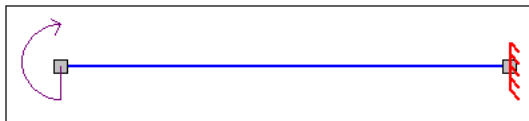


<b>TEST SCHEDULE R 13</b>	<b>EN 1993-1-1: 2005 (EUROCODE 3)</b>	<b>Sargon ©, Cescoplus ©</b>
RESISTANCE	BENDING - AXIS 2	<b>EC3.RES.M2.002</b>



**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

<b>BEAM</b>		
Length [mm]	Left end	Right end
1000	FREE	FIXED

<b>LOAD</b>		
Type	Value	Point of application
BENDING MOMENT $M_2$	$M=10.000.000\text{Nmm}$	LEFT END

<b>MATERIAL</b>		<b>A514/100</b>				
$f_y$ [N/mm <sup>2</sup> ]	$f_u$ [N/mm <sup>2</sup> ]	$E$ [N/mm <sup>2</sup> ]	$\nu$	$\gamma_{M0}$	$\gamma_{M1}$	$\gamma_{M2}$
689	758	2,000e+05	0,3	1,1	1,1	1,25

<b>CROSS-SECTION</b>		<b>UPN 120</b>		<b>CLASS: M<sub>2</sub> →1</b>		
$A$ [mm <sup>2</sup> ]	$J_2$ [mm <sup>4</sup> ]	$J_3$ [mm <sup>4</sup> ]	$J_t$ [mm <sup>4</sup> ]	$W_2$ [mm <sup>3</sup> ]	$W_3$ [mm <sup>3</sup> ]	
1698	3,642e+06	4,320e+05	4,15e+04	6,071e+04	1,106e+04	
$W_{pl2}$ [mm <sup>3</sup> ]	$W_{pl3}$ [mm <sup>3</sup> ]	$i_2$ [mm]	$i_3$ [mm]	$i_t$ [mm]		
7,268e+04	2,127e+04	46,31	15,93	15,88		
$h$	$b$	$t_w$	$t_f$	$r$	$r_1$	
120	55	7	9	9	4,5	

<b>OTHER DATA</b>					

**TARGET VALUES BASED ON PRELIMINAR COMPUTATIONS**

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

$Tv = M / M_{pl,Rd}$
2,197E-01

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

$Cv$	$(Cv - Tv) / Tv$
2,197E-01	<b>0,000E+00</b>