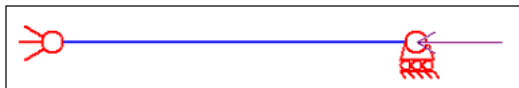


TEST SCHEDULE B 5	EN 1993-1-1: 2005 (EUROCODE 3)	Sargon ©, Cescoplus ©
BUCKLING	COMPRESSION	EC3.BUC.NN.005



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=500.000N		RIGHT END		
MATERIAL		S355				
f_y [N/mm ²]	f_u [N/mm ²]	E [N/mm ²]	ν	γ_{M0}	γ_{M1}	γ_{M2}
355	510	2,10e+05	0,3	1,1	1,1	1,25
CROSS SECTION		RHS 90x90x7x14	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]	
2198	2,486e+06	2,486e+06	4,117e+06	5,525e+04	5,525e+04	
W _{pl2} [mm ³]	W _{pl3} [mm ³]	i ₂ [mm]	i ₃ [mm]	i _t [mm]		
6,699e+04	6,699e+04	33,63	33,63	0		
h	b	t	r			
90	90	7	14			
OTHER DATA*						
α	λ	$\bar{\lambda}$	Φ	χ	N _{b,Rd} [N]	
0.21	29.74	0.389	0.596	0.956	677.860	

TARGET VALUES BASED ON PRELIMINAR COMPUTATIONS

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

T_v
7,376E-01

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

C_v	$(C_v - T_v)/T_v$
7,377E-01	1,139E-04

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