CRANEGIRDER EC3 - Update information

Version 1.3.4 May 2025

1. Overhead crane with boggie wheel.
   Wheel can now be defined as boggie wheel which means that the wheel load from one wheel is divided to two wheels for local calculations. This means that up to 8 wheels will load the beam.
2. RunTime error when moving the main form from left screen to right screen corrected

Version 1.3.3

3. Fatigue point 3, overhead crane:
   Section of control is based on an effective loaded length of Leff+tw. Leff is effective loaded length at underside of top flange. Wheel load is the average load of the wheel loads.
4. Reinforcement with L-profile for topflange added.
5. Correction FLS for two cranes with fixed distance
6. Psi0 taken into account for FLS for two cranes
7. Psi0 taken into account for wheel load for two cranes
8. Updated lamda value for normal stress for S9 crane for fatigue

Version 1.3.2

1. Fatigue control of point 2 updated, for two cranes with constant distance between cranes and working simultaneously

Version 1.3.1

2. Font “Arial Narrow” can result in “Run time error 380”. Now font changed to “Arial”,
3. Lateral torsional buckling is not combined with Mz-moment if the Mz-moment is for opposite flange

Version 1.3.0

4. Including rule updates until jan-2020
5. Program data files changed format from .csv to .txt format

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6. Minor correction for section class 4 effective section calculations
7. For welded profiles and stiffened plates, the weld leg length is now assumed to be 0.5t for calculating effective sections.
8. Reaction forces for last support for fatigue corrected (values swapped)
9. Material and profile data are now saved under C:\ProgramData\StruProg 2020\CraneGirder EC\
10. Program installation under “StruProg 2020”

Version 1.2.4

11. Deformations control of flange for monorail corrected without dynamic factor for lateral load
12. Detailed result now also including deformation in y-direction
13. Detailed result now also including deformation control of flange for monorail

Version 1.2.3

1. Calculation of flange bending for monorail revised if distance between wheel is less than 1.5*flange width

Version 1.2.2

1. Fatigue for single stress corrected without potens, ref EN 1993-1-9, eq 8.2
2. Calculation correction for for fatigue detail 3 for cranegrider with two cranes working simultaneously
3. Calculation correction for for fatigue detail 4 for cranegrider with two cranes working simultaneously
4. Resistance of the web to wheel load for overhead crane, now based on dimensioning wheel load including loadfactor and dynamic factor
5. Gangway load is set to 0 for Monorail
6. Wheel load for crane 2 taken as max from all wheels and not from wheel 1 to 2. Effects Fatigue calculation for detail 3 for two cranes with more than 2 wheels for crane 2.
7. Fatigue for detail 3 for crane 2, correction of beam shear stress value. Usage factor is correct.
8. Psi0 – factor for crane 2 can now be given if crane 1 and 2 are working independently. Valid for ULS/SLS

CRANEGIRDER EC3 - Update information

Version 1.2

1. The program includes rule updates until july 2014
2. It and Iw values for profile is corrected
3. IPN profile added to rolled profiles, based on DIN 1025-1
4. Input correction for fatigue of beams splices, when number of span is reduced
5. Position for Vz-control updated
6. Font type changed on all screens from Ms Sans Serif to Arial
7. Lateral torsional buckling My and Mz moment are now taken at same position
8. C-values for calculation of Mcr is updated, specially C1-value for beam lateral loaded with fixed/fixed support
9. Lateral torsional buckling in combination with Mz-moment is based on eq 6.6.1 with kyy=kyz =1.0
10. Crane positions for lateral torsional bucking is now given

Version 1.1

1. V4/H4 for monorails mixed position in print out. Calculation is correct.
2. Graphic position of beam splices updated
3. Monorail – local wheel load control now based on load*loadfactor
4. Monorail – stress control is now also made for serviceability limit state,
5. ref ch 7.5 in EN 1993-6
6. Crane positions is now given for My/Vz (detailed result)
7. Crane can now start outside and stop outside the beam, which means that for example a simply supported beam can be calculated
8. Option to have constant distance between crane 1 and crane 2. This means also that for example a crane with 8 wheels can be calculated.
9. Reference for local stress in web corrected to EN 1993-6 (from 1993-1-5)
10. Moment capacity of beam corrected for lateral buckling. Interaction ratio is correct.
11. Default deformation limit now set to L/600 also for horizontal deflection
12. Updated beam input form
13. Correction of Rymin at start support
14. Export to Excel of reactions corrected
15. Reinforcement of top flange with flatbars now an option