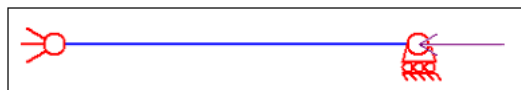


TEST SCHEDULE B 4	EN 1993-1-1: 2005 (EUROCODE 3)	Sargon ©, Cescoplus ©
BUCKLING	COMPRESSION	EC3.BUC.NN.004



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]	Buckling factors		Left end		Right end	
1000	$\beta_2=1$	$\beta_3=1$	HINGE		SIMPLY SUPPORTED	
LOAD						
Type		Value		Point of application		
COMPRESSION		N=10.000N		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		O 54x3,2		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]	
510,7	1,654e+05	1,654e+05	3,308e+05	6,126e+03	6,126e+03	
W_{pl2} [mm ³]	W_{pl3} [mm ³]	i_2 [mm]	i_3 [mm]	i_t [mm]		
8,269E+03	8,269E+03	18	18	0		
OTHER DATA*						
α	λ	$\bar{\lambda}$	Φ	χ	$N_{b,Rd}$ [N]	
0,21	55,56	0,592	0,716	0,893	97,446	

TARGET VALUES BASED ON PRELIMINAR COMPUTATIONS

$$T_v = N/N_{b,Rd}$$

T_v
1,026E-01

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

C_v	$(C_v - T_v)/T_v$
1,026E-01	-2,053E-04

(*) formulae for λ , $\bar{\lambda}$, χ and $N_{b,Rd}$ are given in EN 1993-1-1 6.3.1