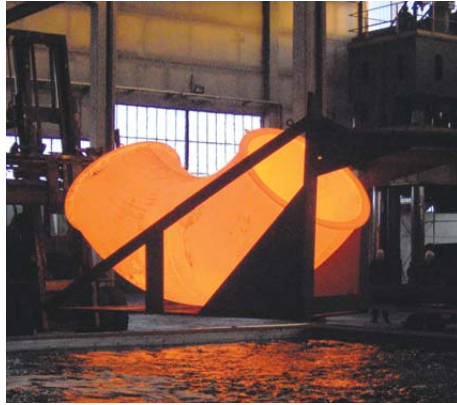
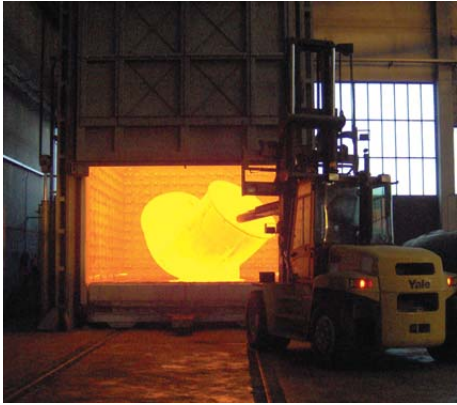


*A Long Experience in Energy Equipment and one Goal:*

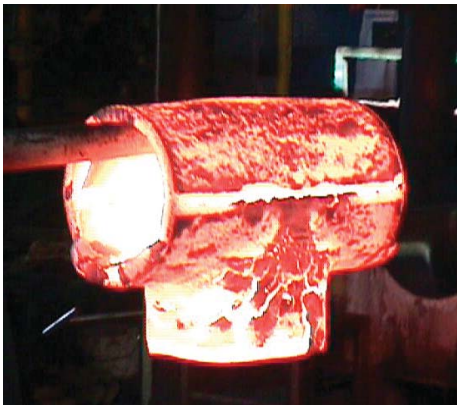
*The Customer's satisfaction.*



Butt Welding Fittings  
in Stainless Steel and Exotic Alloys  
for Severe Service.



*Carbide Solution Annealing of a 72" Stainless Steel Elbow*



*Heavy Wall Duplex S.S. Tee under forging*



*20" sch. 140 Elbow according to UNS S31254 (SMO)*



*Typical Fittings in Stainless Steel and Exotic Alloys*



*Large Size Stainless Steel Fittings*



*Fittings after Pickling and Passivation*

# MATERIAL GRADE AND CHEMICAL COMPOSITION

AUSTENITIC STAINLESS STEEL TO ASTM A 403													
TRADE DESIGNATION	UNS	C MAX	Mn MAX	Si MAX	P MAX	S MAX	Cr MAX	Ni MAX	Mo MAX	Ti MAX	Nb MAX	Cu MAX	N MAX
304	UNS S30400	.080	2.00	1.00	.045	.030	18-20	8-11					
304L	UNS S30403	.035	2.00	1.00	.045	.030	18-20	8-13					
304H	UNS S30409	.04-10	2.00	1.00	.045	.030	18-20	8-11					
316	UNS S31600	.080	2.00	1.00	.045	.030	16-18	10-14	2.0-3.0				
316L	UNS S31603	.035	2.00	1.00	.045	.030	16-18	10-15	2.0-3.0				
316H	UNS S31609	.04-10	2.00	1.00	.045	.030	16-18	10-14	2.0-3.0				
316Ti		.070	2.00	1.00	.045	.030	16-18	10-14	2.0-3.0	.10-.70			
316 urea		.030	2.00	1.00	.045	.030	16-18	13 min	2.0-3.0				.20
321	UNS S32100	.080	2.00	1.00	.045	.030	17-20	9-13		.10-.70			
321H	UNS S32109	.04-10	2.00	1.00	.045	.030	17-20	9-13		.10-.70			
347	UNS S34700	.080	2.00	1.00	.045	.030	17-20	9-13			.10-.70		
347H	UNS S34709	.04-10	2.00	1.00	.045	.030	17-20	9-13			.10-.70		
SMO ®	UNS S31254	.020	1.00	.80	.030	.010	19.5-20.5	17.5-18.5	6.0-6.5			.50-1.0	.18-.22

DUPLEX & SUPER DUPLEX TO ASTM A 815													
TRADE DESIGNATION	UNS	C MAX	Mn MAX	Si MAX	P MAX	S MAX	Cr MAX	Ni MAX	Mo MAX	N MAX	Nb MAX	Cu MAX	W MAX
DUPLEX	UNS S31803	.030	2.00	1.00	.030	.020	21-23	4.5-6.5	2.5-3.5	.08-.20		0.30	
S.DUPLEX	UNS S32550	.040	1.50	1.00	.040	.030	24-27	4.5-6.5	2.9-3.9	.10-.25		1.5-2.5	
S.DUPLEX	UNS S32750	.030	1.20	.80	.035	.020	24-26	6-8	3-5	.24-.32		.50	
ZERON 100 ®	UNS S32760	.030	1.00	1.00	.030	.010	24-26	6-8	3-4	.20-.30		.50-1.0	.50-1.0

NICKEL ALLOYS TO ASTM B 366													
TRADE DESIGNATION	UNS	C MAX	Mn MAX	Si MAX	P MAX	S MAX	Cr MAX	Ni MAX	Mo MAX	Ti MAX	Fe MAX	Cu MAX	Nb MAX
MONEL 400 ®	UNS N04400	.30	2.00	.50		.024		63min			2.5	28 min	
ALLOY 20 ®	UNS N08020	.070	2.00	1.00	.045	.035	19-21	32-38	2.0-3.0		bal	3.0-4.0	
INCOLOY 800 ®	UNS N08800	.10	1.50	1.00		.015	19-23	30-35		.15-.60	39 min	.75	
INCOLOY 825 ®	UNS N08825	.050	1.00	.50		.030	19.5-23.5	38-46	2.5-3.5	.6-1.2	22.0	1.5-3.0	
INCONEL 600 ®	UNS N06600	.15	1.00	.50			14-17	72min			6-10	.50	
INCONEL 625 ®	UNS N06625	.10	.50	.50	.015	.015	20-23	58min	8-10	.40	5.00		3-5

TITANIUM TO ASTM B 363													
TRADE DESIGNATION	UNS	C MAX	Mn MAX	Si MAX	P MAX	S MAX	Cr MAX	Ni MAX	Mo MAX	Ti MAX	Nb MAX	Cu MAX	W MAX
WPT2		0.10								bal			
WPT12		0.08						0.6-0.9	0.2-0.4	bal			

## MANUFACTURING PROGRAM

### - Butt Welding Fittings

- Forged Long Radius Elbows up to 84"
- Forged Short Radius Elbows up to 56"
- Straight Tee pieces up to 84"
- Reducing Tee pieces up to 84"
- Concentric and Eccentric Reducers up to 100"
- Crosses up to 60"
- Caps up to 100"

### - Special Fittings

- Bends 3D & 5D radius
- Special radius Elbows
- Barred Tees
- Flow Tees
- Split Tees
- Equal and Reducing Laterals

### - Special Products

- Inlet & Outlet Headers
- Y type pieces
- Strainers
- Special Fittings as per Customer's drawing

All schedules in accordance with ASME B 36.19 / B 36.10 and up to 200 mm

## **Tecnoforge Castelsangiovanni Plant**



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