CS Load Cases (Construction stage analysis of MIDAS/Civil automatically generates the load cases noted in the table below.)

No.	Load Case	Result			
		Reaction	Deformation	Force	Stress
1	CS: Dead Load	O	O	O	O
2	CS: Erection Load	O	O	O	O
3	CS: Tendon Primary	O	O	O	O
4	CS: Tendon Secondary	O	X	O	O
5	CS: Creep Primary	O	O	O	O
6	CS: Creep Secondary	O	X	O	O
7	CS: Shrinkage Primary	O	O	O	O
8	CS: Shrinkage Secondary	O	X	O	O
9	CS: Summation	O	O	O	O
	load cases included in CS: Summation	1+2+4+6+8	1+2+3+5+7	1+2+3+4+6+8	1+2+3+4+6+8

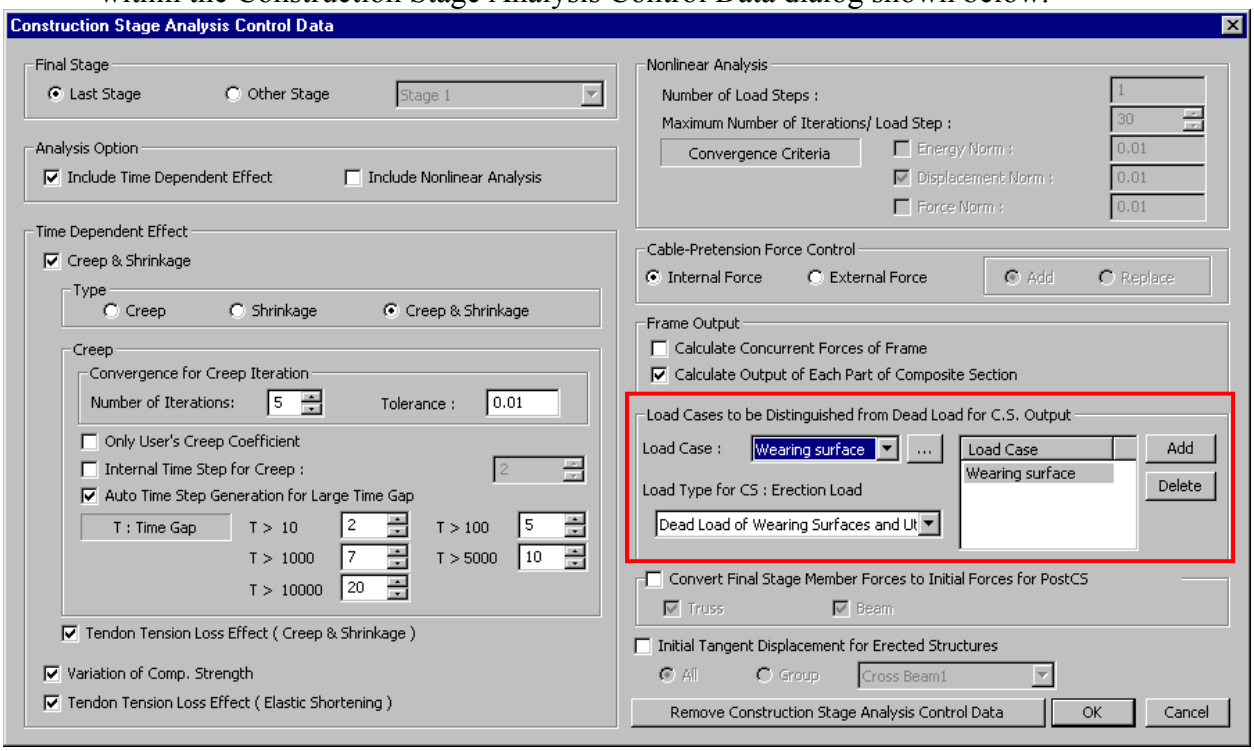
Legend: O - generated & X- not generated

CS: Dead Load

Dead Load represents the results due to all the load cases applied to the construction stages including the self-weight, excluding Erection Load and the effects of Tendon Prestress, Creep and Shrinkage.

