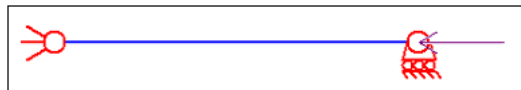


TEST SCHEDULE B 6	EN 1993-1-1: 2005 (EUROCODE 3)	Sargon ©, Cescoplus ©
BUCKLING	COMPRESSION	EC3.BUC.NN.006



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]	Buckling factors		Left end		Right end	
1000	$\beta_1=0$	$\beta_2=1$	$\beta_3=1$	HINGE		SIMPLY SUPPORTED
LOAD						
Type		Value		Point of application		
COMPRESSION		N=1.000.000N		RIGHT 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 200 B		CLASS: N° →1		
A [mm ²]	J_2 [mm ⁴]	J_3 [mm ⁴]	J_t [mm ⁴]	W_2 [mm ³]	W_3 [mm ³]	
7808	5,696e+07	2,003e+07	5,928e+05	5,696e+05	2,003e+05	
W_{pl2} [mm ³]	W_{pl3} [mm ³]	i_2 [mm]	i_3 [mm]	i_t [mm]		
6,426e+05	3,058e+05	85,40	50,70	57,74		
h	b	t_w	t_f	r		
200	200	9	15	18		
OTHER DATA*						
$\alpha_2(h/b<1,2 \ t_t<100)$	$\alpha_3(h/b<1,2 \ t_t<100)$	λ_2	λ_3	$\bar{\lambda}_2$	$\bar{\lambda}_3$	
0,34	0,49	11,71	19,72	0,125	0,210	
Φ_2	Φ_3	χ_2	χ_3	$N_{b2,Rd}$ [N]	$N_{b3,Rd}$ [N]	
0.495	0.524	1.027→1	0.995	(1.668.073)	1.659.583	

TARGET VALUES BASED ON PRELIMINAR COMPUTATIONS

$$Tv = N/N_{b3,Rd}$$

Tv
6,026E-01

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

Cv	(Cv-Tv)/Tv
6,026E-01	6,489E-05

(*) formulae for $\lambda_{2,3}$, $\bar{\lambda}_{2,3}$, $\chi_{2,3}$ and $N_{b2,3,Rd}$ are given in EN 1993-1-1 6.3.1