TEAM DESIGN- 2nd floor Regal Court, 42-44 High Street, Slough, SL1 1EL
Email : info@beamdezign.co.uk Office: 0800 130 3312

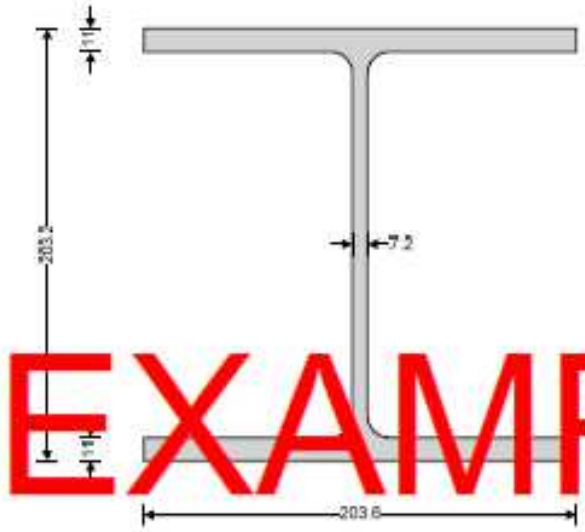
Project No	Example	Sht. No.	12of 16
Site Address	Example		
Subject	Extension and alteration works – Supporting Calculations		
Engineer	Peter V	Date:	

Analysis results

Maximum moment;	M_{max} = **8** kNm;	M_{min} = **0** kNm
Maximum shear;	V_{max} = **30.7** kN;	V_{min} = **-21.1** kN
Deflection;	δ_{max} = **0.1** mm;	δ_{min} = **0** mm
Maximum reaction at support A;	R_{A_max} = **30.7** kN;	R_{A_min} = **30.7** kN
Unfactored dead load reaction at support A;	R_{A_Dead} = **18.8** kN	
Unfactored imposed load reaction at support A;	$R_{A\_Imposed}$ = **2.8** kN	
Maximum reaction at support B;	R_{B_max} = **21.1** kN;	R_{B_min} = **21.1** kN
Unfactored dead load reaction at support B;	R_{B_Dead} = **12.8** kN	
Unfactored imposed load reaction at support B;	$R_{B\_Imposed}$ = **2** kN	

Section details

Section type; **UKC 203x203x46 (Corus Advance);** Steel grade; **S275**



Classification of cross sections - Section 3.5

Tensile strain coefficient; ε = **1.00**; Section classification; **Compact**

Shear capacity - Section 4.2.3

Design shear force; F_v = **30.7** kN; Design shear resistance; P_v = **241.4** kN

PASS - Design shear resistance exceeds design shear force

Moment capacity - Section 4.2.5

Design bending moment; M = **8** kNm; Moment capacity low shear; M_c = **136.8** kNm

Buckling resistance moment - Section 4.3.6.4

Bending strength; p_b = **275** N/mm^2; Buckling resistance moment; M_b = **136.8** kNm

PASS - Moment capacity exceeds design bending moment

NOTE: For Building Regulations Submission only, not for ordering materials. Principal Contractor is responsible for taking measurements on site, preparing construction drawings and safely erecting the proposed structural works. Team Design is not responsible for site supervision.

IF IN DOUBT - ASK!