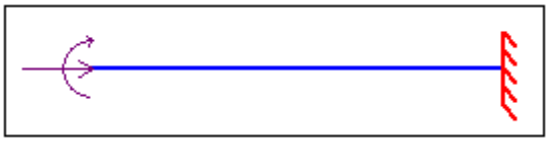
TEST SCHEDULE R 35	EN 1993-1-1: 2005 (EUROCODE 3)	Sargon ©, Cescoplus ©
RESISTANCE	COMPRESSION + BENDING 3	EC3.RES.NNM3.001



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

LOADS		
Type	Value	Point of application
BENDING MOMENT M_3	M=5.500.000Nmm	LEFT END
Type	Value	Point of application
COMPRESSION	N=320.000N	LEFT END

MATERIAL	**A514/100**					
f_y [N/mm^2]	f_u [N/mm^2]	E [N/mm^2]	*v*	γ_{M0}	γ_{M1}	γ_{M2}
689	758	2,000e+05	0,3	1,1	1,1	1,25

CROSS SECTION	**IPE 100**	**CLASS: N$^-$ →1 M$_3$ →1 N$^-$ + M$_3$→1 (reclasses method*)**			
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				
$a=(A-2bt_f)/A$	N_{pl} [N]	$n=N_{Ed}/N_{pl}$	$M_{pl}=W_{pl}*f_y/\gamma_{M0}$[Nmm]	$M_n=M_{pl}[1-((n-a)/(1-a))^2]$ [Nmm]
0,392	646.407	0,495	5.728.095	5.564.735

TARGET VALUES BASED ON PRELIMINAR COMPUTATIONS

Tv = M_2/ M_n
9,884E-01

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

Cv	(Cv-Tv)/Tv
9,881E-01	**-2,701E-04**

(*) P. Rugarli, *Strutture in acciaio, La classificazione delle sezioni, Commento all'Eurocodice 3*, EPC Libri, 2007