

Docol RP/ BH

Cold reduced rephosphorized steels

Product

Docol RP is a phosphorus alloyed high strength steel intended for pressing. Docol RP is characterized by excellent formability combined with high strength. The final strength of the finished part is achieved by strain hardening during pressing.

Docol BH is also a rephosphorized steel, but the difference is that the final strength of the finished part is due to a combination of strain hardening during pressing and bake hardening following painting.

In many cases Docol RP/ BH replace mild steels. Typical applications are parts in vehicles.

Dimension range

Thickness Docol RP: 0.50 - 3.00 mm

Thickness Docol BH: 0.50 - 2.00 mm

Width: 600 - 1500 mm

The maximum width is depending on steel grade and thickness.

Tolerances

Docol RP and Docol BH is supplied to tolerances accordance with EN 10131.

Mechanical properties

Grade SSAB	Yield Strength $R_{p0.2}$ N/mm ²		Tensile Strength R_m N/mm ²		Elongation $A_{80\%}$ min	Yield Strength $R_{p2.0} + BH$ N/mm ² min
	min	max	min	max		
Docol 220RP	220	280	340	420	30	-
Docol 220BH	220	280	340	420	30	270
Docol 260RP	260	320	380	460	28	-
Docol 260BH	260	320	380	460	28	310
Docol 300RP	300	360	420	500	26	-
Docol 300BH	300	360	420	500	26	360

Chemical Composition

(Typical values)

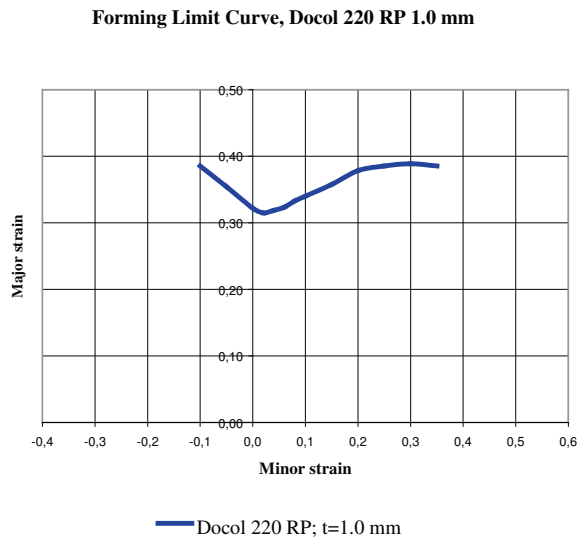
Grade SSAB	C (%)	Si (%)	Mn (%)	P (%)	S (%)	N (%)	Al (%)
Docol 220RP/ BH	0,04	0,01	0,30	0,06	0,01	0,003	0,04
Docol 260RP/ BH	0,04	0,01	0,50	0,09	0,01	0,003	0,04
Docol 300RP/ BH	0,05	0,20	0,60	0,11	0,01	0,003	0,04

Welding

Docol RP and Docol BH offer excellent welding characteristics. All the conventional welding methods can be used.

Forming

Docol RP and Docol BH has good performance regarding formability and ductility. The FLD-data are approximately the same, for both the RP- and BH-materials. An example of forming data is shown in the figure below, i.e. Docol 220 RP with thickness 1.0 mm.



Technical service and information

Knowledge Service Center will be pleased to assist with additional information concerning this product from SSAB Tunnplåt.

Specifications herein are for general reference only. They are valid at date of publication and are subjects to change without notice due to ongoing product development. Specifications are binding only if confirmed in writing.

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