Duferco
TRAVI E PROFILATI
FROM LIQUID STEEL TO FINISHED PRODUCTS

DUFERCO TRAVI E PROFILATI

In 1996, Duferco Group took over all the assets of the former Ferdofin Siderurgica and renamed the new company as Duferdofin.

The strategic alliance with Nucor, a world player in the steel sector, led to the foundation in 2008 of Duferdofin-Nucor, a joint venture.

Duferdofin - Nucor returns in 2020, totally italian and becomes Duferco Travi e Profilati S.p.A., today a benchmark in Italy, Europe and North Africa for the production of beams, special quality steels, special profiles and long products.

Duferco Travi e Profilati sells in 60 countries all over the world, satisfying the expectations of 800 clients.

The skillful combination of know-how, technologies and human resources has created a cohesive, solid and integrated system of companies capable of achieving maximum synergies in the production of rolled products at competitive costs and with minimum environmental impact.

Overall, the Group has four plants for the different stages of production of steel products , with an extension of approximately 1,500,000 m² and a production capacity of over 1,000,000 tons per year.

The steel mill is located in San Zeno Naviglio, where ferrous scrap is melted for the production of semi-finished steel products (blooms, billets and round bars).

These are partly sold on the market and partly destined for the rolling mills of the Group, located in Giammoro and Pallanzeno for the subsequent processing phase which consists of rolling to obtain beams, angles and special profiles.

The special profiles produced by the two rolling mills are processed in the San Giovanni Valdarno plant to obtain grouser for earthmoving machines for the tractor and spare parts sector.

DUFERCO GROUP

Duferco Travi e Profilati S.p.A. is affiliate of Duferco Group, founded in 1979, and mainly active at global level in the steel, energy, shipping and logistic sector.

Duferco Group employs over 5,700 people throughout the world, in more than 20 countries and in four main business divisions:

STEEL

ENERGY

SHIPPING

INNOVATION

PLANTS

SAN ZENO NAVIGLIO PLANT

Via A. Diaz, 248
25010 San Zeno Naviglio (BS) - Italy

PALLANZENO PLANT

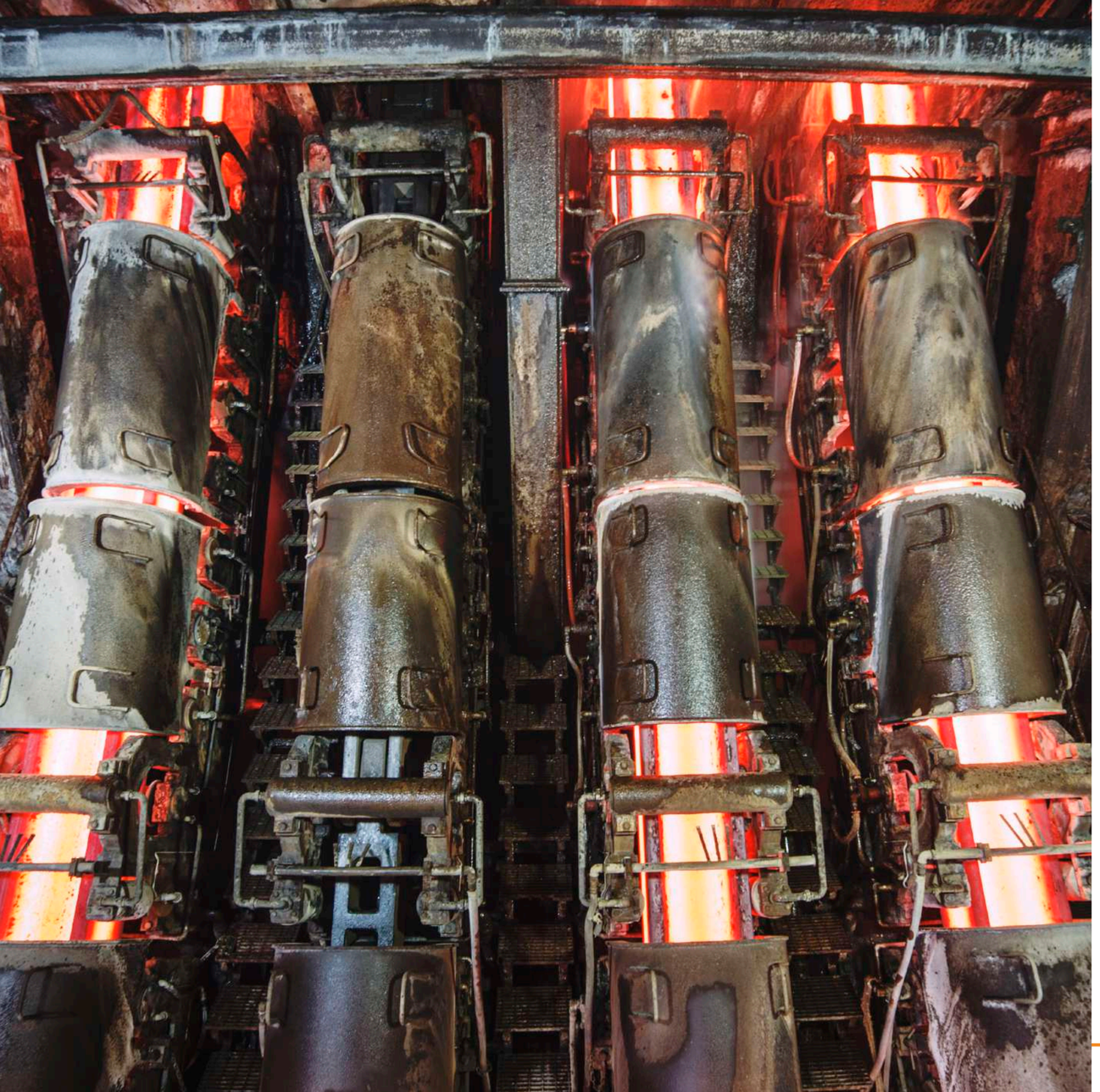
Via Sempione, 7
28884 Pallanzeno (VB) - Italy

GIAMMORO PLANT

Zona industriale Giammoro
98042 Pace del Mela (ME) - Italy

SAN GIOVANNI VALDARNO PLANT

Via Peruzzi, 58
52027 San Giovanni Valdarno (AR) - Italy



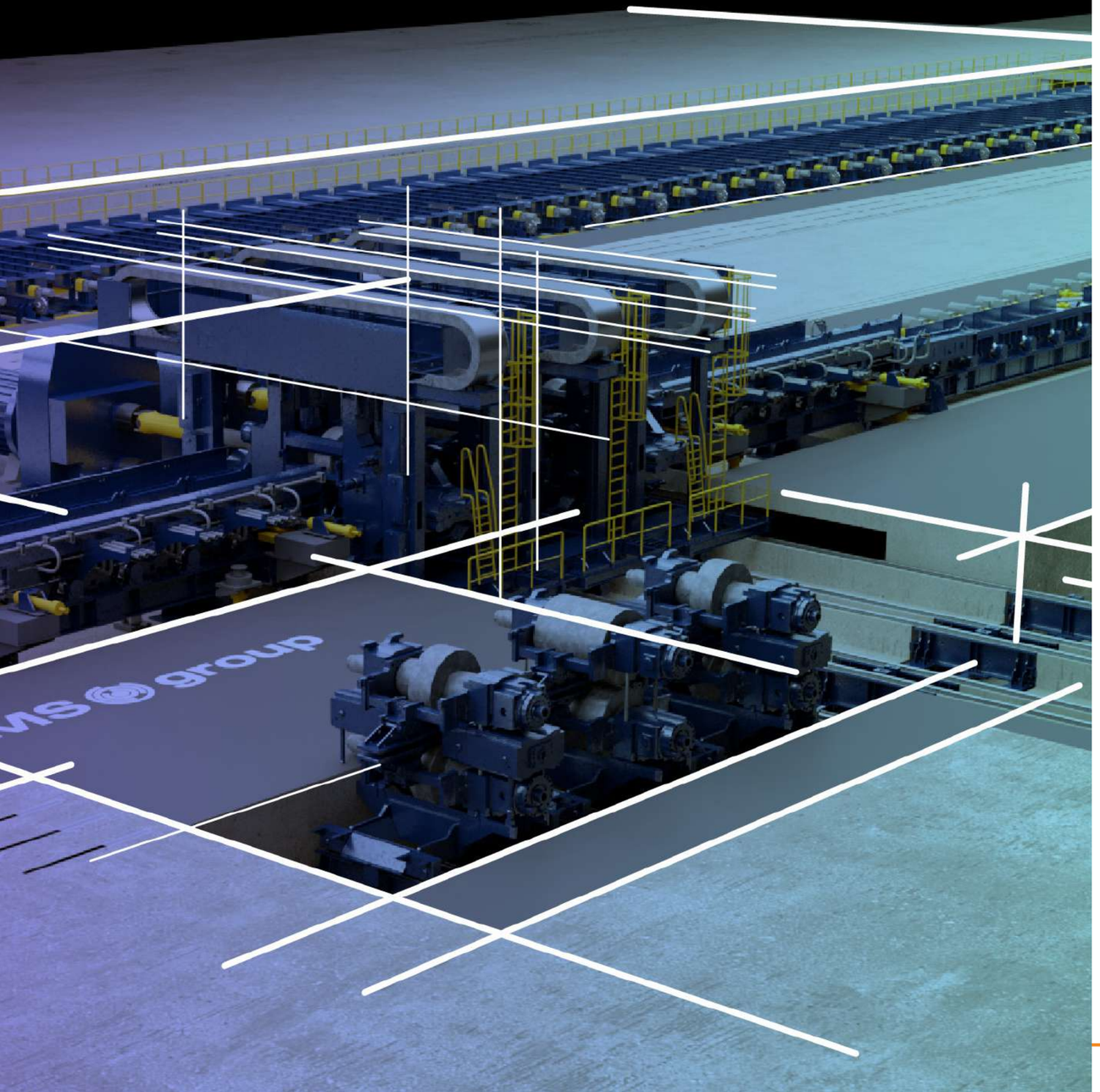
SAN ZENO NAVIGLIO

The steel plant in San Zeno Naviglio is the main plant of the Group with an extension of roughly 475,000 m² and a production capacity of about 980,000 tons of steel per year.

