

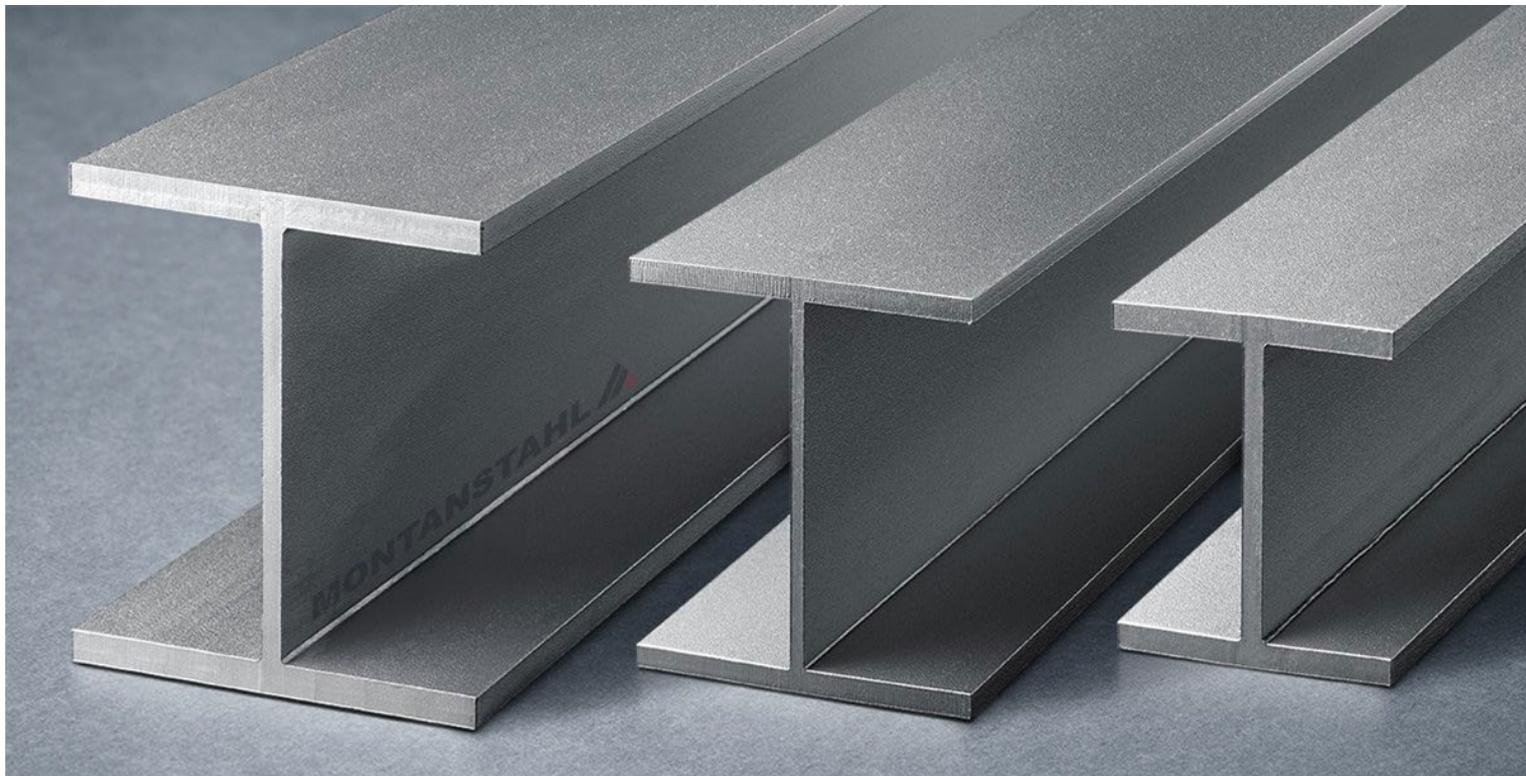
RESISTENCIA A PANDEO LATERAL DE VIGAS CORRUGADAS



DAVID FERNÁNDEZ LACABE

Mayo 2022

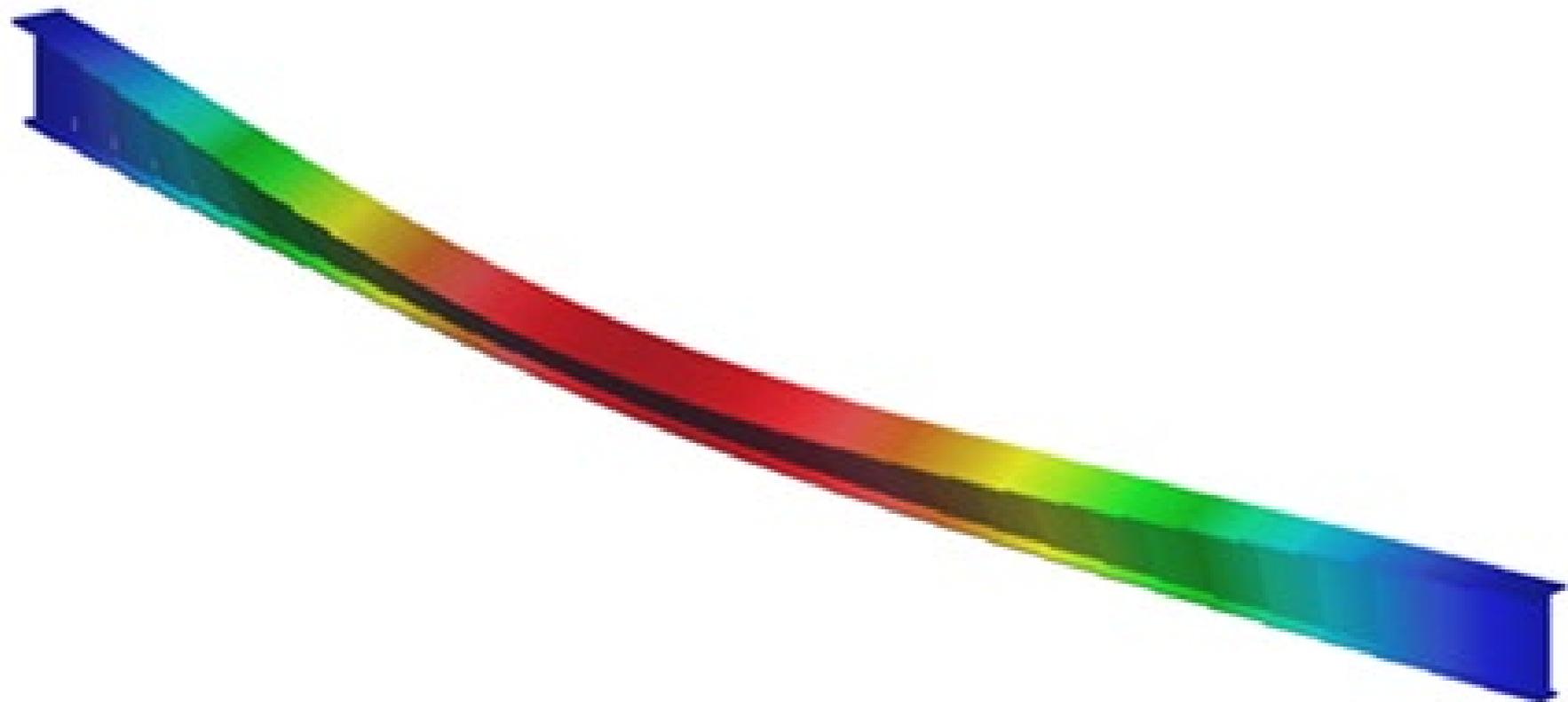
La resistencia de las vigas a flexión depende en gran medida de su momento de inercia, que aumenta al alejar el material del eje de giro.

