	0.15N
	SAF 2205	J92205/1.4470	SAF 2205	<0.03	22.0	5.5	3.0	0.18N
	SAF 2507 ®	J93404/1.4469	SAF 2507	<0.03	25.0	7.0	4.2	0.25N
	2RK65	1.4538	2RK65	<0.03	20.0	25.0	4.5	1.5Cu
	Sanicro 28	-	Sanicro 28	<0.03	27.0	31.0	3.5	1.0Cu
Outokumpu	254SMO ®	J93254/1.4557	254SMO	<0.025	20.0	18.0	6.3	0.7Cu, 0.20N
	654SMO ®	-	654SMO	<0.025	24.0	22.0	7.5	0.50N, 3.5Mn
	153MA™	-	153MA	<0.05	18.5	9.5	-	1.5Si, 0.15N, Ce
	253MA ®	-	253MA	<0.20	21.0	11.0	-	1.70Si, Ce
Haynes Intl. Inc.	353MA ®	1.4852	353MA	<0.20	25.0	35.0	-	1.50Si, Ce
	Hastelloy ® C-276*	N30002/2.4686	Hastelloy C-276	<0.02	15.5	Bal	16.0	5.5Fe, 3.75W
	Hastelloy ® C-4*	N26455/2.4610	Hastelloy C-4	<0.02	16.0	Bal	16.25	Fe<2.0
	Hastelloy ® C-22*	N26022	Hastelloy C-22	<0.02	21.25	Bal	13.5	4.0Fe, 3.0W
	Hastelloy ® B-2*	N30007	Hastelloy B-2	<0.02	<1.0	Bal	28.0	Fe<2.0
	Hastelloy ® G-3*	2.4619	Hastelloy G-3	<0.02	22.25	Bal	7.0	2.0Cu, 19.5Fe
	Hastelloy ® G-30*	-	Hastelloy G-30	<0.03	29.75	Bal	5.3	15.0Fe, 1.7Cu, 2.8W, Nb
	Hastelloy ® C-2000**	2.4675	Hastelloy C-2000	<0.02	23.0	Bal	16.0	1.6Cu, Fe<3.0
	Hastelloy ® B-3**	2.4600	Hastelloy B-3	<0.02	2.0	Bal	29.5	Fe<2.0
	Hastelloy ® C-22HS**	-	Hastelloy C-22HS	<0.02	20.7	Bal	16.5	Fe<1.8
Hastelloy ® G-35**	2.4643	Hastelloy G-35	<0.02	33.4	Bal	8.3	Fe<2.0	