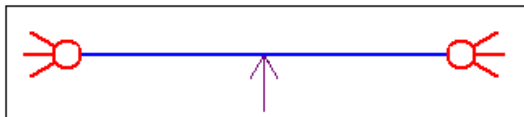


TEST SCHEDULE R 27	EN 1993-1-1: 2005 (EUROCODE 3)	Sargon ©, Cescoplus ©
RESISTANCE	SHEAR – AXIS 3	EC3.RES.T3.007



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

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

C_v	$(C_v-T_v)/T_v$
4,478E-01	4,871E-05

Only member's extreme sections were considered in the check in order to get bending moment $M_2=0$, always

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