The plant includes an electric furnace, two refining furnaces, one of which is a twin, which allows two steel castings to be treated simultaneously, a degassing plant, two continuous casting lines and related auxiliary services.

In the steel plant the Group produces round, square, rectangular and preshaped (dog bone) semi-products.

The plant has a rail link of over 5 kilometers, which connects it to the national railways line.



THE NEW ROLLING MILL

The investment of over 180 million euros aims to build the rolling mill train, for beams and other laminates, with the best available technologies.

The main goal of the investment is to maximize the level of customer service and the overall efficiency of the production process.

The plant will have minimum environmental impacts, as a result of the energy efficiency solutions implemented and the use of renewable energy from long-term power purchase agreements (PPA).

The new rolling mill, will allow the plant to increase production capacity by 25% reaching approximately 1 million tons of product per year.

At least approximately 150 new jobs are expected to be created in San Zeno.

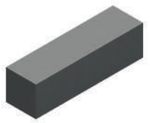
The existing rolling mills of Pallanzeno (Verbania) and Giammoro (Messina) will deepen their specialization: the former mainly on special profiles and the latter will foster its business in the Mediterranean market.

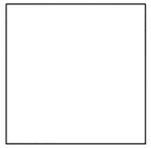
The authorization process has started, and the new rolling mill is expected to start operations by the end of 2022.

The construction of this plant is the result of a long and continuous improvement activity that has involved the entire Group in recent years.

SEMIPRODUCT

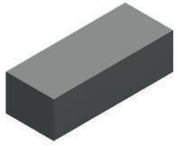
Square section





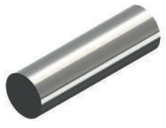
Size (mm)	Weight (Kg/m)
160x160	200
200x200	311
230x230	410
260x260	519
280x280	615

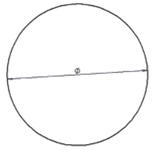
Rectangular section



Size (mm)	Weight (Kg/m)
300x400	935

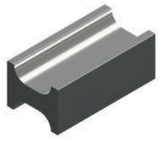
Round section

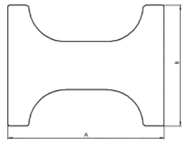




Size (mm)	Weight (Kg/m)
Ø 220	298
Ø 280	483
Ø 350	753
Ø 405	1011
Ø 500	1549

Dog Bone





A	B	Size (mm)	Weight (Kg/m)
520	400	947	

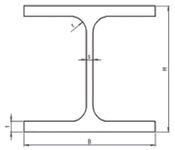
SEMIPRODUCT	RELEVANT NORMS	GRADES
SEMIPRODUCT: SQUARE SECTION	Dimensional and shape tolerances according to EN 10031 or customer technical specification. Avaiability of the following tests: Jominy test according to UNI EN ISO 642 Austenitic grain size acc. ASTM E122 (Mc Quaid-Ehn method) Inclusional level according to ASTM E45 or ISO 4967	Structural steel grades: Grades acc. to UNI EN 1002 Boron steel grades: 26MCB - 27MCB6 - 27MCDB5 - 34 MB - 28 MCB6 Cold heading steel grades: Grades acc. to EN 10263 Drawing wire steel grades: Grades acc. to EN 16120 Special steel for quenching and tempering: Grades acc. to EN 10083 e ASTM A29 Case hardening special steels: Grades acc. to EN ISO 683 Special steels for flanges and pressure system: Grades acc. to ASTM A105 - A350 - A694 - A707
SEMIPRODUCT: ROUND SECTION		
SEMIPRODUCT: RECTANGULAR SECTION		
DOG BONE	Duferco Travi e Profilati technical Specification	Structural steel grades: Steel grades acc. to UNI EN 10025

PALLANZENO

Pallanzeno plant (TPP) has a production capacity of 500 K t/ year; it's equipped with a rolling mill, a finishing centre, warehouses for storing and a finished products shipping through a railway connection.

This production unit is specialized in the hot rolling process of the small and medium range of HE and IPE beams, UPN, equal and unequal angles, IPN and earth moving special profiles, also intended to provide the mechanical division of San Giovanni Valdarno.

WIDE FLANGE BEAMS

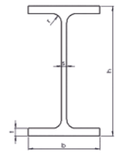


PROFILE	h (mm)	b (mm)	s (mm)	t (mm)	r (mm)	Section (cm²)	Mass (Kg/m)
HE 100 A	96	100	5	8	12	21.2	16.7
HE 100 B	100	100	6	10	12	26	20.4
HE 120 A	114	120	5	8	12	25.3	19.9
HE 120 B	120	120	6.5	11	12	34	26.7
HE 140 A	133	140	5.5	8.5	12	31.4	24.7
HE 140 B	140	140	7	12	12	43	33.7
HE 160 A	152	160	6	9	15	38.8	30.4
HE 160 B	160	160	8	13	15	54.3	42.6
HE 180 A	171	180	6	9.5	15	45.3	35.5
HE 180 B	180	180	8.5	14	15	65.3	51.2
HE 200 A	190	200	6.5	10	18	53.8	42.3
HE 200 B	200	200	9	15	18	78.1	61.3

TAPER FLANGE I SECTION

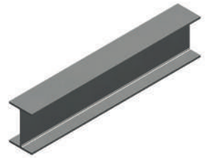
PROFILE	h (mm)	b (mm)	s (mm)	t (mm)	r (mm)	Section (cm²)	Mass (Kg/m)
IPN 160	160	74	6.3	9.5	6.3	22.8	17.9
IPN 180	180	82	6.9	10.4	6.9	27.9	21.9
IPN 200	200	90	7.5	11.3	7.5	33.4	26.2
IPN 220	220	98	8.1	12.2	8.1	39.5	31.1
IPN 240	240	106	8.7	13.1	8.7	46.1	36.2

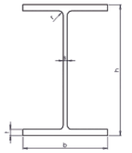
PARALLEL FLANGE I SECTION



PROFILE	h (mm)	b (mm)	s (mm)	t (mm)	r (mm)	Section (cm²)	Mass (Kg/m)
IPE 120	120	64	4.4	6.3	7	13.2	10.4
IPE 140	140	73	4.7	6.9	7	16.4	12.9
IPE 160	160	82	5.0	7.4	9	20.1	15.8
IPE 180	180	91	5.3	8.0	9	23.9	18.8
IPE 200	200	100	5.6	8.5	12	28.5	22.4
IPE 220	220	110	5.9	9.2	12	33.4	26.2
IPE 240	240	120	6.2	9.8	15	39.1	30.7
IPE 270	270	135	6.6	10.2	15	45.9	36.1
IPE 300	300	150	7.1	10.7	15	53.8	42.2

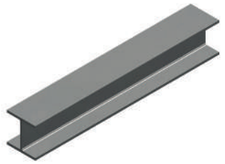
UNIVERSAL BEAMS

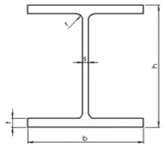




PROFILE	h (mm)	b (mm)	s (mm)	t (mm)	r (mm)	Section (cm²)	Mass (Kg/m)
127x76x13	127	76	4	7.6	7.6	16.52	13
152x89x16	152.4	88.7	4.5	7.7	7.6	20.32	16
178x102x19	177.8	101.2	4.8	7.9	7.6	24.3	19
203x102x23	203.2	101.8	5.4	9.3	7.6	29.4	23.1
203x133x25	203.2	133.2	5.7	7.8	7.6	32.2	25.1
203x133x30	206.8	133.9	6.4	9.6	7.6	38	30

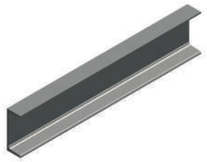
UNIVERSAL COLUMNS

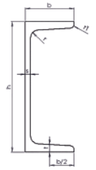




PROFILE	h (mm)	b (mm)	s (mm)	t (mm)	r (mm)	Section (cm²)	Mass (Kg/m)
152x152x37	161.8	154.4	8.0	11.5	7.6	47.3	37
152x152x30	157.6	152.9	6.5	9.4	7.6	38.4	30

