Technical information

Standard stock KKR, EN 10219, S355J2H

Chemical composition/charge analysis

Steel grade	C % max.	Si [1] % max.	Mn % max.	P % max.	S % max.	Al tot % min.	CEV [2] T ≤ 16 max.
S355J2H	0.22	0.55	1.60	0.035	0.035	0.020	0.45

1) Normal delivery value is approx 0.15 – 0.25%
2) Normal delivery value is approx 0.40

Strength

Steel grade		S355J2H
Yield point R_{eH} min	T ≤ 16	355 N/mm^2
Tensile strength R_m min	T < 3	510–680 N/mm^2
	3 ≤ T ≤ 16	490–630 N/mm^2
Elongation A_5 min		20%
Impact strength at -20°C		min. 27 Joule [1]

1) We can supply impact strength min. 34 Joule at -40 °C on special request.

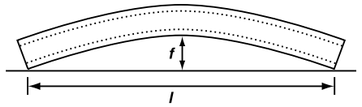

Fig 1

Tolerances

Characteristics	Tolerance
Outer dimension (w, h) w, h < 100 100 ≤ w, h ≤ 200 w, h > 200	 ±1% with at least ±0.5 mm ±0.8% ±0.6%
Thickness (T) [2]	T ≤ 5 mm: ±10% T > 5 mm: ±0.50 mm
Concavity / convexity [1] (t_1, t_2) Fig 2	Max. 0.8% of side with at least 0.5 mm
Side right-angularity (v) Fig 3	90 ° ±1°
Outer edge radius (R) Fig 5	See below!
Twisting (W) Fig 4	2 mm + 0.5 mm/m length
Straightness (f) Fig 1	0.15% of whole length
Weight (g)	+6% on individual length
Length tolerance: Fabrication length Fixed length	 -0/+50 mm After agreement when ordering

1) Tolerance of convexity and concavity is independent of the tolerance of the outer dimensions
2) On special request, we can deliver tolerance of -5% + 10% with min +0,2 mm and max +0,5 mm.

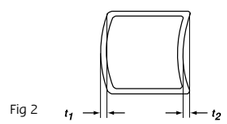

Fig 2

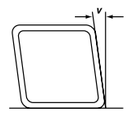

Fig 3

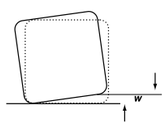

Fig 4

Outer edge radius fig 5

Wall thickness	Outer edge radius
T ≤ 6	1.6T to 2.4T
6 < T ≤ 10	2.0T to 3.0T
10 < T	2.4T to 3.6T

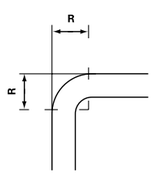

Fig 5

Technical information

Delivery from mill, EN 10210, S355J2H

Chemical properties/charge analysis

Steel grade	C % max.	Si [1] % max.	Mn % max.	P % max.	S % max.	Al tot % min.	CEV [2] T ≤ 16 max.
S355J2H	0.22	0.55	1.60	0.035	0.035	0.020	0.45

1) Normal delivery value is approx 0.15 – 0.25%
2) Normal delivery value is approx 0.40

Strength

Steel grade		S355J2H
Yield strength R_{eH} min	T ≤ 16	355 N/mm^2
Tensile strength R_m min	T < 3	510–680 N/mm^2
	3 ≤ T ≤ 16	490–630 N/mm^2
Extension A_5 min.		22%
Impact strength at -20°C		min. 27 Joule

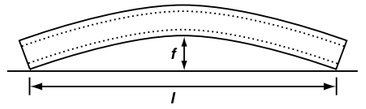

Fig 1

Characteristics	Tolerance
Outer dimensions (w,h)	±1% with at least ±0.5 mm
Wall thickness (T) 3)	-10% (Seamless -12.5%)
Concavity / convexity 1) (t1, t2) Fig 2	1%
Side right-angularity (v) Fig 3	90° ±1°
Outer edge radius (R) 2) Fig 5	Max. 3 t
Twisting (w) Fig 4	2 mm + 0.5 mm/m length
Straightness (f) Fig 1	0.20% of whole length
Weight (g)	±6% on individual length (Seamless -6/+8%)
Length tolerance: Fabrication length Fixed length	 -0/+300 mm After agreement when ordering.

1) Tolerance of convexity and concavity is dependant on the tolerance of the outer dimensions.
2) Normal delivery is approx 2t.
3) The positive deviation is limited by the weight tolerance.

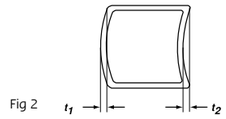

Fig 2

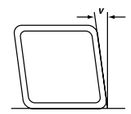

Fig 3

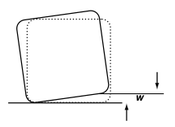

Fig 4

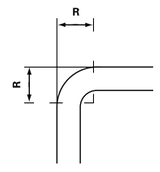

Fig 5