Quality	**S275J0**	Structural Steel	*Technical sheet*
According to standard	**EN 10025-2: 2004**		*Lucefin Group*
Number	**1.0143**		*rev. 2018*

Chemical composition

C% max	**Si%**	**Mn%** max	**P%** max	**S%** max	**N%** max	**Cu%** max	
0,18 [c)]	-	1,50	0,030	0,030	0,012 [a)]	0,40	**Cast** analysis
0,21 [c)]	-	1,60	0,040	0,040	0,014 [b)]	0,45	**Product** analysis

FN deoxidation method - rimming steel not admitted

[c)] max 0.20 ladle analysis, max 0,22 product analysis for thickness > 150 mm

[c)] for nominal thickness > 100 mm, C content to be agreed

[a)] N max value is not applied if chemical composition shows total Al content of 0.020%

[b)] N max value is not applied if chemical composition shows total Al content of 0.015%

Temperature °C

Hot-forming	**Supply state +U**	**Soft annealing +A**	**Isothermal annealing +I**	**Temperature values are valid for analysis close to:**		
1200-850	natural state	690 air	-	C%	Mn%	Si%

In some cases, the piece can be normalized and tempered **+NT** or quenched and tempered **+QT**

Normalizing and tempering	**Quenching and tempering**	**Stress-relieving +SR**
920 air 540-650 air	920 water 540-665 air	50° under the temperature of tempering

Pre-heating welding	**Stress-relieving after welding**
not required	slow cooling

Ac1	**Ac3**	**Ms**	**Mf**

Mechanical properties

Hot-rolled EN 10025-2: 2004 **S275J0** 1.0143

Testing at room temperature Kv 0 °C

size mm		**R**	**R_{eH}**	**A%**	**A%**	**Kv** 0 °C	***HB***	**Modulus of Elasticity**	
from	to	N/mm²	N/mm² min	min (L)	min(T)	J min [a)] (L)	*for inf.*	GPa +20 °C	
	3	430-580	275	-	-	-	-	long.	tang.
3	16	410-560	275	23	21	27	*122-162*	200	77
16	40	410-560	265	23	21	27	*122-162*		
40	63	410-560	255	22	20	27	*122-162*		
63	80	410-560	245	21	19	27	*122-162*		
80	100	410-560	235	21	19	27	*122-162*		
100	150	400-540	225	19	19	27	*119-158*		
150	200	380-540	215	18	18	27	*110-158*		
200	250	380-540	205	18	18	27	*110-158*		
250	400	380-540	195	18	18	27	*110-158 apply to flat products*		

[a)] values to be agreed for thickness > 100 mm (**normalization** +N is advised)

Cold-drawn						Hot-rolled **– Peeled**			
size mm		Testing at room temperature (longitudinal)				Testing at room temperature (longitudinal)			
		R	**Rp** 0.2	**A%**	**HB**	**R**	**Rp** 0.2	**A%**	**HB**
from	to	N/mm²	N/mm² min	min		N/mm²	N/mm² min	min	

No indications from reference standards

EUROPE EN	**ITALY** UNI	**CHINA** GB	**GERMANY** DIN	**FRANCE** AFNOR	**U.K.** B.S.	**RUSSIA** GOST	**USA** AISI/SAE
S275J0	Fe 430 C		St 44-3 U	E 28-3	43 C		