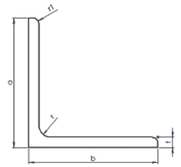
U CHANNELS





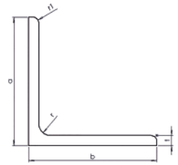
PROFILE	h (mm)	b (mm)	s(*) (mm)	t(*) (mm)	r (mm)	r 1 (mm)	Section (cm²)	Mass (Kg/m)
140	140	60	7	10	10	5	20.4	16
160	160	65	7.5	10.5	10.5	5.5	24	18.8
180	180	70	8	11	11	5.5	28	22
200	200	75	8.5	11.5	11.5	6	32.2	25.3
220	220	80	9	12.5	12.5	6.5	37.4	29.4
240	240	85	9.5	13	13	6.5	42.3	33.2
260	260	90	10	14	14	7	48.3	37.9
300	300	100	10	16	16	8	58.8	46.1

EQUAL ANGLES from 120x120x10 to 150x150x15



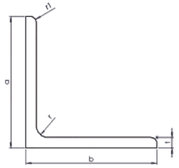
PROFILE	a (mm)	b (mm)	t (mm)	r (mm)	r1 (mm)	Section (cm²)	Mass (Kg/m)
120x120x10	120	120	10	13	6.5	23.2	18.2
120x120x12	120	120	12	13	6.5	27.5	21.6
120x120x14	120	120	14	13	6.5	31.8	25
120x120x15	120	120	15	13	6.5	33.9	26.6
120x120x16	120	120	16	13	6.5	36	28.3
130x130x10	130	130	10	14	7	25.2	19.8
130x130x12	130	130	12	14	7	30	23.5
130x130x14	130	130	14	14	7	34.7	27.2
130x130x15	130	130	15	14	7	37	29
130x130x16	130	130	16	14	7	39.3	30.8
140x140x10	140	140	10	15	7.5	27.2	21.4
140x140x12	140	140	12	15	7.5	32.4	25.4
140x140x13	140	140	13	15	7.5	35	27.4
140x140x14	140	140	14	15	7.5	37.5	29.4
140x140x15	140	140	15	15	7.5	40	32.4
140x140x16	140	140	16	15	7.5	42.5	33.3
150x150x10	150	150	10	16	8	29.3	23
150x150x11	150	150	11	16	8	32.1	25.2
150x150x12	150	150	12	16	8	34.8	27.3
150x150x13	150	150	13	16	8	37.6	29.5
150x150x14	150	150	14	16	8	40.3	31.6
150x150x15	150	150	15	16	8	43	33.8

EQUAL ANGLES from 150x150x16 to 200x200x34



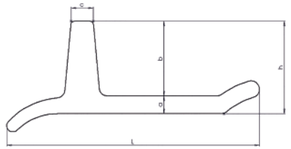
PROFILE	a (mm)	b (mm)	t (mm)	r (mm)	r1 (mm)	Section (cm²)	Mass (Kg/m)
150x150x16	150	150	16	16	8	45.7	35.9
150x150x18	150	150	18	16	8	51	40.1
150x150x20	150	150	20	16	8	56.3	44.2
180x180x14	180	180	14	18	9	48.8	38.3
180x180x15	180	180	15	18	9	52.1	40.9
180x180x16	180	180	16	18	9	55.4	43.5
180x180x18	180	180	18	18	9	61.9	48.6
180x180x20	180	180	20	18	9	68.3	53.7
180x180x22	180	180	22	18	9	84.7	58.6
200x200x14	200	200	14	18	9	54.4	42.7
200x200x15	200	200	15	18	9	58.1	45.6
200x200x16	200	200	16	18	9	61.8	48.5
200x200x18	200	200	18	18	9	69.1	54.2
200x200x20	200	200	20	18	9	76.3	59.9
200x200x22	200	200	22	18	9	83.5	65.6
200x200x24	200	200	24	18	9	90.6	71.1
200x200x25	200	200	25	18	9	94.1	73.9
200x200x26	200	200	26	18	9	97.6	76.6
200x200x28	200	200	28	18	9	104.5	82
200x200x30	200	200	30	18	9	111,3	87,4
200x200x32	200	200	32	18	9	118,1	92,7
200x200x34	200	200	34	18	9	124,8	97,9

UNEQUAL ANGLES



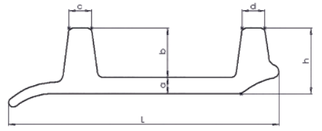
PROFILE	a (mm)	b (mm)	t (mm)	r (mm)	r 1 (mm)	Section (cm²)	Mass (Kg/m)
150X90X10	150	90	10	12	6	23.2	18.2
150X90X11	150	90	11	12	6	25.3	19.9
150X90X12	150	90	12	12	6	27.5	21.6
150X90X15	150	90	15	12	6	33.9	26.6
150X100X10	150	100	10	12	6	24.2	19
150X100X12	150	100	12	12	6	28.7	22.6
150X100X14	150	100	14	12	6	33.2	26.1
200X100X10	200	100	10	15	7.5	29.2	23
200X100X12	200	100	12	15	7.5	34.8	27.3
200X100X14	200	100	14	15	7.5	40.3	31.6
200X100X15	200	100	15	15	7.5	43	33.7
200X100X16	200	100	16	15	7.5	45.7	35.9
200X100X18	200	100	18	15	7.5	51	40
200X150X12	200	150	12	15	7.5	40.8	32
200X150X15	200	150	15	15	7.5	50.5	39.6
200X150X16	200	150	16	15	7.5	53.7	42.1
200X150X18	200	150	18	15	7.5	60	47.1

TRACK SHOES - SINGLE GROUSER



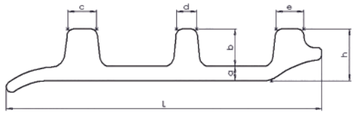
PROFILE	N' grouser	L (mm)	a (mm)	b (mm)	c (mm)	h (mm)	Section (cm²)	Mass (Kg/m)
IS 9/1	1	180.0	9.0	47.0	7.0	56.0	22.67	17.79
IS12	1	160	8	43	5	51	17,64	13,85
IS 14	1	198.0	11.5	53.0	8.0	64.5	29.86	23.44
IS 14/1	1	201.0	11.0	55.0	9.5	66.0	29.72	23.33
IS 15/1	1	201.0	11.5	55.0	9.5	66.5	30.71	24.11
IS16/1	1	199,5	12	55	9,5	67	31,64	24,83
IS 20/1	1	222.0	13.5	55.5	9.0	69.0	37.5	29.43
IS 31/1	1	247.6	15.0	71.4	22.0	86.4	56.94	44.70
IS 30/1	1	247.6	16.6	71.4	22.0	88.0	60.84	47.76
IS 36/1	1	236.0	12.3	57.7	10.0	70.0	37.48	29.42
IS 36 K	1	232.5	12.0	65.0	10.5	77.0	38.97	30.57
IS 37	1	245.0	14.7	71.5	12.7	86.2	48.61	38.15
IS68	1	242.5	19	84	22,6	103	67,63	53,09
IS86/1	1	200	11	47	8	58	27,76	21,79

TRACK SHOES - DOUBLE GROUSER



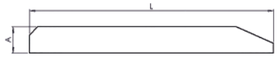
PROFILE	N' grouser	L (mm)	a (mm)	b (mm)	c (mm)	d (mm)	h (mm)	Section (cm²)	Mass (Kg/m)
IS 50/1	2	306.0	20.5	50.0	33.0	33.0	70.5	92.15	72.34
IS54	2	297	24	52	30	30	76	99,49	78,1
IS56	2	219	13	35	19,9	19,9	48	41,94	32,92
IS 74/1	2	306.0	23.5	50.0	33.0	33.0	73.5	101.07	79.34
IS 84	2	306.0	25.0	50.0	33.0	33.0	75.0	105.52	82.84
IS 95	2	197.0	11.0	37.0	14.0	14.0	48.0	33.06	25.95
IS 96	2	234.0	14.0	42.5	19.5	19.5	56.5	49.89	39.16
IS 97	2	250.0	15.0	49.5	23.0	23.0	64.5	61.81	48.52

