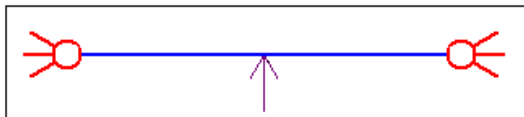


<b>TEST SCHEDULE R 27</b>	<b>EN 1993-1-1: 2005 (EUROCODE 3)</b>	<b>Sargon ©, Cescoplus ©</b>
RESISTANCE	SHEAR – AXIS 3	<b>EC3.RES.T3.007</b>



**Program:** WEURO © version October 2007 for Sargon and Cescoplus  
**Keywords:** EN 1993, Eurocode 3, example, validation, benchmark, reliability, quality control, error measure. **Parole chiave:** Eurocodice 3, esempio, validazione, test ,affidabilità, controllo di qualità, misura dell'errore  
**Tv=**exploitation target value, **Cv=**exploitation computed value  
**Authors:** Ing. Marco Croci, Ing. Paolo Rugarli

<b>BEAM</b>						
Length [mm]	Left end			Right end		
1000	HINGE			HINGE		
<b>LOAD</b>						
Type		Value		Point of application		
SHEAR FORCE T <sub>3</sub>		T=1.000.000N		MIDDLE POINT		
<b>MATERIAL</b>						
<b>S235</b>						
f <sub>v</sub> [N/mm <sup>2</sup> ]	f <sub>u</sub> [N/mm <sup>2</sup> ]	E [N/mm <sup>2</sup> ]	ν	γ <sub>M0</sub>	γ <sub>M1</sub>	γ <sub>M2</sub>
235	360	2,10E+05	0,3	1,1	1,1	1,25
<b>CROSS-SECTION</b>						
<b>HE 300 M</b>						
A [mm <sup>2</sup> ]	J <sub>2</sub> [mm <sup>4</sup> ]	J <sub>3</sub> [mm <sup>4</sup> ]	J <sub>t</sub> [mm <sup>4</sup> ]	W <sub>2</sub> [mm <sup>3</sup> ]	W <sub>3</sub> [mm <sup>3</sup> ]	
30308	5,920E+08	1,940E+08	1,408E+07	3,482E+06	1,252e+06	
W <sub>pl2</sub> [mm <sup>3</sup> ]	W <sub>pl3</sub> [mm <sup>3</sup> ]	i <sub>2</sub> [mm]	i <sub>3</sub> [mm]	i <sub>t</sub> [mm]		
4,078E+06	1,913E+06	139,8	80	89,49		
h	b	t <sub>w</sub>	t <sub>f</sub>	r		
340	310	21	39	27		
<b>OTHER DATA</b>						
A <sub>v</sub> =A-2bt <sub>f</sub> +(t <sub>w</sub> +2r)t <sub>f</sub> [mm <sup>2</sup> ]						
9.053						

**TARGET VALUES BASED ON PRELIMINAR COMPUTATIONS**

$$V_{pl,Rd} = A_v \cdot (f_y / \sqrt{3}) / \gamma_{M0}$$

$T_v = T / V_{pl,Rd}$
4,478E-01

**CHECKER'S RESULTS (COMPUTED VALUES) AND COMPARISON WITH THE TARGET**

Cv	(Cv-Tv)/Tv
4,478E-01	<b>4,871E-05</b>

Only member's extreme sections were considered in the check in order to get bending moment M<sub>2</sub>=0, always

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