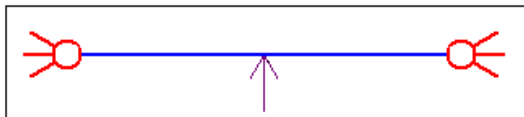


<b>TEST SCHEDULE R 25</b>	<b>EN 1993-1-1: 2005 (EUROCODE 3)</b>	<b>Sargon ©, Cescoplus ©</b>
RESISTANCE	SHEAR – AXIS 3	<b>EC3.RES.T3.005</b>



**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

BEAM		
Length [mm]	Left end	Right end
1000	HINGE	HINGE

LOAD		
Type	Value	Point of application
SHEAR FORCE T <sub>3</sub>	T=1.000.000N	MIDDLE POINT

MATERIAL S490						
f <sub>y</sub> [N/mm <sup>2</sup> ]	f <sub>u</sub> [N/mm <sup>2</sup> ]	E [N/mm <sup>2</sup> ]	ν	γ <sub>M0</sub>	γ <sub>M1</sub>	γ <sub>M2</sub>
490	570	2,10E+05	0,3	1,1	1,1	1,25

CROSS-SECTION HE 200 B					
A [mm <sup>2</sup> ]	J <sub>2</sub> [mm <sup>4</sup> ]	J <sub>3</sub> [mm <sup>4</sup> ]	J <sub>t</sub> [mm <sup>4</sup> ]	W <sub>2</sub> [mm <sup>3</sup> ]	W <sub>3</sub> [mm <sup>3</sup> ]
7808	5,696e+07	2,003e+07	5,928e+05	5,696e+05	2,003e+05
W <sub>pl2</sub> [mm <sup>3</sup> ]	W <sub>pl3</sub> [mm <sup>3</sup> ]	i <sub>2</sub> [mm]	i <sub>3</sub> [mm]	i <sub>t</sub> [mm]	
6,426e+05	3,058e+05	85,40	50,70	57,74	
h	b	t <sub>w</sub>	t <sub>f</sub>	r	
200	200	9	15	18	

OTHER DATA					
A <sub>v</sub> =A-2bt <sub>f</sub> +(t <sub>w</sub> +2r)t <sub>f</sub> [mm <sup>2</sup> ]					
2.483					

**TARGET VALUES BASED ON PRELIMINAR COMPUTATIONS**

$$V_{pl,Rd} = A_v \cdot (f_y / \sqrt{3}) / \gamma_{M0}$$

$Tv = T / V_{pl,Rd}$
7,830E-01

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

Cv	(Cv-Tv)/Tv
7,830E-01	<b>2,589E-05</b>

Only member's extreme sections were considered in the check in order to get bending moment M<sub>2</sub>=0, always

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