

CHARGE AND DISCHARGE ROLLS IN REHEAT FURNACE APPLICATIONS

By Thermocast Spa

THERMOCAST Spa

- Thermocast is a stainless steel foundry located in North of Italy.
- Our core business is furnace rolls for steel mills.
- Static casting division and centrifugal casting division
- Machine shop and welding shop



THERMOCAST Spa LOCATION



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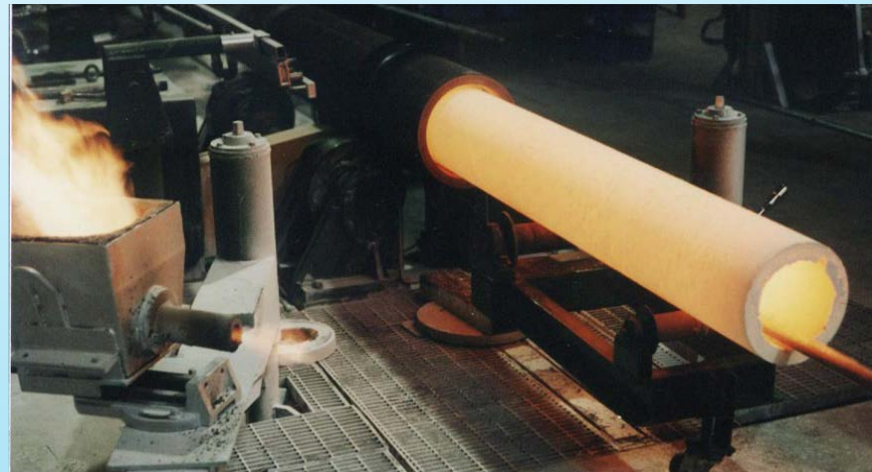
FUSIONI IN ACCIAIO INOX RESISTENTI AL CALORE
HEAT RESISTANT STAINLESS STEEL CASTINGS

FOUNDRY

STATIC CASTING PROCESS



CENTRIFUGAL CASTING PROCESS from 60mm (2,5") TO 1600mm (63") pipes



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MACHINE AND WELDING SHOP

MACHINE SHOP



WELDING SHOP



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THERMOCAST FOCUS

- Thermocast is supplying OEMs rolls for new furnaces.
- Thermocast is also focused on spare parts sold to end users.
- Thermocast is performing failure analysis on old rolls to improve lifetime.



LAB FULLY EQUIPPED FOR DESTRUCTIVE AND NON DESTRUCTIVE TESTS



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ENGINEERING DEPARTMENT

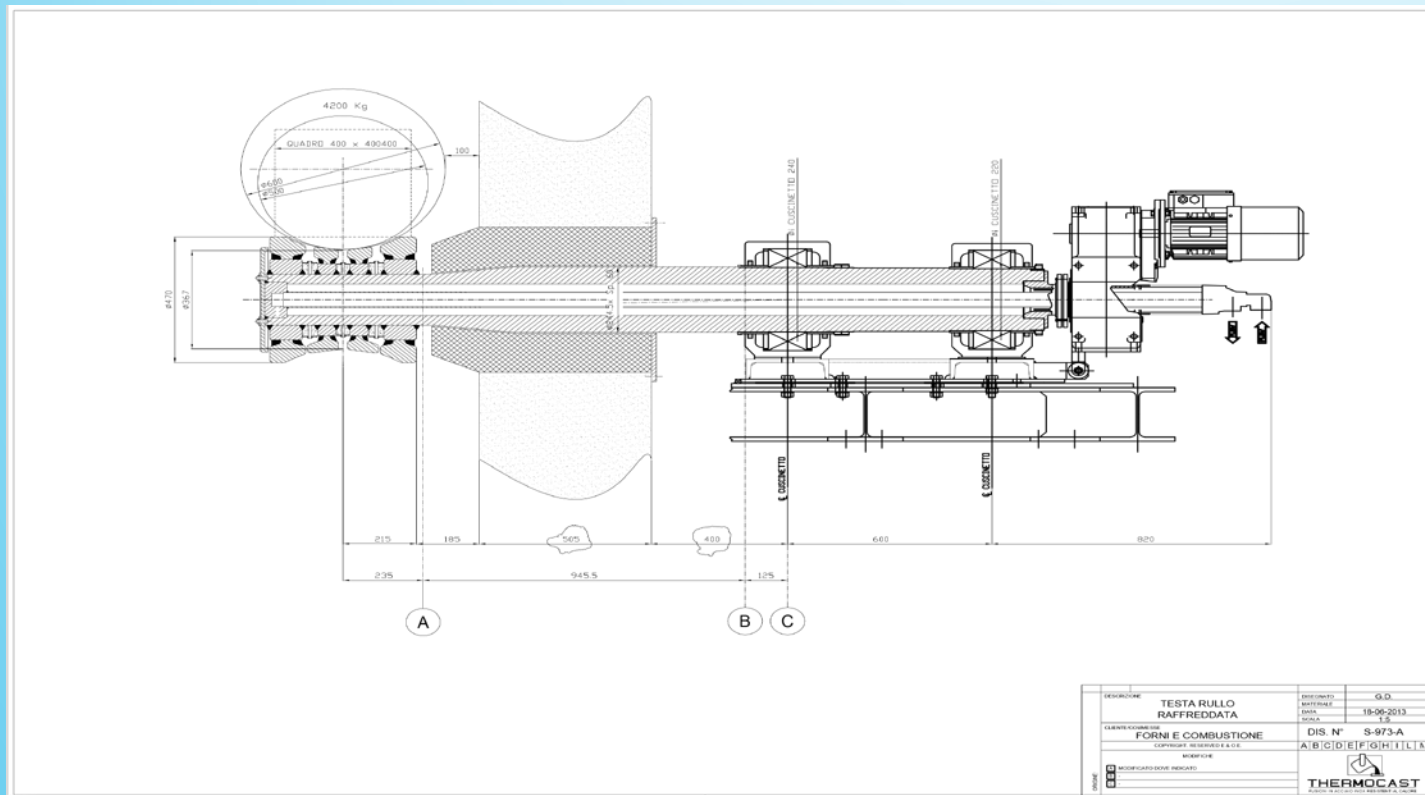
Thermocast has its own engineering department which is designing spare parts based on new furnace operating conditions or failure analysis with the cooperation of our lab.

