

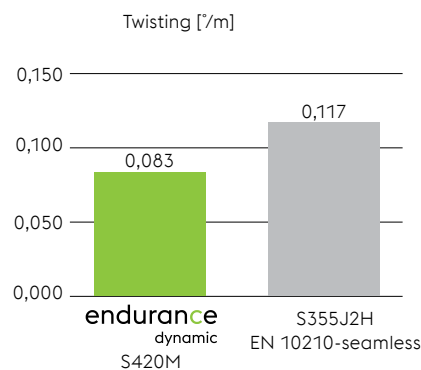
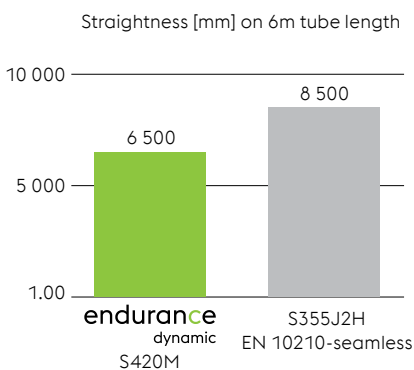
PROCESSABILITY & MECHANICAL CHARACTERISTICS

EXCELLENT PROCESSABILITY

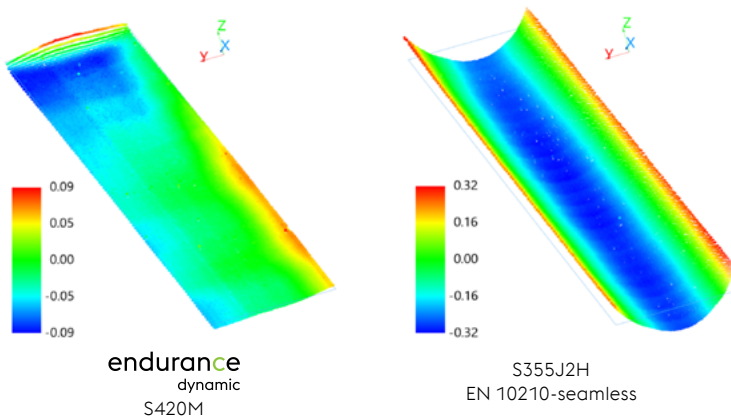
The very good degree of purity and the specially adjusted homogeneous microstructure of the steel grades used result in improved formability. In combination with adapted tube manufacturing, this offers advantages when expanding and bending the tubes. In addition, narrow chamfer dimensions can be realized.

- » Compared to EN10219, narrower chamfer dimensions are made possible - up to $1.25 \times T$
- » Dimensional tolerances from EN10219 can be limited

endurance dynamic is known for its high quality in straightness, twisting and flatness of plane surfaces. Especially in the automated processing of hollow sections there are advantages in manipulation. In addition, fewer imperfections occur, which in turn leads to a reduction in instability under compressive loads.



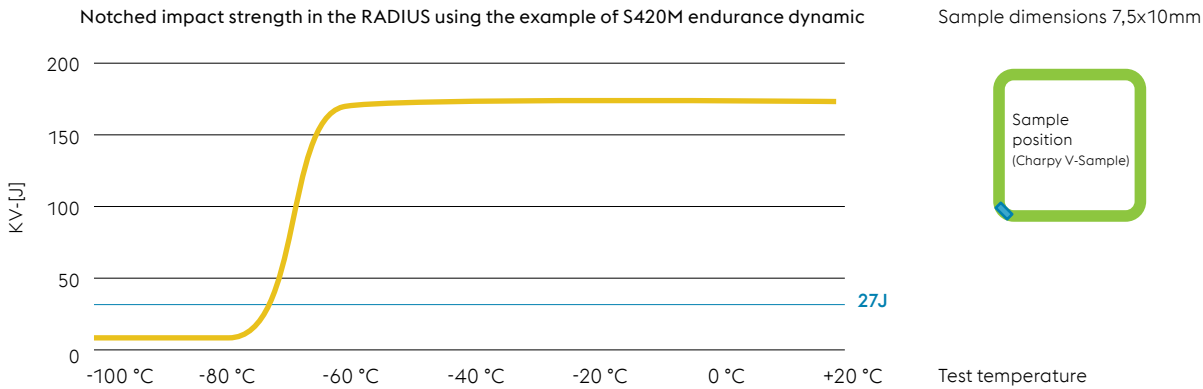
Flatness of plane surfaces on tubes



MECHANICAL CHARACTERISTICS

endurance dynamic meets all material requirements of EN10149-2. The very good degree of purity and the specially adjusted homogeneous microstructure also improve formability and notched impact strength.

» verified notched bar impact values of 27J at -40°C in longitudinal direction up to incl. S600M



DIRECT FORMING INSTEAD OF ROUND TUBE FORMING

Compared to round tube forming, direct forming offers the possibility of tight radii and chamfer dimensions, lower residual stresses in the tube and tighter tolerances for weld seam center and at the tube ends.

Dimensional range for direct forming

Square tube in [mm]

MIN	MAX	Thickness [mm]
30x30	60x60	2-3
50x50	120x120	2-8

Rectangular tube in [mm]

Height MIN	Height MAX	Width MIN	Width MAX	Thickness [mm]
25	80	30	60	2-3
50	152	40	120	2-8

Compared to round tube forming, the elongation values on the finished tube are increased by 3 to 10%.

INCREASED STIFFNESS

Smaller chamfer dimensions bring advantages in welding and also increase the cross-sectional area and the area moment of inertia. Consequently, endurance dynamic is more resistant to mechanical stress than a hollow section according to EN10219 with the same external dimensions.