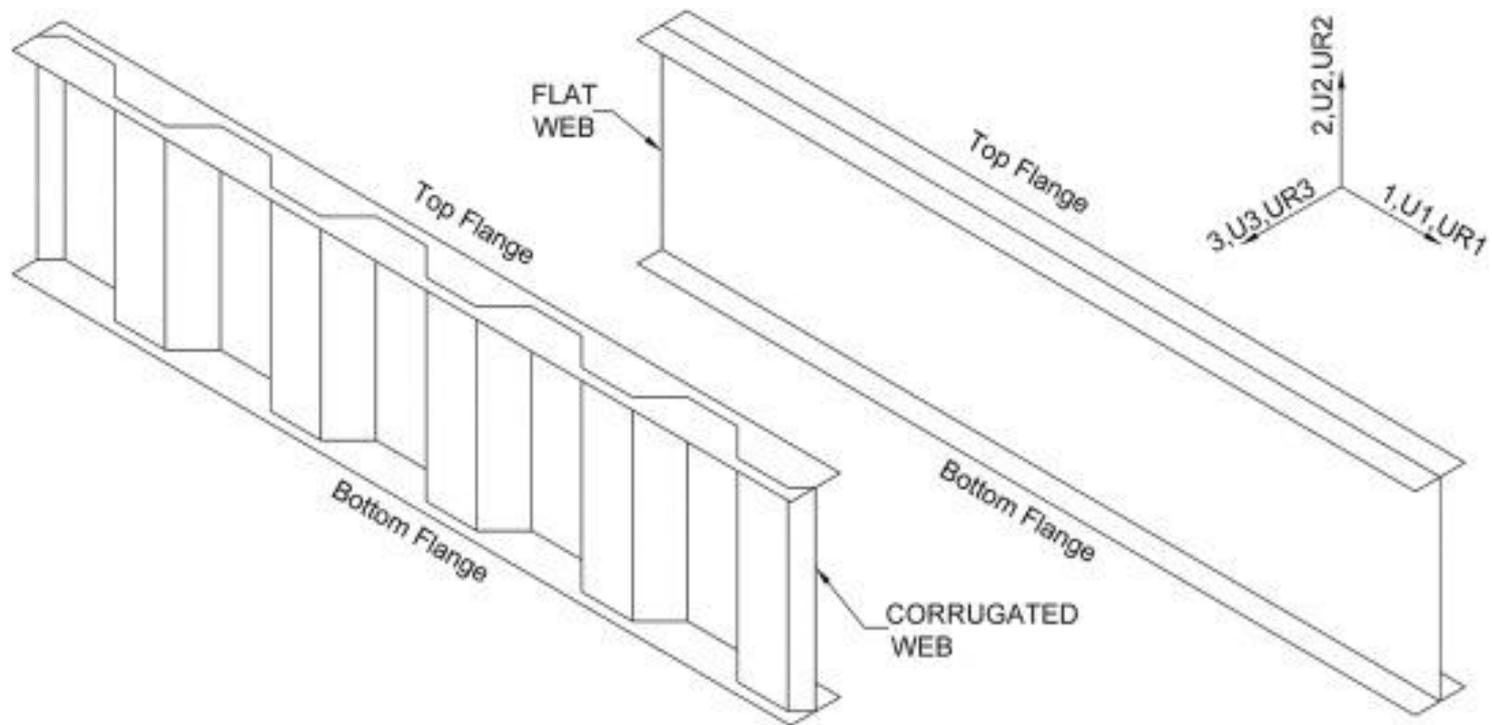
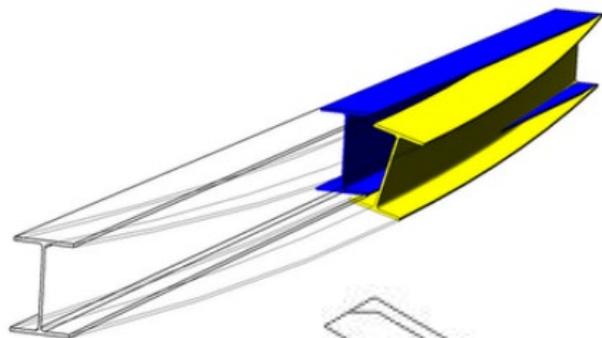




Cuando las vigas son muy largas aparece otro tipo de fallo:

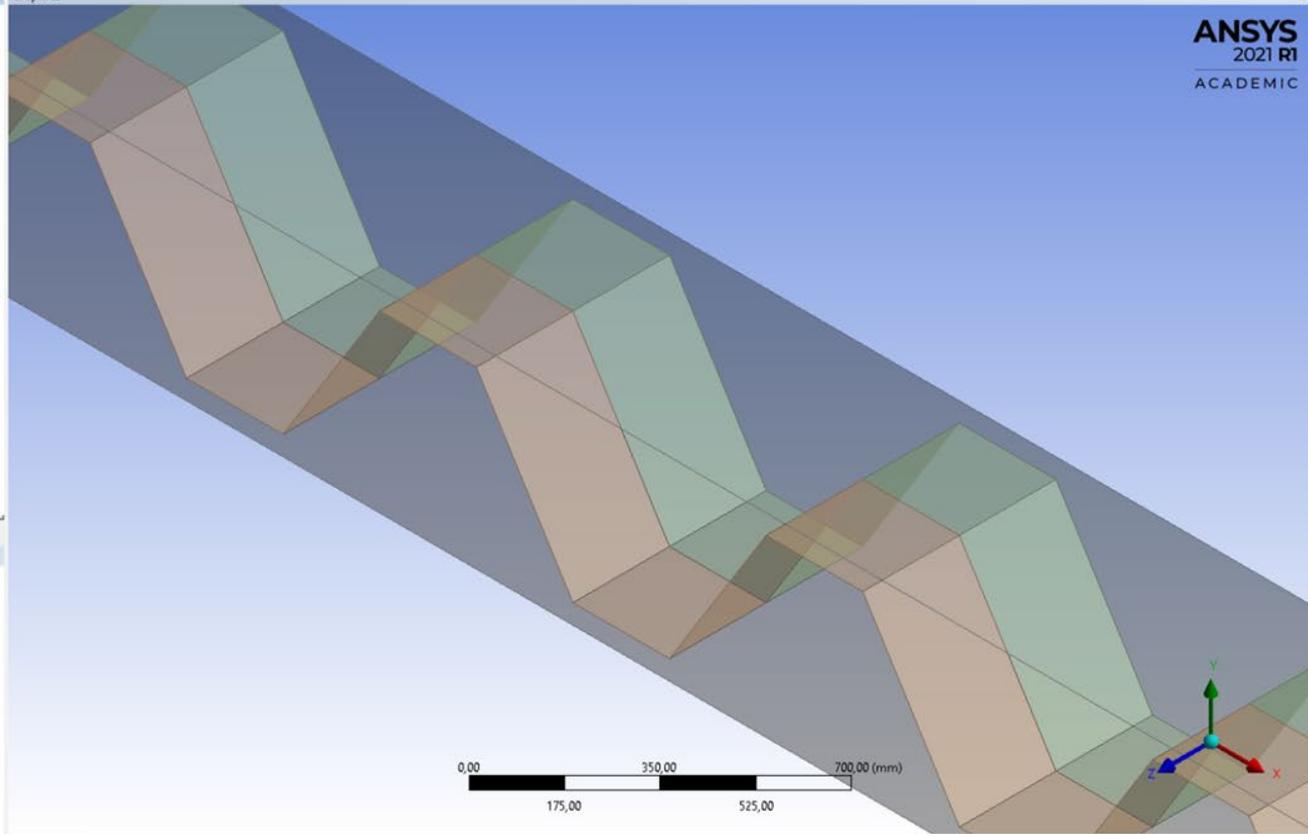
el **pandeo lateral** (Lateral Torsional Buckling)







- A: Giro solo un eje
 - XYPlane
 - ZXPlane
 - YZPlane
 - Extrude1
 - Extrude2
 - Pattern
 - Slice1
 - Projection1
 - Projection2
 - Boolean1
 - Slice2
 - Connect1
 - Slice3
 - 2 Parts, 4 Bodies