CS: Erection Load

Erection Load represents the results due to all permanent loads applied to the construction stages in addition to Dead Load. Typically superimposed dead loads are included. The results of Erection Load are reported separately from Dead Load. Erection Load is specified in "Load Cases to be Distinguished from Dead Load for CS Output" within the Construction Stage Analysis Control Data dialog shown below.



CS: Tendon Primary (Due to idealization as a determinate structure)

Reactions: Results are of no significance (zero) and unaccounted for in CS Summation.

Deformations: Deformations due to Tendon Prestress loads (includes the secondary effect results)

Forces: Member forces induced by Tendon Prestress loads

Stresses: Member stresses induced by Tendon Prestress loads

CS: Tendon Secondary (Due to the effects of indeterminacy of actual constraints)

Reactions: Reactions due to Tendon Prestress loads

Forces: Member forces resulting from an indeterminate structure due to Tendon Prestress loads. Forces are zero for determinate structures.

Stresses: Stresses resulting from an indeterminate structure due to Tendon Prestress loads. Stresses are zero for determinate structures.

CS: Creep Primary

Reactions: Results are of no significance and unaccounted for in CS Summation.

Deformations: Deformations due to Creep (includes the secondary effect results)

Forces: Fictitious member forces required to cause the Creep strain, therefore, unaccounted for in CS Summation

Stresses: Fictitious stresses required to cause the Creep strain, therefore, unaccounted for in CS Summation

CS: Creep Secondary

Reactions: Reactions due to Creep resulting from the effects of support constraints

Forces: Member forces due to Creep resulting from the effects of support constraints

Stresses: Stresses due to Creep resulting from the effects of support constraints

CS: Shrinkage Primary

Reactions: Results are of no significance and unaccounted for in CS Summation.

Deformations: Deformations due to Shrinkage (includes the secondary effect results)

Forces: Fictitious member forces required to cause the Shrinkage strain, therefore, unaccounted for in CS Summation

Stresses: Fictitious stresses required to cause the Shrinkage strain, therefore, unaccounted for in CS Summation

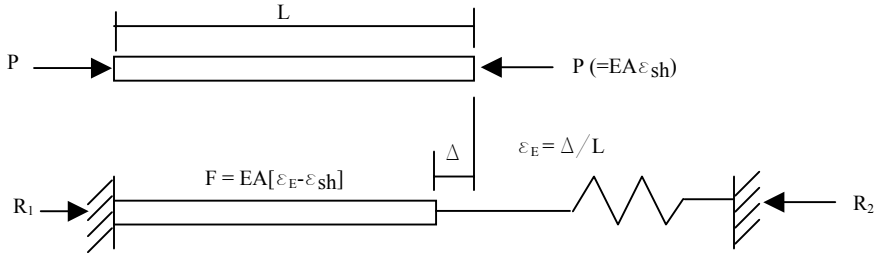
CS: Shrinkage Secondary

Reactions: Reactions due to Shrinkage resulting from the effects of support constraints

Forces: Member forces due to Shrinkage resulting from the effects of support constraints

Stresses: Stresses due to Shrinkage resulting from the effects of support constraints

Illustration



Spring represents the constraints of the member.

ε_{sh}: Shrinkage strain (time-dependent strain due to shrinkage)

P: Fictitious member force required to induce Shrinkage strain (CS: Shrinkage Primary)
Computing the fictitious force is necessary in the process of finding the shrinkage strain, which is expressed in terms of member forces. This however has no physical meaning.

Δ: Deformation due to Shrinkage accounting for the constraints (CS: Shrinkage Primary)

F: Member force due to Shrinkage accounting for the constraints (CS: Shrinkage Secondary)

R_1, R_2: Reactions due to Shrinkage accounting for the constraints (CS: Shrinkage Secondary)