Working tools are AUTOCAD 2D and 3D and different finite element analysis softwares.



FEM ANALYSIS

First step is finite element analysis based on loads and furnace operating conditions.



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ALLOY IMPROVEMENTS

Wide range of alloys available

Lega Alloy	Rif. Werkstoff Ref. Werkstoff	Rif. EN Ref. EN	Rif. ASTM Ref. ASTM	Analisi chimica indicativa Indicative chemical comp. Cr Ni Aggiunt.			Densità Density g / cm ³	Microstruttura Microstructure
T 6	1.4710	GX30CrSi7	-	6	-	-	7.7	Ferr. + Carb.
T 13	1.4729	GX40CrSi13	CA 40	13	-	-	7.7	Ferr. + Carb.
T 18	1.4740	GX40CrSi17	-	18	-	-	7.7	Ferr. + Carb.
T 28	1.4776	GX40CrSi29	HC	28	-	-	7.5	Ferr. + Carb.
T 28.5	1.4823	GX40CrNiSi27.4	HD	28	5	-	7.6	Ferr. + Aust.
T 18.8	1.4825	GX25CrNiSi18.9	HF	18	8	-	7.8	Aust. + Carb.
T 22.10	1.4826	GX40CrNiSi22.9	-	22	10	-	7.8	Aust. + Carb.
T 25.12	1.4837	GX40CrNiSi25.12	HH	25	12	-	7.8	Aust. + Carb.
T 22.14	1.4832	GX25CrNiSi20.14	-	22	14	-	7.8	Aust. + Carb.
T 25.20	1.4848	GX40CrNiSi25.20	HK	25	20	-	7.8	Aust. + Carb.
T 30.20	-	GX40CrNiSi30.20	HL	30	20	-	8.0	Aust. + Carb.
T 24.24 Nb	1.4855	GX40CrNiSiNb24.24	-	24	24	Nb	8.0	Aust. + Carb.
T 18.38	1.4865	GX40NiCrSi38.18	HT	18	38	-	8.0	Aust. + Carb.
T 25.35	1.4857	GX40NiCrSi35.25	HP	25	35	-	8.0	Aust. + Carb.
T 18.38 Nb	1.4849	GX40NiCrSiNb38.18	-	18	38	Nb	8.0	Aust. + Carb.
T 25.35 Nb	1.4852	GX40NiCrSiNb35.25	-	25	35	Nb	8.0	Aust. + Carb.
T 25.35.5	-	-	-	25	35	W	8.2	Aust. + Carb.
T 28.48.5	2.4879	G-NiCr28W	-	28	48	W	8.2	Aust. + Carb.
T 28.45.5.4	-	-	-	28	45	W, Co	8.2	Aust. + Carb.
T 30.50.16	-	-	-	30	50	W	8.3	Aust. + Carb.
T 18.55 Nb	-	G-NiCr17Nb	-	18	55	Nb	8.2	Aust. + Carb.
T Co 50	2.4778	G-CoCr28	-	28	-	Co	8.2	Aust. + Carb.
T Co 51	2.4779	G-CoCr28Nb	-	28	-	Co, Nb	8.2	Aust. + Carb.
T 50.50.1	2.4813	G-NiCr50Nb	-	50	50	Nb	8.0	Aust. + Carb.



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