COMPOSITE

Error code	Error message
E/01	*The member type is not supported. Composite beam checks can only be carried out on plate ribs only. Please connect the beam as a rib to a composite 2D member.*
E/02	*The effective width of a beam cannot be equal to zero. Please adapt the effective width values in the 1D member properties.*
E/03	*The cross-section of the member is not supported. Composite beam checks can only be carried out on hot-rolled or welded symmetrical I-profiles. Please adjust the cross-section type.*
E/05	*The slab element type is not supported. Please adjust the Element Type value to Composite deck in the 2D member properties.*
E6/09	*The member is subject to extreme shear. Please adjust the cross-section material strength or consider using a larger member.*
E6/19	*There is not enough space to place the connectors on the beam flange.*
E6/20	*There is not enough space to place the connectors on the beam flange or in the sheeting rib.*
E/10	*The sheeting ribs are not fully covered by concrete. Please adjust the slab depth and/or adjust the sheeting profile.*
E/11	*The shear connectors are not fully covered by concrete. Please adjust the slab depth and/or adjust the connector height.*
E/13	*Members without composite action are not supported. Please use the Steel Code Check to design members without composite action to EN 1993-1-1.*
E/17	*The steel sheeting has not been defined or assigned to the 2D member. Please check the properties of the 2D member.*
E/18	*The material assigned to the 2D member is incorrect. Please assign a concrete class in the 2D member properties.*
E/21	*The mesh reinforcement interferes with the sheeting ribs. Please decrease the concrete cover and/or increase the slab thickness.*
E/27	*One or more openings extend beyond the beam web. For this size and eccentricity of the opening, a larger steel beam is needed.*

Warning code	Warning message
W3/05	*The concrete class assigned to the slab does not conform to EN 1994-1-1, article. 3.1 (2). Please review the material assigned in the 2D member properties.*
W3/06	*The steel grade assigned to the beam does not conform to EN 1994-1-1, article 3.3 (2). Please review the material assigned in the 1D member properties.*
W3/07	*The nominal thickness of the steel sheeting is less than the recommended minimum value set in EN 1994-1-1, article 3.5 (2). Please review the sheeting thickness.*
W/04	*The angle between the beam and profiled sheeting ribs is greater than 10 degrees. Therefore, the member is evaluated as transverse to the sheeting ribs. The trough spacing is disregarded for the stud layout; all other maximum spacing requirements are taken into account.*
W6/02	*EN 1994-1-1, article 6.6.5.7 (1) is not fulfilled. The shear studs are shorter than 3 times their diameter.*
W6/04	*The concrete strut angle is outside the limits.*
W6/08	*The cross-section is not qualified for LTB verification by the simplified method.*
W6/09	*EN 1994-1-1, article 6.6.5.6 (2) is not fulfilled. The clear distance between the connector and the edge of the steel flange is less than 20 mm.*
W6/10	*EN 1994-1-1, article 6.6.5.7 (4) is not fulfilled. The distance between studs in the transverse direction is less than 4 times the stud diameter.*
W6/11	*EN 1994-1-1, article 6.6.5.7 (5) is not fulfilled. The stud diameter is greater than 2.5 times the thickness of the steel beam flange.*
W6/12	*EN 1994-1-1, article 6.6.5.8 (1) is not fulfilled. The shear connectors must extend above the top of the steel deck by a length more than twice their diameter.*