TRACK SHOES - TRIPLE GROUSER



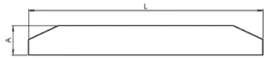
PROFILE	N' grouser	L (mm)	a (mm)	b (mm)	c (mm)	d (mm)	e (mm)	h (mm)	Section (cm²)	Mass (Kg/m)
IS 02	3	163.0	9.0	18.0	15.0	15.0	15.0	27.0	21.96	17.24
IS 06/2	3	186.0	10.0	22.0	15.0	15.0	15.0	32.0	28.63	22.47
IS 17	3	199.0	8.5	25.0	17.0	11.0	17.0	33.5	29.00	22.76
IS 24/1	3	222.5	12.5	28.0	20.0	12.0	19.0	40.5	41.42	32.52
IS 24/2	3	219.0	12.0	26.0	20.0	14.0	19.0	38.0	39.98	31.38
IS 25	3	145.0	8.0	18.0	10.0	8.0	10.0	26.0	16.77	13.16
IS 32/3	3	199.0	11.0	25.0	17.0	11.0	17.0	36.0	33.91	26.62
IS 32	3	203.0	12.7	25.3	15.0	15.0	15.0	38.0	36.98	29.03
IS 35	3	199.0	9.5	25.0	17.0	11.0	17.0	34.5	30.95	24.30
IS 39/3	3	232.5	15.0	31.0	24.0	18.0	24.0	46.0	55.72	43.74
IS 40/1	3	247.0	16.5	32.5	24.0	18.0	18.0	49.0	59.86	46.99
IS 40	3	253.0	16.5	30.5	25.0	20.5	23.4	47.0	60.32	47.35
IS 41	3	217.5	10.0	26.0	21.0	13.5	19.0	36.0	36.65	28.77
IS 41/2	3	219.0	10.0	26.0	20.0	14.0	19.0	36.0	35.66	27.99
IS 47	3	245.0	22.5	26.5	27.0	27.0	27.0	49.0	70.72	55.51
IS48	3	266	30	30	23	20	23,5	60	88,97	69,84
IS 49	3	232.5	11.0	31.0	24.0	18.0	24.0	42.0	46.54	36.53
IS 58	3	219.0	8.5	26.0	20.0	14.0	19.0	34.5	32.41	25.44
IS 59	3	232.5	11.0	26.0	24.0	18.0	24.0	37.0	42.86	33.65
IS 60	3	247.0	11.0	36.0	24.0	18.0	18.0	47.0	51.31	40.28
IS66	3	172,7	7,9	19,1	14,1	18,7	10,7	27	23,46	18,42
IS 69	3	232.5	13.0	31.0	24.0	18.0	24.0	44.0	51.13	40.14
IS 70	3	247.0	13.0	36.0	24.0	18.0	18.0	49.0	56.25	44.15
IS 79	3	186.0	8.0	22.0	15.0	15.0	15.0	30.0	24.72	19.41
IS 100	3	240.0	12.0	26.5	26.0	18.0	26.0	38.5	45.18	35.46
IS 101	3	240.0	15.0	26.5	26.0	18.0	26.0	41.5	52.26	41.03

CUTTING EDGES - SINGLE BEVEL



PROFILE	N' bevel	L (mm)	A (mm)	Section (cm²)	Mass (Kg/m)
Il 74	1	300	40	113.98	89.47

CUTTING EDGES - DOUBLE BEVEL



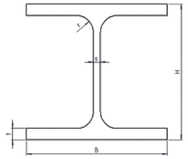
PROFILE	N' bevel	L (mm)	A (mm)	Section (cm²)	Mass (Kg/m)
IL 32	2	406.0	25.0	94.95	74.5
IL 35	2	203.0	16.0	29.94	23.5
IL 36	2	406.0	28.5	109.15	85.7
IL 37	2	330.0	35.0	110.77	87.0
IL 40	2	203.2	19.0	36.05	28.3
IL 41	2	330.0	25.0	77.77	61.0
IL 42	2	280.0	25.0	61.27	48.1
IL 43	2	406.0	41.0	159.9	125.8
IL 45	2	203.2	25.0	48.28	37.9
IL 49	2	305.0	25.0	73.73	55.3
IL 50	2	254.0	19.0	46.64	34.0
IL 51	2	360.0	30.0	95.30	74.8
IL 54	2	254.0	23.0	54.80	43.0
IL 55	2	254.0	25.0	59.88	47.0
IL 59	2	330.0	32.0	100.87	79.2
IL 60	2	330.0	28.5	89.32	70.1
IL 61	2	406.0	35.0	135.5	106.4
IL 64	2	330.0	41.0	130.57	102.5

GIAMMORO

Giammoro plant has a production capacity of 450 K t/ year and has the DEMAG beams mill specialized in the hot rolling of big and medium size HE and IPE beams, heavy earth moving special profiles, also for San Giovanni Valdarno supply and profiles for rolling tracks for subways.

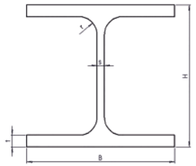
Giammoro production unit is equipped with an internal railroad connected to the national railway network and it is under construction a wharf that, once completed, will directly connect the plant to the port to facilitate traffic by ship and optimize logistics; it will also be an important infrastructure for the development of economic, commercial and productive activities in the area, while reducing the environmental impact of logistics activities.

WIDE FLANGE BEAMS from HE 140 A to HE 260 M



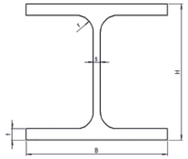
PROFILE	h (mm)	b (mm)	s (mm)	t (mm)	r (mm)	Section (cm²)	Mass (Kg/m)
HE 140 A	133	140	5.5	8.5	12	31.4	24.7
HE 140 B	140	140	7	12	12	43	33.7
HE 140 M	160	146	13	22	12	80.6	63.2
HE 140 MM	168	138	18	28.5	12	99.9	78.5
HE 160 A	152	160	6	9	15	38.8	30.4
HE 160 B	160	160	8	13	15	54.3	42.6
HE 160 M	180	166	14	23	15	97.1	76.2
HE 160 MM	208	160	24	37.5	15	154.1	121
HE 180 A	171	180	6	9.5	15	45.3	35.5
HE 180 B	180	180	8.5	14	15	65.3	51.2
HE 180 M	200	186	14.5	24	15	113.3	88.9
HE 200 A	190	200	6.5	10	18	53.8	42.3
HE 200 B	200	200	9	15	18	78.1	61.3
HE 200 M	220	206	15	25	18	131.3	103
HE 220 A	210	220	7	11	18	64.3	50.5
HE 220 B	220	220	9.5	16	18	91	71.5
HE 220 M	240	226	15.5	26	18	149.4	117
HE 240 A	230	240	7.5	12	21	76.8	60.3
HE 240 B	240	240	10	17	21	106	83.2
HE 240 M	270	248	18	32	21	199.6	157
HE 260 A	250	260	7.5	12.5	24	86.8	68.2
HE 260 B	260	260	10	17.5	24	118.4	93
HE 260 M	290	268	18	32.5	24	219.6	172

WIDE FLANGE BEAMS from HE 280 A to HE 500 B



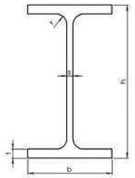
PROFILE	h (mm)	b (mm)	s (mm)	t (mm)	r (mm)	Section (cm²)	Mass (Kg/m)
HE 280 A	270	280	8	13	24	97.3	76.4
HE 280 B	280	280	10.5	18	24	121.4	103
HE 280 M	310	288	18.5	33	24	240.2	189
HE 300 A	290	300	8.5	14	27	112.5	88.3
HE 300 B	300	300	11	19	27	149.1	117
HE 300 M	340	310	21	39	27	303.1	238
HE 320 A	310	300	9	15.5	27	124	97.6
HE 320 B	320	300	11.5	20.5	27	161	127
HE 320 M	359	309	21	40	27	312	245
HE 340 A	330	300	9.5	16.5	27	133	105
HE 340 B	340	300	12	21.5	27	171	134
HE 340 M	377	309	21	40	27	315.8	248
HE 360 A	350	300	10	17.5	27	143	112
HE 360 B	360	300	12.5	22.5	27	181	142
HE 360 M	395	308	21	40	27	318.8	250
HE 400 A	390	300	11	19	27	159	125
HE 400 B	400	300	13.5	24	27	198	155
HE 400 M	432	307	21	40	27	325.8	256
HE 450 A	440	300	11.5	21	27	178	140
HE 450 B	450	300	14	26	27	218	171
HE 500 A	490	300	12	23	27	197.5	155
HE 500 B	200	300	14.5	28	27	238.6	187

WIDE FLANGE BEAMS LIGHT WEIGHT



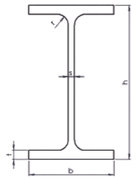
PROFILO	h (mm)	b (mm)	s (mm)	t (mm)	r (mm)	Section (cm²)	Mass (Kg/m)
HE 200 AA	186	200	5.5	8.0	18	94.1	34.6
HE 220 AA	205	220	6.0	8.5	18	51.5	40.4
HE 240 AA	224	240	6.5	9.0	21	64.4	47.4
HE 260 AA	244	260	6.5	9.4	24	69.0	54.1
HE 280 AA	264	280	7.0	10.0	24	78.0	61.2
HE 300 AA	283	300	7.5	10.5	27	88.9	69.8
HE 320 AA	301	300	8.0	11.0	27	94.5	74.2
HE 340 AA	320	300	8.5	11.5	27	100.5	78.9
HE 360 AA	339	300	9.0	12.0	27	106.6	83.7
HE 400 AA	378	300	9.5	13.0	27	117.7	92.4

PARALLEL FLANGE I SECTION LIGHT WEIGHT



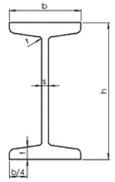
PROFILE	h (mm)	b (mm)	s (mm)	t (mm)	r (mm)	Section (cm²)	Mass (Kg/m)
IPE 240 A	237	120	5.2	8.3	15	33.3	26.2
IPE 270 A	267	135	5.5	8.7	15	39.1	30.7
IPE 300 A	297	150	6.1	9.2	15	46.5	36.5
IPE 330 A	327	160	6.5	10.0	18	54.7	43.0
IPE 360 A	357.6	170	6.6	11.5	18	64.0	50.2
IPE 400 A	397	180	7.0	12.0	21	73.1	57.4

