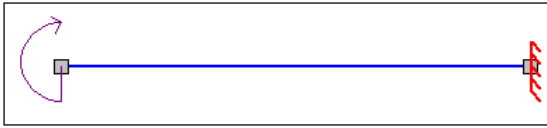


TEST SCHEDULE R 15	EN 1993-1-1: 2005 (EUROCODE 3)	Sargon ©, Cescoplus ©
RESISTANCE	BENDING - AXIS 2	EC3.RES.M2.004



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	FREE	FIXED

LOAD		
Type	Value	Point of application
BENDING MOMENT M_2	$M=10.000.000\text{Nmm}$	LEFT END

MATERIAL	S690					
f_y [N/mm ²]	f_u [N/mm ²]	E [N/mm ²]	ν	γ_{M0}	γ_{M1}	γ_{M2}
690	780	2,10E+05	0,3	1,1	1,1	1,25

CROSS SECTION	IPE 100	CLASS: $M_2 \rightarrow 1$			
A [mm ²]	J_2 [mm ⁴]	J_3 [mm ⁴]	J_t [mm ⁴]	W_2 [mm ³]	W_3 [mm ³]
1032	1,710e+06	1,592e+05	1,202E+04	3,420e+04	5,789e+03
W_{pl2} [mm ³]	W_{pl3}	i_2 [mm]	i_3 [mm]	i_t [mm]	
3,941E+04	9,145E+03	40,7	12,42	15,88	
h	b	t_w	t_f	r	
100	55	4,1	5,7	7	

OTHER DATA					

TARGET VALUES BASED ON PRELIMINAR COMPUTATIONS

$$M_{pl,Rd} = W_{pl} \cdot f_y / \gamma_{M0}$$

$T_v = M / M_{pl,Rd}$
4,045E-01

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

C_v	$(C_v - T_v) / T_v$
4,045E-01	-4,290E-05