ANSYS
2021 R1
ACADEMIC

Sketching Modeling

Details View

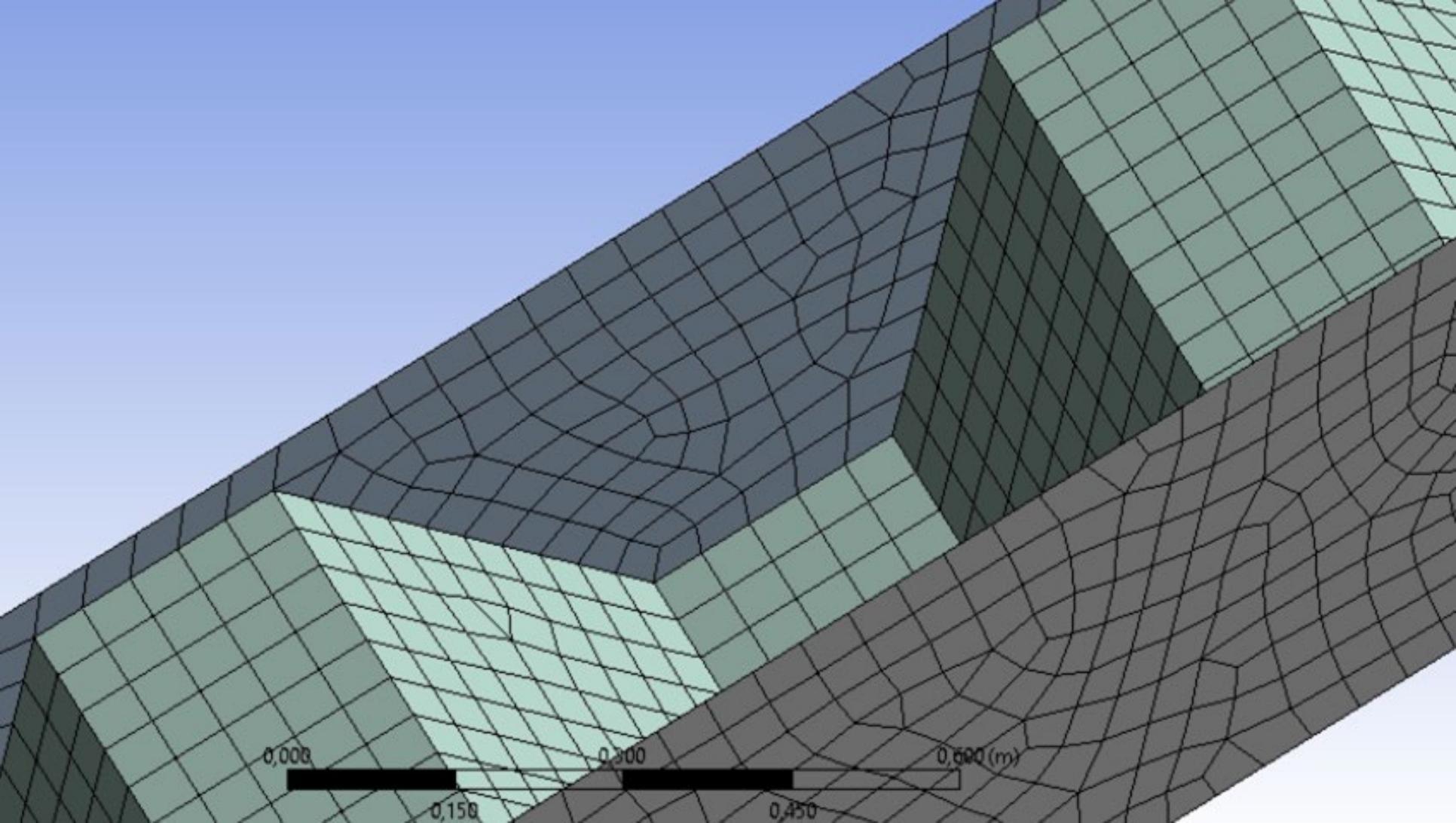
Model View Print Preview