PARALLEL FLANGE I SECTION



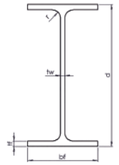
PROFILE	h (mm)	b (mm)	s (mm)	t (mm)	r (mm)	Section (cm²)	Mass (Kg/m)
IPE 240	240	120	6.2	9.8	15	39.1	30.7
IPE 270	270	135	6.6	10.2	15	45.9	36.1
IPE 300	300	150	7.1	10.7	15	53.8	42.2
IPE M 300	300	175	25	40	13	196.4	154.2
IPE 330	330	160	7.5	11.5	18	62.6	49.1
IPE 360	360	170	8.0	12.7	18	72.7	57.1
IPE 400	400	180	8.6	13.5	21	84.5	66.3
IPE 450	450	190	9.4	14.6	21	98.8	77.6
IPE 500	500	200	10.2	16	21	116	90.7
IPE 550	550	210	11.1	17.2	24	134	106

TAPER FLANGE I SECTION



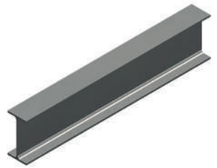
PROFILE	h (mm)	b (mm)	s (mm)	t (mm)	r (mm)	Section (cm²)	Mass (Kg/m)
IPN 240	240	106	8.7	13.1	8.7	46.1	36.2
IPN 260	260	113	9.4	14.1	9.4	53.3	41.9
IPN 280	280	119	10.1	15.2	10.1	61	47.9
IPN 300	300	125	10.8	16.2	10.8	69	54.2
IPN 320	320	131	11.5	17.3	11.5	77.7	61
IPN 360	360	143	13	19.6	13	97	76.1
IPN 400	400	155	14.4	21.6	14.4	118	92.6

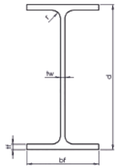
"W" SHAPES from W 6X20 to W 12x16



PROFILE	SECT. A (mm²)	d (mm)	bf (mm)	tf (mm)	tw (mm)	Mass (Kg/m)
W 6x20	379	157	153	9.3	6.6	29.8
W 6x25	474	162	154	11.6	8.1	37.1
W 8x10	191	200	100	5.2	4.3	15
W 8x13	248	203	102	6.5	5.8	19.3
W 8x15	286	206	102	8	6.2	22.5
W 8x18	339	207	133	8.4	5.8	26.6
W 8x21	397	210	134	10.2	6.4	31.3
W 8x24	457	201	165	10.2	6.2	35.9
W 8x28	532	205	166	11.8	7.2	41.7
W 8x31	589	203	203	11	7.2	46.1
W 8x35	665	206	204	12.6	7.9	52
W 8x40	755	210	205	14.2	9.1	59
W 8x48	910	216	206	17.8	10.2	71
W 8x58	1100	222	209	20.6	13	86
W 8x67	1270	229	210	23.7	14.5	100
W 10x22	419	258	146	9.1	6.1	32.7
W 10x26	491	262	147	11.2	6.6	38.5
W 10x30	570	266	148	13	7.6	44.8
W 10x49	929	253	254	14.2	8.6	73
W 10x54	1020	256	255	15.6	9.4	80
W 10x60	1140	260	256	17.3	10.7	89
W 10x68	1290	264	257	19.6	11.9	101
W 10x77	1460	269	259	22.1	13.5	115
W 10x88	1670	275	261	25.1	15.4	131
W 10x100	1900	282	263	28.4	17.3	149
W 10x112	2120	289	265	31.8	19.2	167
W 12x14	268	303	101	5.7	5.1	21
W 12x16	304	305	101	6.7	5.6	23.8

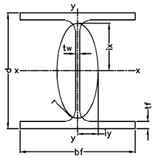
"W" SHAPES from W 12x19 to W 21x62





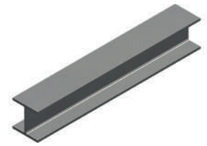
PROFILE	SECT. A (mm²)	d (mm)	bf (mm)	tf (mm)	tw (mm)	Mass (Kg/m)
W 12x19	359	309	102	8.9	6	28.3
W 12x22	408	313	102	10.8	6.6	32.7
W 12x26	494	310	165	9.7	5.8	38.7
W 12x30	567	313	166	11.2	6.6	44.5
W 12x35	665	317	167	13.2	7.6	52
W 12x65	1230	308	305	15.4	9.9	97
W 12x72	1360	311	306	17	10.9	107
W 14x22	419	349	127	8.5	5.8	32.9
W 14x26	496	353	128	10.7	6.5	39
W 14x30	571	352	171	9.8	6.9	44
W 14x34	645	355	171	11.6	7.2	51
W 14x38	723	358	172	13.1	7.9	57
W 16x36	684	403	177	10.9	7.5	53
W 16x40	761	407	178	12.8	7.7	60
W 16x45	858	410	179	14.4	8.8	67
W 16x50	948	413	180	16	9.7	75
W 16x57	1080	417	181	18.2	10.9	85
W 18x71	1340	469	194	20.6	12.6	106
W 18x65	1230	466	193	19	11.4	97
W 18x60	1140	463	192	17.7	10.5	89
W 18x55	1050	460	191	16.0	9.9	82
W 18x50	948	457	190	14.5	9.0	74
W 21x93	1760	549	214	23.3	14.7	138
W 21x83	1570	544	212	21.2	13.1	123
W 21x73	1390	539	211	18.8	11.6	109
W 21x68	1290	537	210	17.4	10.9	101
W 21x62	1180	533	209	15.6	10.2	92

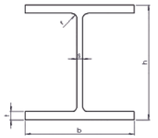
"HP" SHAPES



PROFILE	SECT. A (mm²)	d (mm)	bf (mm)	tf (mm)	tw (mm)	Mass (Kg/m)
HP 8x36	6840	204	207	11.3	11.3	53.7
HP 10x42	8000	246	256	10.7	10.5	62.8
HP 10x57	10800	254	260	14.4	14.4	84.8
HP 12x53	10000	299	306	11	11	78.5
HP 12x63	11900	303	308	13.1	13.1	93.4
HP 12x74	14100	308	310	15.5	15.4	110.7
HP 12x84	15900	312	312	17.4	17.4	124.8
HP 12x89	16900	314	313	18.3	18.3	132.7

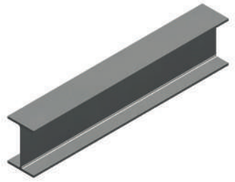
UNIVERSAL COLUMN

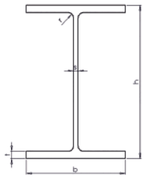




PROFILE	H (mm)	B (mm)	s (mm)	t (mm)	r (mm)	Section (cm²)	Massa (Kg/m)
152x152x30	157.6	152.9	6.5	9.4	7.6	38.4	30.0
152x152x37	161.8	154.4	8.0	11.5	7.6	47.3	37.0
203x203x46	203.2	203.6	7.2	11.0	10.2	58.8	46.1
203x203x52	206.2	204.3	7.9	12.5	10.2	66.4	52.0
203x203x60	209.6	205.8	9.4	14.2	10.2	76	60.0
203x203x71	215.8	206.4	10.0	17.3	10.2	90.9	71.0
203x203x86	222.2	209.1	12.7	20.5	10.2	110.1	86.1
254x254x73	254.1	254.6	8.6	14.2	12.7	92.9	73.1
254x254x89	260.3	257.3	10.3	17.3	12.7	113.6	88.9
254x254x107	266.7	258.8	12.8	20.5	12.7	136.6	107.1
254x254x132	276.3	261.3	15.3	25.3	12.7	168.7	132.0
254x254x167	289.1	265.2	19.2	31.7	12.7	212.4	167.1
305x305x97	307.9	305.3	9.9	15.4	15.2	123.3	96.9
305x305x118	314.5	307.4	12.0	18.7	15.2	150.2	117.9
305x305x137	320.5	309.2	13.8	21.7	15.2	174.4	136.9
305x305x158	327.1	311.2	15.8	25.0	15.2	201.4	158.1