W6/13	*EN 1994-1-1, article 6.6.5.8 (2) is not fulfilled. The steel sheeting troughs must be wider than 50 mm.*
W6/14	*The conditions set in EN 1994-1-1, article 6.6.1.2 (1) are not fulfilled. The shear connectors do not qualify for partial shear connection. Please review the stud properties to ensure that the diameter is between 16 and 25 mm and that the stud length is greater than four times the stud diameter.*
W6/17	*EN 1994-1-1, article 6.6.5.5 (3) is not fulfilled. The spacing of shear connectors along the beam is greater than 6 times the total slab thickness or 800 mm.*
W6/18	*EN 1994-1-1, article 6.6.5.7 (4) is not fulfilled. The distance between studs in the longitudinal direction is less than 5 times the stud diameter.*
W6/22	*The selected cross-section is not suitable due to the assumed plastic failure. Only cross-sections of class 1 and 2 are supported. Please change the cross-section or run the optimisation.*
W6/23	*The degree of shear connection is lower than the minimal value.*
W6/25	*EN 1994-1-1, article 6.6.5.2 (2) is not fulfilled. Insufficient cover of shear connectors.*
W9/01	*EN 1994-1-1, article 9.2.1 (2) is not fulfilled. The total depth of composite slab should not be less than 90 mm.*
W9/02	*EN 1994-1-1, article 9.2.1 (2) is not fulfilled. The depth of full concrete should not be less than 50 mm.*
W9/03	*EN 1994-1-1, article 9.2.1 (4) is not fulfilled. The amount of reinforcement in longitudinal direction should not be less than 80 mm^2/m.*
W9/04	*EN 1994-1-1, article 9.2.1 (4) is not fulfilled. The amount of reinforcement in transverse direction should not be less than 80 mm^2/m.*
W9/05	*EN 1994-1-1, article 9.2.1 (5) is not fulfilled. The spacing of reinforcement bars in longitudinal direction should not exceed $2h_s$ and 350 mm, whichever is the lesser.*
W9/06	*EN 1994-1-1, article 9.2.1 (5) is not fulfilled. The spacing of reinforcement bars in transverse direction should not exceed $2h_s$ and 350 mm, whichever is the lesser.*
W/16	*Only one or two rows of studs are supported. Please revise your inputs.*
W/25	*The intermediate buckling supports in the z (y-y) direction have been ignored for the effective width calculation for both the analysis model and member checks. Please verify the buckling settings or split the beam in each span.*
W/27	*Camber is not considered or designed for continuous or cantilevered beams.*
W/28	*The amount of longitudinal reinforcement is insufficient and cannot be changed by design. Please modify your inputted reinforcement.*
W/29	*The utilisation ratio for longitudinal shear is greater than 1 and cannot be changed by design. Please modify your inputted reinforcement or reduce the composite action.*
W/30	*The utilisation ratio for crushing of the concrete flange is greater than 1 and cannot be changed by design. Please increase the angle of concrete strut (if the member has reserve capacity in longitudinal shear) or reduce the composite action.*
W/31	*The calculated natural frequency is below the frequency limit. This is not included in the optimisation. Please modify the section size, slab thickness, dead loads, etc. or change the calculation settings.*
W/32	*The utilisation ratio for cracking of concrete is greater than 1 and cannot be changed by design. Please modify your inputted reinforcement.*
W/33	*The member has no zero moment, therefore the stud design cannot be performed.*
W/36	*The checks for web openings are not performed in regions of negative moment.*
W/40	*The optimisation could not find working design parameters which allow all checks to pass.*
W/41	*The reinforcement resistance is limited to the resistance of the steel section. EN 1994-1-1 article 6.2.1.3 (2) is not fulfilled.*
W/42	*EN 1994-1-1, article 6.6.5.7 (4) is not fulfilled: the distance between studs in the transverse direction is zero. Please adjust the transverse spacing of the studs.*

W/43	*'Advanced composite action' has been activated in 1D member properties. Therefore, the check assumptions are invalid. Please switch 'type of connection' to 'standard composite action.'*
W/47	*The maximum stud spacing limit given by SCI P405 is not fulfilled.*
W/48	*Openings in the member set to shape type 'cross-section' are not supported in the checks. Please review the openings on the beam.*
W/49	*Interfering openings in the member are not considered in the checks. Please review the openings on the beam.*
W/50	*Openings in the member with a non-zero rotation or Z-orientation are not supported in the checks. Please review the openings on the beam.*
W/52	*Openings outside of the beam span are not considered in the checks. Please review the openings on the beam.*
W/53	*The practical geometric limits set in SCI P355 Table 2.1 have not been met for all openings. Please review the check output for more information.*
W/54	*The geometric recommendations for stiffened openings given by SCI P355 have not been met for all openings. Please review the check output for more information.*
W/56	*Automatic design of sheet welded cross-section is not supported.*
W/57	*Number of studs have been determined according to rib spacing. The degree of composite action is different from what is defined on the beam.*
W/58	*The degree of composite action is different from what is defined on the beam. This may be due to rounding the number of studs up to the nearest whole number.*
W/59	*The requirement for number of studs between point forces is not met. Please adapt the stud layout manually or use a larger steel beam.*

