

# SMOOTH SEAMLESS TUBES

## Large thickness hot-rolled tubes, internally smoothed according to EN 10297-1 standard

### FEATURES

As tubes of particular dimensions or with high wall thicknesses must be processed, it is necessary to make them from hot-rolled material with certain qualifying features. The first action to carry out therefore is to bore the internal diameter in a way to obtain an ideal dimension for the following actions: Smooth the tube at a H8 tolerance.  
The mechanical features, after processing, remain those of a hot-rolled raw tube.

### CONTROLS

The following rigorous controls are carried out on all tubes after processing:

- superficial features
- dimensional precision
- tolerance on internal diameter

### LENGTHS

COMMERCIAL from 4m to 10 m.

FIXED by machine cutting up to diameter 660,4 included, with a "STANDARD" length tolerance of -0+5mm; more restricted tolerance to agree on request.

### MATERIAL

E 355 steels

### CHEMICAL COMPOSITION AS A PERCENTAGE (cast analysis)

STEEL TYPE	C	Mn	Si	P	S
	max	max	max	max	max
E 355	0,22	1,60	0,55	0,040	0,035

### MARKING

The following data is shown on all tubes: brand of manufacturer, steel quality, reference standard.

### CERTIFICATES

It is possible to equip the supply with relative certificates of origin showing the chemical analysis and mechanical tests foreseen by standard (EN 10297-1).

### TOLERANCES

EXTERNAL DIAMETER, THICKNESS, DEFORMATION,  
STRAIGHTNESS: according to specific manufacturing standards of starting "raw" material:  
(see table "HOT-ROLLED TUBES FOR MECHANICAL USE")  
INTERNAL DIAMETER: H8

### MECHANICAL FEATURES

STEEL TYPE	R	Rs min.	A min.
	N/mm <sup>2</sup>	N/mm <sup>2</sup>	%
E 355	500 ÷ 650	355 <sup>2)</sup>	21

<sup>2)</sup> For thickness over 16 mm Rs 345 N/mm<sup>2</sup>  
For thickness over 40 mm Rs ≥ 335 N/mm<sup>2</sup>

# SMOOTH SEAMLESS TUBES

**Large thickness hot-rolled tubes, internally smoothed according to EN 10297-1 standard**

I.D.	Thick. I.D.	E.D.	Weight
mm	mm	mm	kg/ml
80	-0/+0,054	101,6	24,18
80	-0/+0,054	108	32,45
80	-0/+0,054	114,3	41,08
85	-0/+0,054	101,6	19,09
85	-0/+0,054	114,3	36
90	-0/+0,054	114,3	30,60
90	-0/+0,054	121	40,32
90	-0/+0,054	127	49,50
95	-0/+0,054	114,3	24,90
100	-0/+0,054	121	28,61
100	-0/+0,054	127	37,78
100	-0/+0,054	133	47,40
100	-0/+0,054	139,7	58,66
100	-0/+0,054	146	69,76
105	-0/+0,054	133	41,08
110	-0/+0,054	127	24,83
110	-0/+0,054	133	34,45
110	-0/+0,054	139,7	45,72
110	-0/+0,054	146	56,81
115	-0/+0,054	133	34,45
115	-0/+0,054	139,7	45,72
115	-0/+0,054	146	49,88
120	-0/+0,063	139,7	31,54
120	-0/+0,063	146	42,63
120	-0/+0,063	152,4	54,41
120	-0/+0,063	159	67,08
125	-0/+0,063	146	35,08
125	-0/+0,063	152,4	46,86
125	-0/+0,063	159	59,53
125	-0/+0,063	168,3	78,29
130	-0/+0,063	152,4	38,99
140	-0/+0,063	168,3	53,79
140	-0/+0,063	177,8	74,06
150	-0/+0,063	177,8	56,18

I.D.	Thick. I.D.	E.D.	Weight
mm	mm	mm	kg/ml
150	-0/+0,063	193,7	92,59
150	-0/+0,063	203	115,34
160	-0/+0,063	193,7	73,48
160	-0/+0,063	203	96,23
170	-0/+0,063	193,7	53,14
170	-0/+0,063	203	75,88
180	-0/+0,072	219,1	96,20
180	-0/+0,072	229	123,55
180	-0/+0,072	244,5	168,80
190	-0/+0,072	219,1	73,39
200	-0/+0,072	229	76,7
200	-0/+0,072	244,5	121,45
200	-0/+0,072	254	151,14
200	-0/+0,072	273	212,87
210	-0/+0,072	244,5	96,67
210	-0/+0,072	254	125,86
210	-0/+0,072	273	187,60
220	-0/+0,072	244,5	70,16
220	-0/+0,072	254	99,35
220	-0/+0,072	267	141,11
220	-0/+0,072	2733	161,09
220	-0/+0,072	298,5	223,19
225	-0/+0,072	254	85,64
225	-0/+0,072	267	127,39
225	-0/+0,072	273	147,37
230	-0/+0,072	267	113,37
230	-0/+0,072	273	104,37
230	-0/+0,072	298,5	223,19
240	-0/+0,072	273	104,37
240	-0/+0,072	298,5	194,21
250	-0/+0,081	267	54,18
250	-0/+0,081	273	74,16
250	-0/+0,081	298,5	164
250	-0/+0,081	323,9	261,47

I.D.	Thick. I.D.	E.D.	Weight
mm	mm	mm	kg/ml
250	-0/+0,081	355,6	394,27
260	-0/+0,081	298,5	132,57
260	-0/+0,081	323,9	409,72
280	-0/+0,081	323,9	163,45
280	-0/+0,081	343	241,98
280	-0/+0,081	355,6	296,25
280	-0/+0,081	368	351,57
280	-0/+0,081	406,4	534,90
290	-0/+0,081	355,6	261,11
300	-0/+0,089	323,9	91,93
300	-0/+0,089	343	170,46
300	-0/+0,089	355,6	224,73
300	-0/+0,089	368	280,05
300	-0/+0,089	406,4	463,38
320	-0/+0,089	343	94,01
320	-0/+0,089	335,6	148,28
320	-0/+0,089	368	203,60
320	-0/+0,089	406,4	386,94
350	-0/+0,089	419,0	327,65
350	-0/+0,089	457,2	533,49
400	-0/+0,097	457,2	302,29
400	-0/+0,097	508	604,59
420	-0/+0,097	457,2	201,18
420	-0/+0,097	508	503,47
420	-0/+0,097	558,8	837,59
450	-0/+0,097	508	342,56
450	-0/+0,097	558,8	676,67
500	-0/+0,105	558,8	383,83
500	-0/+0,105	609,6	749,76
600	-0/+0,105	660,4	469,34

N.B: Only the most common dimensions are shown in this table on specific request it is possible to supply dimensions or tolerances different to those indicated.