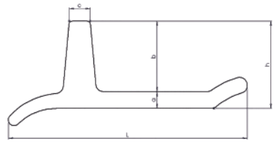
UNIVERSAL BEAMS





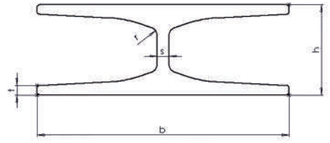
PROFILE	h (mm)	b (mm)	s (mm)	t (mm)	r (mm)	Section (cm^2)	Mass (Kg/m)
254x102x25	257.2	101.9	6.0	8.4	7.6	32	25.2
254x102x28	260.4	102.2	6.3	10	7.6	36	28.3
254x146x31	251.4	146.1	6.0	8.6	7.6	39.9	31.1
254x146x37	256.0	146.4	6.3	10.9	7.6	47.4	37.0
254x146x43	259.6	147.3	7.2	12.7	7.6	55	43.0
305x102x33	312.7	102.4	6.6	10.8	7.6	41.8	32.8
305x127x37	304.4	123.4	7.1	10.7	8.9	47.1	37.0
305x127x42	307.2	124.3	8.0	12.1	8.9	53.3	41.9
305x127x48	311.0	125.3	9.0	14.0	8.9	61.2	48.1
305x165x40	303.4	165.0	6.0	10.2	8.9	51.5	40.3
305x165x46	306.6	165.7	6.6	11.8	8.9	58.9	46.1
305x165x54	310.4	166.9	7.9	13.7	8.9	68.4	54.0
356x171x45	351.4	171.1	7.0	9.7	10.2	57	45.0
356x171x51	355.0	171.5	7.4	11.5	10.2	64.4	51.0
356x171x57	358.0	172.2	8.1	13.0	10.2	72.2	57.0
356x171x67	363.4	173.2	9.1	15.7	10.2	85.5	67.1
406x178x54	402.6	177.7	7.7	10.9	10.2	68.9	54.1
406x178x60	406.4	177.9	7.9	12.8	10.2	76.5	60.1
406x178x67	409.4	178.8	8.8	14.3	10.2	85.5	67.1
406x178x74	412.8	179.5	9.5	16.0	10.2	94.5	74.2
457x191x67	453.4	189.9	8.5	12.7	10.2	85.4	67.1
457x191x74	457.0	190.4	9.0	14.5	10.2	94.6	74.3
457x191x82	460.0	191.3	9.9	16.0	10.2	104.4	82.0
457x191x89	463.4	191.9	10.5	17.7	10.2	113.7	89.3
457x191x98	467.2	192.8	11.4	19.6	10.2	125.2	98.3
533x210x82	528.3	208.8	9.6	13.2	12.7	104.7	82.2
533x210x92	533.1	209.3	10.1	15.6	12.7	117.3	92.1
533x210x101	536.7	210	10.8	17.4	12.7	128.6	101
533x210x109	539.5	210.8	11.6	18.8	12.7	138.8	109
533x210x122	544.5	211.9	12.7	21.3	12.7	155.4	122

TRACK SHOES - SINGLE GROUSER



PROFILE	N' Denti	L (mm)	a (mm)	b (mm)	c (mm)	h (mm)	Section (cm^2)	Mass (Kg/m)
IS 42	1	263.0	19.0	77.5	25.5	96.5	71.02	55.75
IS 45/1	1	301.0	20.5	87.5	28.5	108.0	90.51	71.05
IS 75	1	305.0	20.5	93.0	28.0	113.0	92.75	72.81
IS 98/1	1	322.0	23.0	93.0	31.0	116.0	106.87	83.89
IS 88	1	369.0	25.0	102.0	32.0	127.0	131.54	103.26
IS 125	1	285.0	20.0	84.0	25.0	104.0	82.56	64.81
IS 124	1	285	17	84	25	101	74.30	58.30
IS 34	1	276	17	76.5	14.5	93.5	61.61	48.36
IS 63	1	298	22.5	101	32	123.5	106.61	83.7

ROLLING TRACK



PROFILE	h (mm)	b (mm)	s (mm)	t (mm)	r (mm)	Section (cm^2)	Mass (Kg/m)
PM 89.5	89.5	250	12	9.6	8	76.5	60.5
PM 120	120	250	12	9.5	10	80.16	62.93

PRODUCT	TOLERANCES ON SHAPE AND DIMENSIONS	GRADES
WILDE FLANGE BEAMS & WIDE FLANGE LIGHTENED BEAMS	Dimensions according to UNI EN 10365; dimensional and shape tolerance according to UNI EN 10034; steel grades according to UNI EN 10025.	S235 JR S235 J0 S235 J2 S275 JR S275 J0 S275 J2 S355 JR S355 J0 S355 J2 S355 K2 S355 J0W S355 J2W S355 J0WP
PALLALEL FLANGE I SECTIONS	Dimensions according to UNI EN 10365; dimensional and shape tolerance according to UNI EN 10034; steel grades according to UNI EN 10025.	
TAPER FLANGE I SECTIONS	Dimensions according to UNI EN 10365; dimensional and shape tolerance according to UNI EN 10024; steel grades according to UNI EN 10025.	
TAPER FLANGE U CHANNELS	Dimensions according to UNI EN 10365; dimensional and shape tolerance according to UNI EN 10279; steel grades according to UNI EN 10025.	
UNIVERSAL BEAMS	Dimensions according to UNI EN 10365; dimensional and shape tolerance according to UNI EN 10034; steel grades according to UNI EN 10025.	
UNIVERSAL COLUMNS	Dimensions according to UNI EN 10365; dimensional and shape tolerance according to UNI EN 10034; steel grades according to UNI EN 10025.	
EQUAL ANGLES	Dimensions according to EN 10056-1; dimensional and shape tolerance according to EN 10056-2; steel grades according to UNI EN 10025.	
UNEQUAL ANGLES	Dimensions according to EN 10056-1; dimensional and shape tolerance according to EN 10056-2; steel grades according to UNI EN 10025.	
W SHAPES HP SHAPES	Dimensions according to ASTM A6/A 6M; dimensional and shape tolerance according to ASTM A6/A 6M.	Steel grades according to: ASTM A572/A 572 M ASTM A992/A992M CSA G40-21 350W
TRACK SHOES	According to customer requirements	26 MCB - 27 MCB5 - 28 MCB5
CUTTING EDGES	According to customer requirements	34 MB BB 03/04

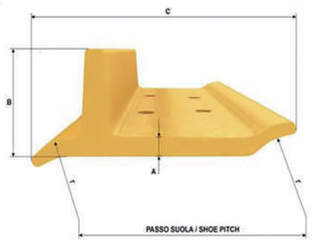
SAN GIOVANNI VALDARNO

San Giovanni Valdarno plant is the mechanical division of the group with more than 50 years of experience in the production of track shoes; Its production capacity is around 4.000.000 pieces per year, corresponding to approximately 50.000 t/ year.

In addition to serving a global market, S.Giovanni represents the end of the steel process, which starts in San Zeno when raw materials are processed into steel and continue to Pallanzeno and Giammoro with the rolling of track shoes and cutting edges profiles, to arrive in S Giovanni where section are transformed into finished track shoes.

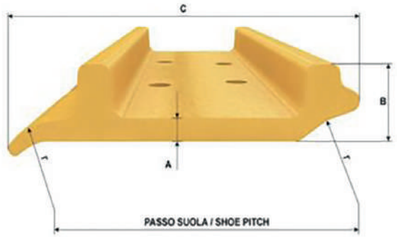
TRACK SHOES

SINGLE GROUSER



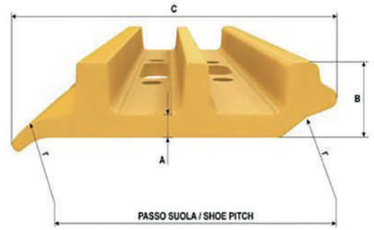
PROFILE	A mm.	B mm.	C mm.	SHOE PITCH mm.	CHAIN PITCH mm.	WEIGHT (Kg/m)
IS 9/1	9.0	56.0	180.0	156.0	156:160	17.82
IS12	8	51	160	140	140	13,85
IS 14/1	11.0	66.0	201.0	170.0	170:171.4	23.28
IS 15/1	11.5	66.5	201.0	171.5	171.5:176	24.60
IS 20/1	13.5	69.0	222.0	190.0	190.0	29.22
IS 36/1	12.3	70.0	236.0	196.2	203.2	29.42
IS 37	14.7	86.2	245.0	203.2	203.2:216	37.42
IS 31/1	15.0	86.4	247.6	210.2	215.9	44.33
IS 30/1	16.6	88.0	247.6	210.2	215.9	47.18
IS 68	19.0	103.0	242.5	216.0	216.0	53.22
IS 34	17.0	93.5	276.0	228.6	228.6	47.90
IS 42	19.0	96.8	263.0	228.6	228.6	56.10
IS 125	20.0	104.0	285.0	240.0	240.0	64.40
IS 71	17.0	93.0	292.0	250.0	250.0	54.80
IS 73	19.0	98.0	289.0	250.0	250.0	64.10
IS 45/1	20.5	108.0	300.0	260.5	260.5	70.60
IS 63	22.5	123.5	298.0	260.5	260.5	83.70
IS 98/1	23.0	116.0	322.0	280.0	280:286	83.34
IS 88	25.0	127.0	370.0	317.0	317.0	103.00
IS122	23	116	262	225	228,6:240	70,58
IS124	17	101	285	240	240	58,33

DOUBLE GROUSER



PROFILE	A mm.	B mm.	C mm.	SHOE PITCH mm.	CHAIN PITCH mm.	WEIGHT (Kg/m)
IS 95	11.0	48.0	197.0	171.0	170:176	25.70
IS 56	13.0	48.0	219.0	190.5	190.0	33.04
IS 96	14.0	56.5	234.0	199.0	203.2	38.83
IS 97	15.0	64.5	250.0	215.9	216.0	48.52
IS 50/1	20.5	70.5	306.0	260.5	260.5	71.80
IS 74/1	23.5	73.5	306.0	260.5	260.5	78.96
IS105	13	50	197	171	170:176	28,99
IS84	25	75	306	260,5	280	82,84

