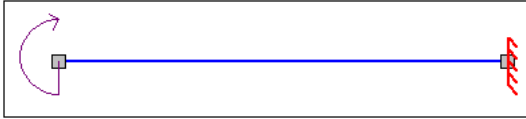


TEST SCHEDULE R 17	EN 1993-1-1: 2005 (EUROCODE 3)	Sargon ©, Cescoplus ©
RESISTANCE	BENDING - AXIS 2	EC3.RES.M2.006



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	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 100 A	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]	
2124	3,492E+06	1,338E+06	5,240E+04	7,276E+04	2,676E+04	
W_{pl2} [mm ³]	W_{pl3} [mm ³]	i_2 [mm]	i_3 [mm]	i_t [mm]		
8,301E+04	4,114E+04	40,6	25,1	28,87		
h	b	t_w	t_f	r		
96	100	5	8	12		

OTHER DATA					

TARGET VALUES BASED ON PRELIMINAR COMPUTATIONS

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

$Tv = M / M_{pl,Rd}$
5,639E-01

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

Cv	$(Cv - Tv) / Tv$
5,639E-01	1,770E-05