Note code	**Note message**
N/01	*The angle between the beam and the profiled sheeting ribs is less than 10°; therefore, the sheeting ribs are considered as parallel to the beam.*
N/02	*The angle between the beam and the profiled sheeting ribs is between 80 and 100°; therefore, the ribs are considered as perpendicular to the beam.*
N6/03	*The bending moment resistance has been reduced due to the influence of vertical shear.*
N6/05	*The compressive force $N_{c,f}$ is reduced according to the plastic theory in EN 1994-1-1, article 6.2.1.3 (3).*
N6/06	*The minimum degree of shear connection is calculated according to EN 1994-1-1 6.6.1.2 (3).*
N/07	*The selected load does not contain any ULS Construction stage loads. Please review the check Properties or the content of load combinations or classes.*
N/08	*The selected load does not contain any ULS Final stage loads. Please review the check Properties or the content of load combinations or classes.*
N/09	*The selected load does not contain any SLS Construction stage loads. Please review the check Properties or the content of load combinations or classes.*
N/10	*The selected load does not contain any SLS Final stage loads. Please review the check Properties or the content of load combinations or classes.*
N/11	*The construction stage ULS check is not performed for propped members.*
N/13	*The shear connectors are welded to the steel beam through the steel sheeting, thus providing continuous restraint to the connected flange. Therefore, the beam is deemed fully restrained and not subject to lateral torsional buckling.*
N/14	*The effects of creep in composite beams are taken into account by using an effective E modulus $E_{c,eff} = E_{cm}/2$. The primary use of the building should not be for storage.*
N/17	*SLS checks for construction stage are not performed on propped members.*
N/18	*The flexural strength for hogging moments is provided by the steel section only. In hogging moment regions, the stud layout and the result labels reflect the spacing requirements.*
N/19	*The deflection limit for the construction stage is set to zero and cannot be fulfilled. Please review the deflection limits in the Composite setup or member data.*

N/20	*The deflection limit for the final stage live load is set to zero and cannot be fulfilled. Please review the deflection limits in the Composite setup or member data.*
N/21	*The deflection limit for the final stage total load is set to zero and cannot be fulfilled. Please review the deflection limits in the Composite setup or member data.*
N/22	*The detailing checks for maximum spacing would fail if the number of studs is based on the degree of composite action. Studs have been added as needed in order to meet the maximum spacing requirement.*
N/24	*This member is set to 'Negative flexural strength determined using steel section alone' and has negative moment which controls. Therefore, the studs shown on the stud layout diagram and in the label reflect the minimum number of studs required to meet the maximum spacing requirement rather than the degree of composite action.*
N/25	*The span is comprised of multiple members. Therefore, the stud layout may be inaccurate.*
N/26	*The optimisation has reached the end of the section list. The steel section cannot be decreased further.*
N/27	*The minimum degree of shear connection is calculated according to SCI P405 chapter 5.1. Maximum stud spacing according to the publication has been taken into account.*
N/28	*The minimum degree of shear connection is calculated according to SCI P405 chapter 5.3. Maximum stud spacing according to the publication has been taken into account.*
N/29	*Deflections used for natural frequency check have been re-calculated using full shear connection.*
N/30	*Deflections used for the natural frequency check have been re-calculated using full shear connection and the dynamic Young's modulus of concrete.*
N/31	*Web posts wider than 5 times the average length of adjacent openings are not considered in the checks.*
N/33	*Prerequisites to apply SCI P405 Chapter 5.3 are not fulfilled. The minimum degree of shear connection is calculated in accordance with SCI P405 chapter 5.1. The maximum stud spacing according to the publication has been taken into account.*
N/34	*Prerequisites to apply SCI P405 Chapter 5.1 are not fulfilled. The minimum degree of shear connection is calculated in accordance with SCI P405 chapter 5.3. The maximum stud spacing according to the publication has been taken into account.*
N/35	*Prerequisite to apply SCI P405 are not fulfilled. The minimum degree of shear connection is calculated in accordance with EN 1994-1-1.*
N/36	*Prerequisite to apply SCI P405 are not fulfilled: the beam should be simply supported and internal. The minimum degree of shear connection is calculated in accordance with EN 1994-1-1.*
N/37	*Prerequisite to apply SCI P405 are not fulfilled: openings can only be circular. The minimum degree of shear connection is calculated in accordance with EN 1994-1-1.*
N/38	*Prerequisite to apply SCI P405 are not fulfilled: beam span should not exceed 22 m. The minimum degree of shear connection is calculated in accordance with EN 1994-1-1.*
N/39	*Prerequisite to apply SCI P405 are not fulfilled: nominal deck profile should not exceed 80 mm. The minimum degree of shear connection is calculated in accordance with EN 1994-1-1.*
N/40	*Prerequisite to apply SCI P405 are not fulfilled: the stud diameter should be 19 mm with an embedment of at least 35 mm. The minimum degree of shear connection is calculated in accordance with EN 1994-1-1.*
N/41	*Prerequisite to apply SCI P405 are not fulfilled: total slab depth should not exceed 180 mm. The minimum degree of shear connection is calculated in accordance with EN 1994-1-1.*
N/42	*Prerequisite to apply SCI P405 are not fulfilled: depth of full concrete should not exceed 100 mm. The minimum degree of shear connection is calculated in accordance with EN 1994-1-1.*