TRIPLE GROUSER



PROFILE	A mm.	B mm.	C mm.	SHOE PITCH mm.	CHAIN PITCH mm.	WEIGHT (Kg/m)
IS 25	8.0	26.0	145.0	125.0	125.0	13.40
IS 2	9.0	27.0	163.0	140.0	140.0	17.30
IS 66	7.9	26.9	172.7	151.0	151.0	19.02
IS 79	8.0	30.0	186.0	156.0	159.7:160	19.30
IS 6/2	10.0	32.0	186.0	156.0	159.7:160	22.58
IS 17	8.5	33.5	199.0	170.0	168:176	23.31
IS 35	9.5	34.5	199.0	170.0	168:176	24.12
IS 32/3	11.0	36.0	199.0	170.0	168:176	26.40
IS 33	12.7	38	203.0	170.0	168:176	29.03
IS 58	8.5	34.5	219.0	190.0	190.0	24.60
IS 41/2	10.0	36.0	219.0	190.0	190.0	27.30
IS 24/2	12.0	38.0	219.0	190.0	190.0	30.13
IS26	12,5	40,5	222,5	190	190	32,52
IS 49	11.0	42.0	232.5	206.0	203.2	35.85
IS 69	13.0	44.0	232.5	206.0	203.2	39.40
IS 39/3	15.0	46.0	232.5	206.0	203.2	43.74
IS 60	11.0	47.0	247.0	216.0	216.0	40.28
IS 70	13.0	49.0	247.0	216.0	216.0	44.16
IS 40/1	16.5	49.0	247.0	216.0	216.0	46.99
IS 47	22.5	49.0	247.0	216.0	216.0	55.43
IS 48	30.0	60.0	266.0	228.6	228.6	70.18

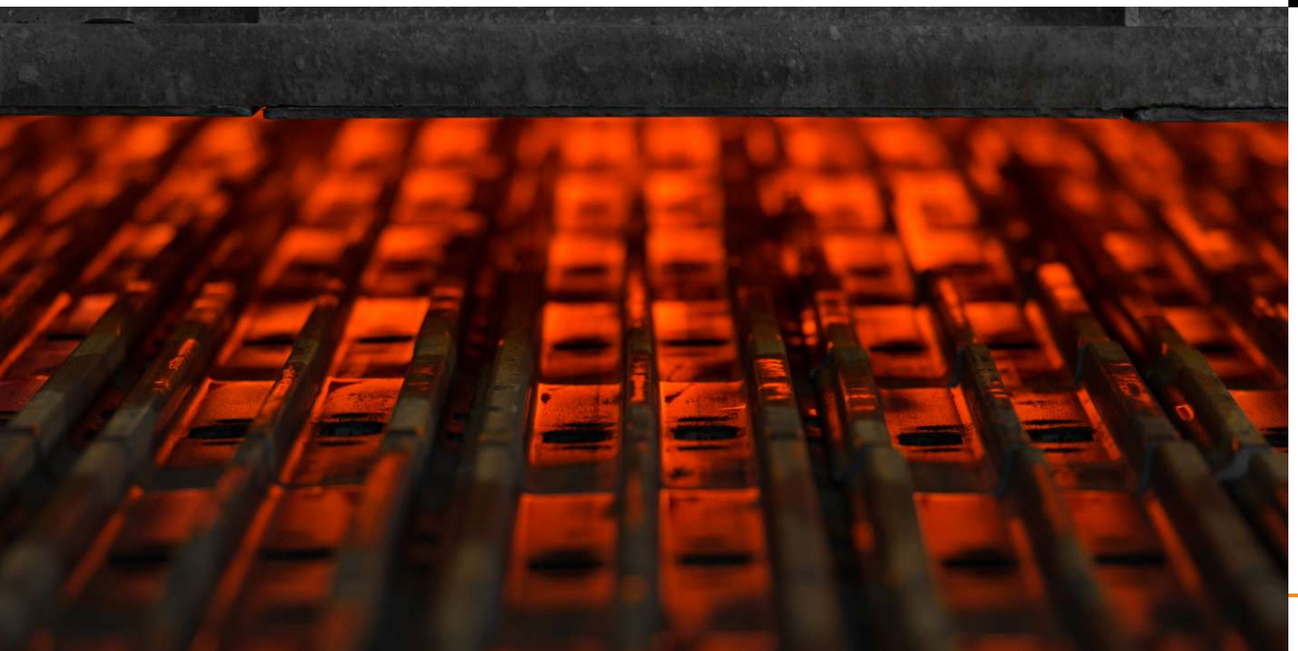
TRACK SHOES

MECHANICAL PROPERTIES

Duferco Travi e Profilati track shoes supplied in boron steel heat treated are highly wear resistant also in a very abrasive ground condition.

TRACK SHOES

SURFACE HARDNESS	as rolled max 248 HB after heat treatment: HB 415 ÷ 515
TENSILE STRENGHT DA N/MM2	min 1400
IMPACT STRENGHT KV (+20'a1 c)	> 20J



ACOFER

Acofer is the distribution company of the Duferco Travi e Profilati group, the first distributor of beams and one of the first distributors of long products in Italy.

It operates through three warehouses in Italy: located in Nave (BS), San Giovanni Valdarno (AR) and Giammoro (ME).

Thanks to the location of its warehouses, the Company is able to cover the Italian market with an efficient, low-cost structure.

ORGANIZATIONAL MODEL D.LGS. 231

The Duferco Travi e Profilati S.p.A. Group has adopted an Organization, Management and Control Model, as required by Legislative Decree 231/2001, in order to prevent any unlawful conduct and to exempt the Group and its subsidiaries from the applicable administrative and criminal liability in the event of unlawful conducts potentially prosecutable under the Decree itself.

In addition to the adoption of Model 231, recognizing the importance of social and environmental risks posed by business activities, the Group identifies and manages operational, strategic, financial and compliance risks through the continuous monitoring of the relevant departments.

Among the main documents referring to the Organizational Model is the Code of Ethics which constitutes the collection of the general principles and rules of conduct of the Group.

The Code of Ethics is the fundamental tool for communicating internally and externally the Group's commitment to the adoption of conduct based on the highest standards of transparency, integrity and loyalty and on the most rigorous compliance with applicable laws.

The Code is also an essential element of the internal control system and compliance by all the stakeholders involved in the prevention of irregularities and illicit activities.

Since the 2013, a Supervisory Organization has been established and is in charge of supervisory and control attributions in order to ensure the functioning, effectiveness, adequacy and observance of the 231 Organizational Model and to prevent any wrongdoing that may involve the administrative and criminal liability of the Group.

CERTIFICATIONS

MANAGEMENT SYSTEM

The “System Management” of the Group is certified in according to UNI EN ISO 9001:2015, “Quality Management System Requirements” and it has been designed and structured to include the management of safety and the environment.

The management system of the Duferco Travi e Profilati group:

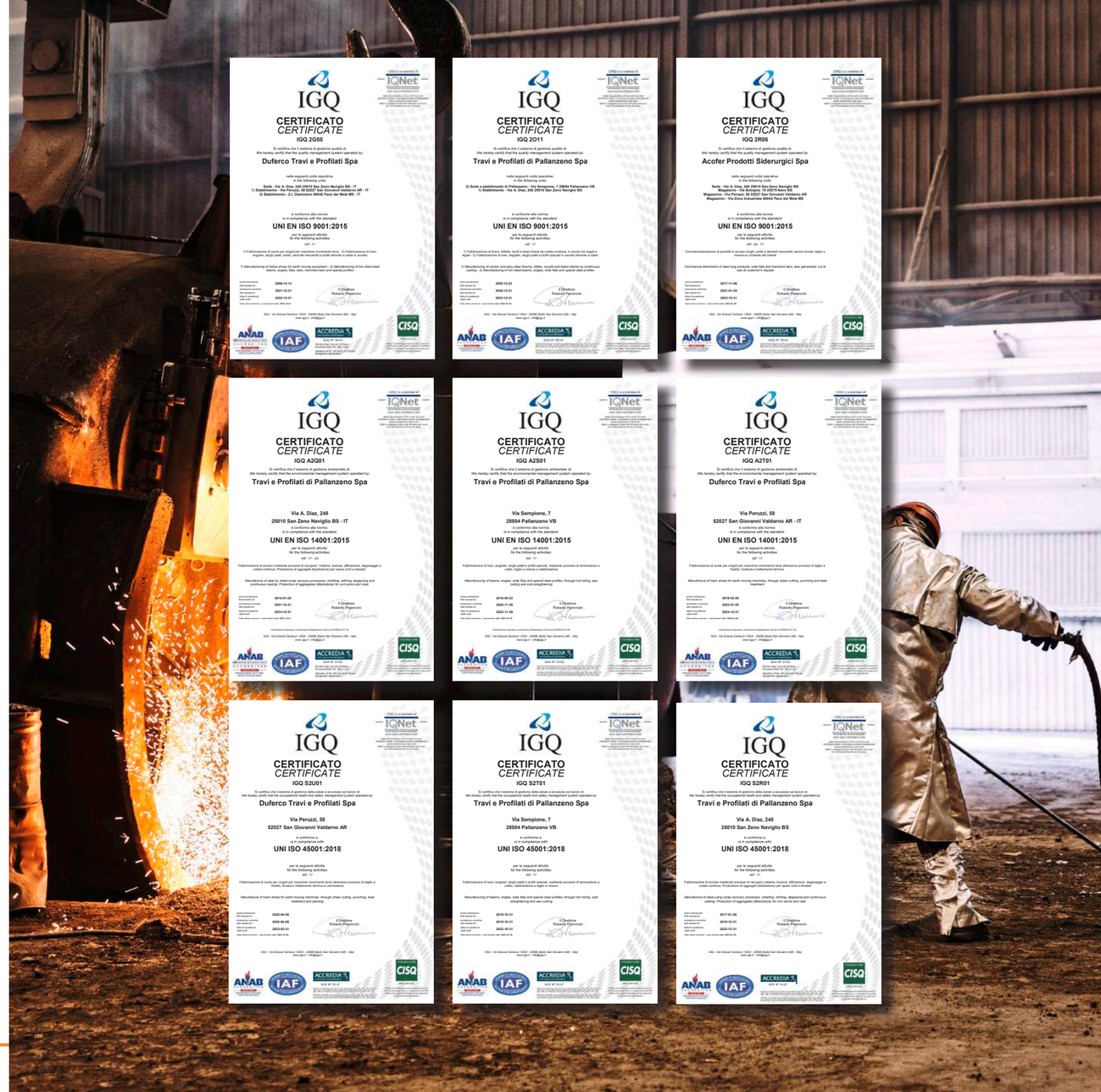
• is structured to comply with the requirements contained in the Guidelines UNI - POS system for managing health and safety at work, in compliance with art.30 of Legislative Decree 81/2008;

