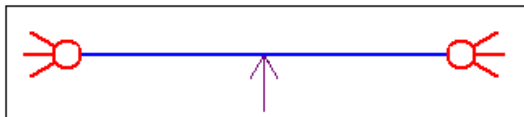


TEST SCHEDULE R 22	EN 1993-1-1: 2005 (EUROCODE 3)	Sargon ©, Cescoplus ©
RESISTANCE	SHEAR – AXIS 3	EC3.RES.T3.002



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	A514/100					
f _v [N/mm ²]	f _u [N/mm ²]	E [N/mm ²]	ν	γ _{M0}	γ _{M1}	γ _{M2}
689	758	2,000e+05	0,3	1,1	1,1	1,25
CROSS-SECTION		I 200x25				
A [mm ²]	J ₂ [mm ⁴]	J ₃ [mm ⁴]	J _t [mm ⁴]	W ₂ [mm ³]	W ₃ [mm ³]	
3218,7	2,349E+07	3,090E+06	5,440E+04	2,312E+05	4,633E+04	
W _{pl2} [mm ³]	W _{pl3} [mm ³]	i ₂ [mm]	i ₃ [mm]	i _t [mm]		
2,589E+05	7,121E+04	85,4	31	38,51		
h	b	t _w	t _f	r		
203,2	133,4	5,8	7,8	7,6		
OTHER DATA						
A _V =A-2bt _f +(t _w +2r)t _f [mm ²]						
1.301.46						

TARGET VALUES BASED ON PRELIMINAR COMPUTATIONS

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

$T_v=T/V_{pl,Rd}$
1,062E+00

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

C_v	$(C_v-T_v)/T_v$
1,062E+00	-3,412E-04

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