



## Special materials and nickel alloys

### Products made from special materials

All over the world, the name BUTTING stands for high quality pipes, pipelines and components which are used in a great variety of industries and applications. The core skills of our family business are based in the knowledge of material, forming and welding technology and in quality assurance. We rely on more than 50 years of experience in welding and in processing corrosion resistant steels and alloys. Apart from austenitic steels, special alloys and titanium, BUTTING is a specialist in the fabrication of special materials and nickel alloys for more than 30 years.

### Highly corrosion resistant alloys

A wide range of high-performance production facilities offers you a large number of possibilities:

- Longitudinally welded pipes which we produce ourselves
  - With outer diameters from 15 to 2 032 mm (80") and wall thicknesses up to 70 mm
  - With demanding tolerance requirements
  - In special geometries
  - Acc. to internationally valid standards, including DIN EN, Norsok, API and ASTM
- Specially shaped parts and long radius piggyback bends
- Special pipes and components ready for installation
- Spools

### Quality as the decisive factor

The quality management system at BUTTING is certified under DIN EN ISO 9001 by the DNV GL. We hold many other approvals. In order to ensure that we meet project-specific demands, a wide range of testing equipment is available for destructive and non-destructive tests. We supply pipes according to international standards, including DIN EN, ASTM, Norsok and API. Our production technology ensures that your project-specific requirements can be implemented:

- Restricted tolerances
- Special surface treatment
- Individual quality requirements



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**BUTTING**

## Individual material selection

The BUTTING manufacturing programme offers you a broad spectrum of high-quality materials for your individual corrosive application.

Excerpt of the BUTTING delivery programme for special alloy							
Material grade	Similar UNS-No.	Other commercial designation	Abbreviation	DIN or SEW for parent metal (coil/plate), pipe	ASTM for the parent metal/pipe	VdTÜV-Werkstoffblatt (data sheet)	Density (g/cm <sup>3</sup> )
1.4361	S30600		X1CrNiSi18-15-4	DIN EN 10088-2	A240/A269, A312, A358	-	7.7
1.4429	S31653		X2CrNi-MoN17-13-3	DIN EN 10028-7/ DIN EN 10217-7, DIN EN 10296-2	A240/A249, A269, A312, A358, A376	-	8.0
1.4462	S31803/ S32205	Duplex	X2CrNiMoN22-5-3	DIN EN 10028-7/ DIN EN 10217-7, DIN EN 10296-2	A240/A790, A928	418	7.8
1.4410	S32750	Superduplex	X2CrNiMoN25-7-4	DIN EN 10028-7/ DIN EN 10217-7, DIN EN 10296-2	A240/A790, A928	-	7.8
1.4501	S32760	ZERON100, Superduplex	X2CrNiMo CuWN25-7-4	DIN EN 10028-7/ DIN EN 10217-7	A240/A790, A928	-	7.8
1.4529	N08926		X1NiCrMo CuN25-20-6/ X1NiCrMo CuN25-20-7	DIN EN 10028-7/ DIN EN 10217-7	B625, A240/A249, A269, A312, A358, B673, B674	502	8.1
1.4539	N08904	904L	X1NiCrMo CuN25-20-5	DIN EN 10028-7/ DIN EN 10217-7, DIN EN 10296-2	A240/A249, A269, A312, A358	421	8.0
1.4547	S31254	254SMO	X1CrNiMo CuN20-18-7	DIN EN 10028-7/ DIN EN 10217-7	A240/A249, A269, A312, A358, A409	473	8.0
1.4562	N08031	Alloy 31	X1NiCrMo CuN32-28-7	SEW 400	B625/B619, B626	509	8.0
1.4563	N08028	Alloy 28	X1NiCrMo Cu31-27-4	DIN EN 10028-7/ DIN EN 10217-7	B709	483	8.0
1.4565/ 1.4565 S	S34565	Superaustenit	X2CrNiMn MoNbN25-18-5-4	DIN EN 10088-2	A240/A249, A269, A312, A358	537	8.0
1.4591	R20033	Alloy 33	X1CrNiMo CuN33-32-1	SEW 400	B625/B619, B626	516	7.9
1.4828	S30900		X15CrNiSi20-12	DIN EN 10095, SEW 470/ DIN EN 10296-2	A167	-	7.9
1.4841	S31000		X15CrNiSo25-21	DIN EN 10095/ SEW 470	A167	-	7.9
1.4876	N08800	Alloy 800	X10NiCrAlTi32-20	DIN EN 10095, SEW 470/ DIN EN 10028-7	A240, B409/A358, B514, B515	412, 434	8.0