• adopts the guidelines of the international standard UNI ISO 45001:2018 “Work and safety management systems - Requirements and guide for use”.

The factories of San Zeno Naviglio, Pallanzeno and San Giovanni Valdarno have already achieved certification.

Gli stabilimenti di San Zeno Naviglio, Pallanzeno e San Giovanni Valdarno hanno già raggiunto la certificazione.

• adopts the guidelines of the international standard UNI EN ISO 14001:2015 “ Environmental management systems. Requirements with guidance for use”. San Zeno, Pallanzeno and San Giovanni Valdarno plants are certified.



CE MARKING

For the hot-rolled products of the Group intended for structural application, (beams, angles, wide, plates, etc.), it states compliance with the essential requirements:

- among which the most relevant are those relating to safety and environment
- contained in the Directives Community.

IGQ
ISTITUTO ITALIANO DI GARANZIA DELLA QUALITÀ

Certificate of conformity of the factory production control

1608 CPR P186

Steel structural components

Acofer Prodotti Siderurgici Spa

Via Diaz, 248 - 25010 S. Zeno Naviglio BS - IT

S. Giovanni Valdarno AR-IT; Nave BS-IT

EN 1090-1:2009+A1:2011

the factory production control fulfils all the prescribed requirements set out above.

IGQ
ISTITUTO ITALIANO DI GARANZIA DELLA QUALITÀ

Certificate of conformity of the factory production control

1608 CPR P166

Hot rolled products of structural steel

Travi e Profilati di Pallanzeno Spa

Via Sempione, 7 - 28884 Pallanzeno VB - IT

Pallanzeno VB - IT

EN 10025-1:2004

the factory production control fulfils all the prescribed requirements set out above.

IGQ
ISTITUTO ITALIANO DI GARANZIA DELLA QUALITÀ

Certificate of conformity of the factory production control

1608 CPR P089

Hot rolled products of structural steel

Duferco Travi e Profilati Spa

Via Zona Industriale Giammoro - 98042 Pace del Mela ME - IT

Pace del Mela ME - IT

EN 10025-1:2004

the factory production control fulfils all the prescribed requirements set out above.

CERTIFICATION TUV OF THE STEEL SHOP

It guarantees the suitability of the semi-finished products of the Group steel shop to be used for the production of pressure vessels, in accordance with the Pressure Equipment Directive (PED) 2014/68/EU, with the European standard EN 764-5:2014 (Pressure Equipment. Part. 5: compliance and inspections. Documentation of materials) and with the standard AD 2000 Merkblatt W0 “Materials for pressure vessels. General principles for materials”.

TÜV NORD

CERTIFICATE

Quality-Assurance System for material manufacturer according to Pressure Equipment Directive 2014/68/EU

Certificate no.: 07/202/9080/WP/Z1739/21

Name and address of the manufacturer: TRAVI E PROFILATI DI PALLANZENO S.p.A. Via Sempione 7 28884 Pallanzeno (VB) - Italy

Herewith we certify that the manufacturer has established and applies a quality-assurance system related to the material. This QA System has been subjected to a specific assessment acc. to directive 2014/68/EU, annex I, point 4.3 with regard to the materials mentioned in the scope of approval.

Approved acc. to directive 2014/68/EU: QA-System in relation to materials, EN 764-6, section 4.2 and AD2000-Merkblatt W0

Certification file no.: 9080/WP_1739/21

Audit report file no.: 8119835468

Scope of approval: Ingots, billets, round bars and slabs from continuous casting

Production site: Via A. Diaz 248 25010 San Zeno Naviglio (BS) -Italy

The certificate is valid until: January 2022

Only valid in conjunction with a valid certificate acc. to AD 2000 W0!

Attachment: Scope of approval

Notified Body 0045 for pressure equipment

Digitally signed by Lisdlocher Anne-Kristin Date: 2021.02.15 12:53:27 +01'00'

TÜV NORD CERT GmbH, Am Grauen Stein, 51105 Köln

Contact: Phone: +49 (0) 40 8557 2990 E-Mail: AMNI@tuev-nord.de

Member of

To verify the validity of the digital signatures of the TÜV NORD Systems employees, the installation of the TÜV NORD GROUP root certificate is required: https://www.tuev-nord.de/de/unternehmen/pki/root-certificates/

Certificate QA-material manufacturer_PED.req_Rev.05_AppReq_EN0120

TÜV NORD

CERTIFICATE

TÜV NORD Systems GmbH & Co. KG

certifies that the company

TRAVI E PROFILATI DI PALLANZENO S.p.A.
Via Sempione 7
28884 Pallanzeno (VB) - Italy

has been verified and recognized as material manufacturer according to

AD 2000-Merkblatt W0

Certificate-No.: 07/203/9080/WP/1739/21
File No.: 9080/AM_1739/21 / 8119835468

Production site: Via A. Diaz 248, 25010 San Zeno Naviglio (BS) -Italy

The scope of approval is available in the annex scope of approval.

The company fulfils the following essential requirements:
Facilities for appropriate manufacturing, heat treatment and manufacturing of the products, qualified personnel for manufacturing and testing of the products and a quality management system with appropriate records, which ensures proper manufacture of the products, as well as compliance with the requirements specified in the material specification.

This certificate is valid until

January 2022

Hamburg, 2021-02-15

Annex: scope of approval

Digitally signed by Lisdlocher Anne-Kristin Date: 2021.02.15 12:56:49 +01'00'

Sitzender: A Welding Technology Am Grauen Stein 51105 Koeln

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To verify the validity of the digital signature of the TÜV NORD Systems employee, the installation of the TÜV NORD GROUP root certificate is required: https://www.tuev-nord.de/de/unternehmen/pki/root-certificates/

07-VA-AM-9080-EN-Zertifikat PB 445_PED_Rev 10_AppReq_EN0120

EMISSION TRADING

It is issued by the certification SGS (Société Générale de Surveillance).

It certifies compliance with the CO_2 quota fixed by the Ministry of Environment to plants which emit greenhouse gases.

EPD - ENVIRONMENTAL PRODUCT DECLARATION

The Hot Rolled Structural Steel Products in Pallanzeno and Giammoro plant have the Environmental Product Declaration – EPD.

The EPD is developed in application of the UNI EN ISO 14025: 2010 standard (Environmental labels and declarations – Type III environmental declarations) and represents a tool to communicate objective, comparable and truthful information related to the environmental performance of products and services.

EMAS

"*Our essence is made of steel, a product that perfectly fits the circular economy paradigm and can be infinitely recycled*".

On 5th March 2021, Travi e Profilati di Pallanzeno obtained the EMAS certification for the San Zeno Naviglio plant.

The goal confirms the quality of the daily commitment of the Group to continuosly improve the environmental performance.

Drafted according to the EMAS (Eco Management and Audit Scheme) requirements, it aims at strengthening the relationships with different stakeholders and at building a more sustainable and safe working environment, in full respect of the people and the surroundings.

SLAG CERTIFICATION

The black slag produced by the Group steel shop fulfills all the conditions laid down by the Legislative Decree 152/2006 (as supplemented by the Legislative Decree no. 205/2010), therefore it is considered a by-product, not a waste.

The material - named blackstone - was recordered in accordance with the Rules “Reach”, it has been allowed to be CE marked (UNI EN 13242:2008 “Aggregates for unbound and hydraulically bound materials for use in civil engineering works and roads construction”) by a notified third body (Q-Aid).

MANUFACTURER APPROVALS

San Zeno Naviglio steel shop is approved for the production of semi-products manufactured in accordance with the main Shipping Registers: DNV-GL, ABS, Bureau Veritas and LLOYD’S Register.

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