

TEST SCHEDULE R 24	EN 1993-1-1: 2005 (EUROCODE 3)	Sargon ©, Cescoplus ©
RESISTANCE	SHEAR – AXIS 3	EC3.RES.T3.004



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

LOAD		
Type	Value	Point of application
SHEAR FORCE T_3	$T=1.000.000N$	MIDDLE POINT

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

CROSS SECTION	IPE 360				
A [mm ²]	J_2 [mm ⁴]	J_3 [mm ⁴]	J_t [mm ⁴]	W_2 [mm ³]	W_3 [mm ³]
7273	1,627E+08	1,043E+07	3,732E+05	9,037E+05	1,228E+05
W_{pl2} [mm ³]	W_{pl3}	i_2 [mm]	i_3 [mm]	i_t [mm]	
1,019E+06	1,911E+05	149,5	37,9	49,07	
h	b	t_w	t_f	r	
360	170	8	12,7	18	

OTHER DATA				
$A_v=A-2bt_f+(t_w+2r)t_f$ [mm ²]				
3.513,8				

TARGET VALUES BASED ON PRELIMINAR COMPUTATIONS

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

$Tv=T / V_{pl,Rd}$
5,533E-01

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

Cv	$(Cv-Tv)/Tv$
5,533E-01	2,411E-05

Only member's extreme sections were considered in the check in order to get bending moment $M_2=0$, always

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