Ready

No Selection

Millimeter Degree

0 0



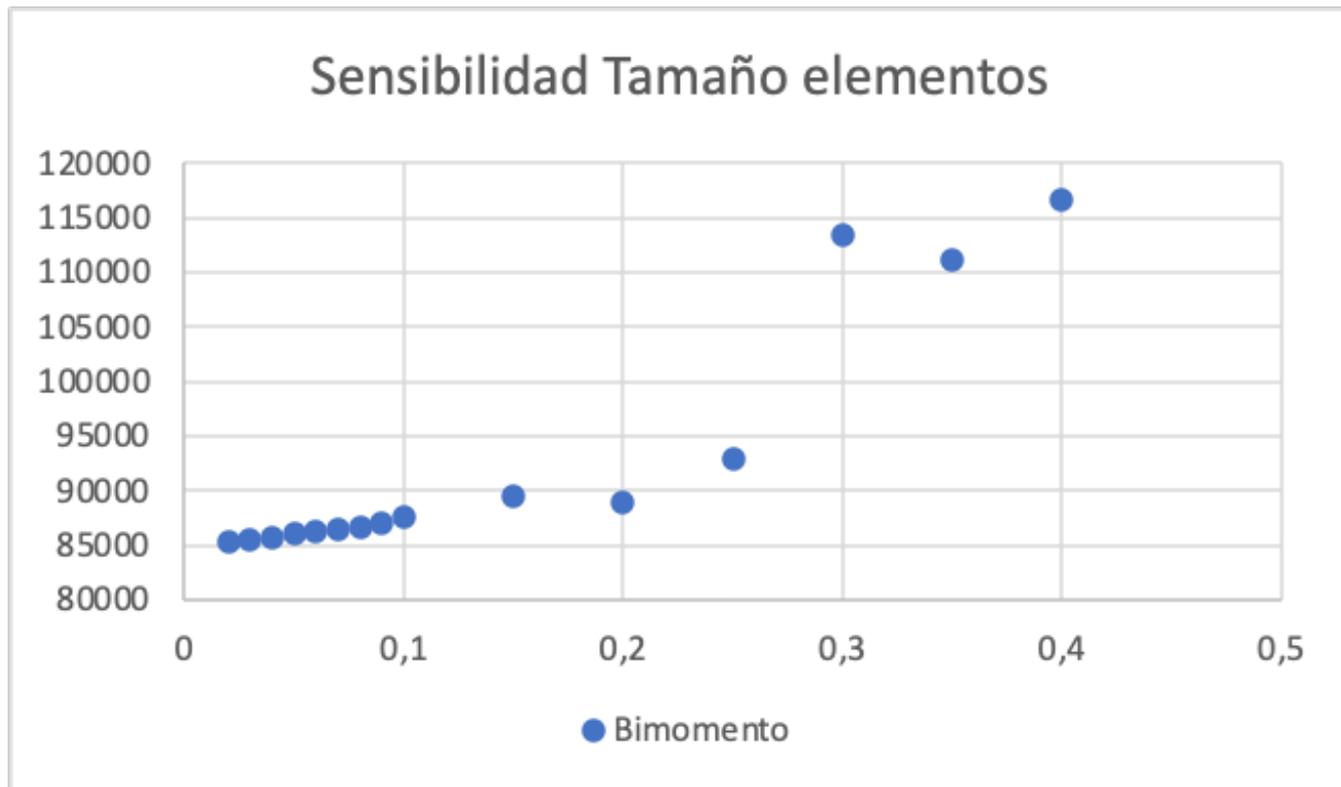
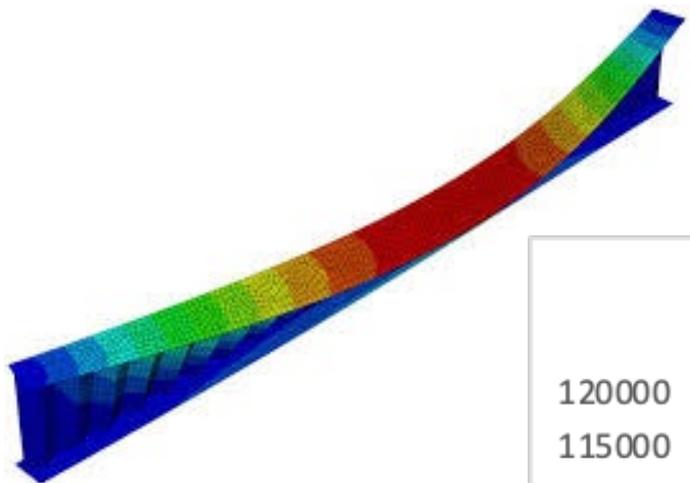