Excerpt of the BUTTING delivery programme for special alloy (continuation)							
Material grade	Similar UNS-No.	Other commercial designation	Abbreviation	DIN or SEW for parent metal (coil/plate), pipe	ASTM for the parent metal/pipe	VdTÜV-Werkstoffblatt (data sheet)	Density (g/cm <sup>3</sup> )
1.4958	N08810	Alloy 800H	X5NiCrAlTi31-20	DIN EN 10028-7	A240, B409/A358, B514, B515	-	8.0
1.4959	N08811	Alloy 800HT	X8NiCrAlTi32-21	DIN EN 10028-7	A240, B409/B515	-	8.0
CW352H (previously: 2.0872)	C70600	Cunifer 10	CuNi10Fe1Mn	DIN EN 1652	B122, B171/B466, B467	420	8.9
CW354H (previously: 2.0882)	C71500	Cunifer 30	CuNi30Mn1Fe	DIN EN 1652	B122, B171/B467	420	8.9
2.4066	N02200	Alloy 200	Ni99.0	DIN 17740/ DIN 17751	B162/B725	-	8.9
2.4068	N02201	Alloy 201	LC-Ni99.0	DIN 17740/ DIN 17751	B162/B725	345	8.9
2.4360	N04400	Alloy 400	NiCu30	DIN 17743, DIN 17750/ DIN 17751	B127/B725	263	8.8
2.4600	N10675	Alloy B3/B4	NiMo 29 Cr	DIN 17744, DIN 17750/ DIN 17751	B333/B619, B626	512, 517	9.2
2.4602	N06022	Alloy 22	NiCr21Mo14W	DIN 17744, DIN 17750/ DIN 17751	B575/B619, B626	479	8.7
2.4605	N06059	Alloy 59	NiCr23Mo16Al	DIN 17744, DIN 17750/ DIN 17751	B575/B619, B626	505	8.6
2.4610	N06455	Alloy C4	NiMo16Cr16Ti	DIN 17744, DIN 17750/ DIN 17751	B575/B619, B626	424	8.6
2.4633	N06025	Alloy 602 CA	NiCr25FeAlY	DIN 17742, DIN 17750/ DIN 17751	B168/B516, B517, B546	540	7.9
2.4650	N07263	Alloy C263	NiCo20Cr20MoTi	DIN 17744, DIN 17750	-	-	8.4
2.4700		Alloy 2120 MoN	NiCr21Mo20N			-	8.6
2.4816	N06600	Alloy 600	NiCr15Fe	DIN EN 10095, DIN 17742, DIN 17750/ DIN 17751	B168/B516, B517	305	8.5
2.4819	N10276	Alloy C276	NiMo16Cr15W	DIN 17744, DIN 17750/ DIN 17751	B575/B619, B626	400	8.9
2.4851	N06601	Alloy 601	NiCr23Fe	DIN EN 10095, DIN 17742, DIN 17750/ DIN 17751	B168	-	8.2
2.4856	N06625	Alloy 625	NiCr22Mo9Nb	DIN EN 10095, DIN 17744, DIN 17750/ DIN 17751	B443/B444, B704, B705	499	8.4
2.4858	N08825	Alloy 825	NiCr21Mo	DIN 17744, DIN 17750/ DIN 17751	B424/B704, B705	432	8.1

No guarantee for correctness



## Projects all over the world

We have been able to incorporate our skills into projects with the highest technical requirements, involving for example:

- Prefabricated piping systems made from the nickel based Alloy 59 and Alloy C276, which were used for flue gas scrubbers in Canada
- Pipes made from Alloy 602CA, which were used for a flue gas system in Denmark
- Pipes made from Alloy 625, which were used for the Umm Schaif project in Abu Dhabi
- Pipes made from Alloy 825, which were used for the Karachaganak project in Kazakhstan
- Spools made from Alloy C276, which were used for a petrochemical plant in Jubail, Saudi Arabia
- Heat exchanger tubes made from Alloy C22, which were used in the USA
- Pipelines made from Alloy C4, which were used for a MDI plant in Shanghai/China
- Pipes made from 6 Moly and Alloy 825, which were used for the BARZAN project in Qatar
- Large pipes made from Alloy 600 which were used in the United Arab Emirates