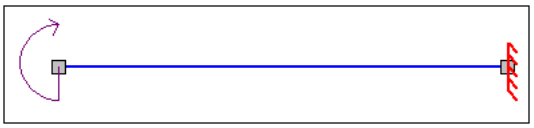
TEST SCHEDULE R 20	EN 1993-1-1: 2005 (EUROCODE 3)	Sargon ©, Cescoplus ©
RESISTANCE	BENDING - AXIS 3	EC3.RES.M3.003



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

LOAD		
Type	Value	Point of application
BENDING MOMENT M_3	M=5.000.000.000Nmm	LEFT END

MATERIAL	**S490**					
f_y [N/mm^2]	f_u [N/mm^2]	E [N/mm^2]	*v*	γ_{M0}	γ_{M1}	γ_{M2}
490	570	2,10E+05	0,3	1,1	1,1	1,25

CROSS SECTION	**HSH 600X828**	**CLASS: M_3 →1**			
A [mm^2]	J_2[mm^4]	J_3 [mm^4]	J_t [mm^4]	W_2 [mm^3]	W_3 [mm^3]
1,055E+05	6,544e+09	2,737e+09	1,813e+08	2,181e+07	9,124e+06
W_{pl2} [mm^3]	W_{pl3} [mm^3]	i_2 [mm]	i_3 [mm]	i_t [mm]	
2,550e+07	1,379e+07	149	161	173,2	
h	b_1=b_2	t_w	t_{f1}=t_{f2}		
600	600	32	76		

OTHER DATA				
Reduced f_y [N/mm^2]				
450				

TARGET VALUES BASED ON PRELIMINAR COMPUTATIONS

$$M_{pl.Rd}=W_{pl}*f_y/\gamma_{M0}$$

Tv=M/$M_{pl.Rd}$
8,863E-01

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

Cv	(Cv-Tv)/Tv
8,860E-01	-3,504E-04

According to table 3.1 when cross section thickness is higher than 40mm yield stress should be decreased. Here a yield stress equal to 450N/mm^2 has been used.