Table 1 Types of corrugated web

Type	Corrugated Web Shape
TRICW	
TRACW	
RECCW	

$$M_{cr,co} = \frac{\pi^2 EI_{z,co}}{L^2} \sqrt{\frac{I_{w,co}}{I_{z,co}} + \frac{L^2 GI_{t,co}}{\pi^2 EI_{z,co}}}$$

Geometry of the
Corrugated web girder

$b_p, h_m, t_p, t_w, a, b, d, L$

Equivalent section
properties

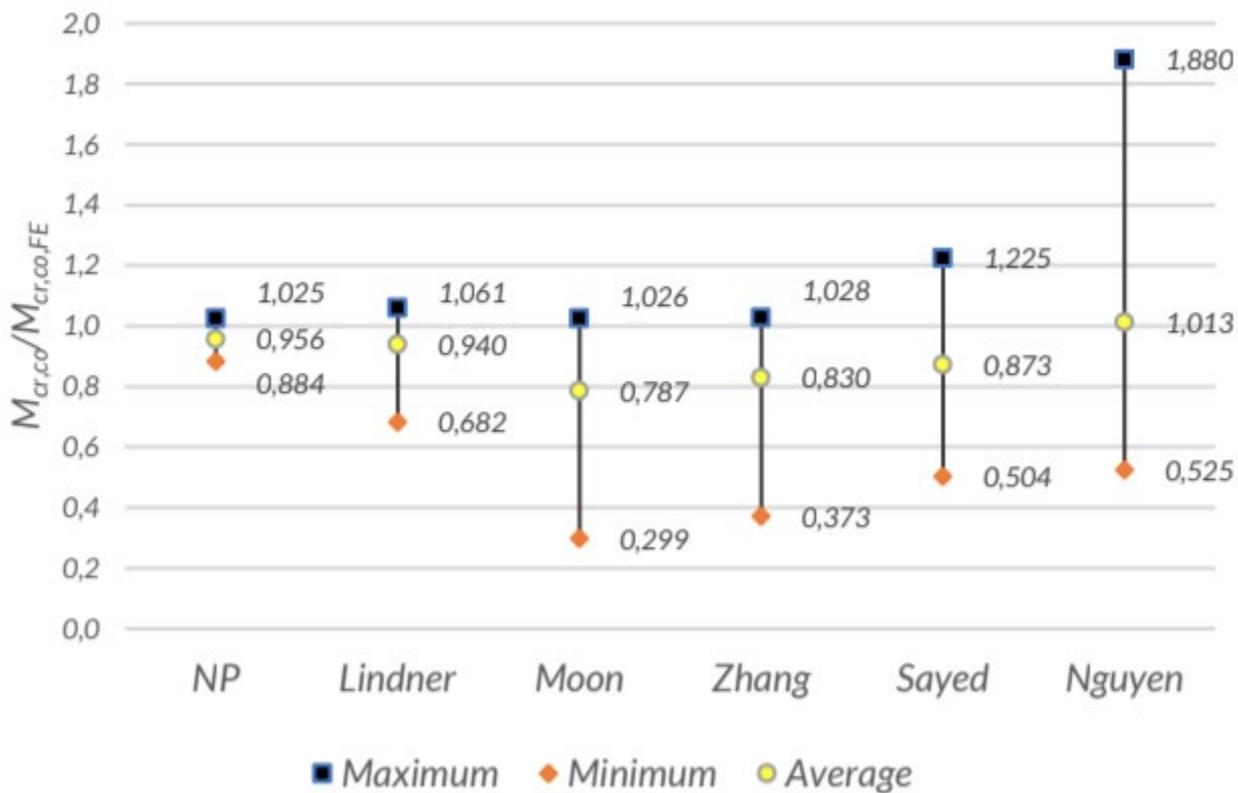
$I_{z,co,NP}$
Eq. 28

$I_{t,co,NP}$
Eq. 33

$I_{w,co,NP}$
Eq. 35

Critical Moment

$M_{cr,co,NP}$
Eq. 37



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