

14 Lessons on Internet/CD

The lessons of the project are presented on the project web page www.fsv.cvut.cz/cestruco and on the project CD in the Microsoft Windows help format. This allows including slides, worked examples, PowerPoint presentations with video/audio sequences and a computer program. On Internet/CD you may find these files:

Lessons in Windows help format

English version	(Cestruco_gb.chm),
Czech version	(Cestruco_cz.chm),
Greek version	(Cestruco_gr.chm),
Dutch version	(Cestruco_nl.chm),
Portuguese version	(Cestruco_pt.chm),
Romanian version	(Cestruco_ro.chm),
Swedish version	(Cestruco_sw.chm),
Navigation in German	(Cestruco_de.chm),
Navigation in French	(Cestruco_fr.chm).

PowerPoint presentation with video/audio images

Connection Design for Fire Safety (Connection_Fire_Design.pps)
including Cardington Structural Integrity Fire Test,
to Chapter 9; 25 minutes.

Cardington Structural Integrity Fire Test (Test_in_Cardington.pps)
to Chapter 9; 20 minutes.

Heating and Cooling of Structure (Heating_and_cooling.pps)
the shots of the thermo imaging cameras during Cardington
Structural Integrity Fire Test, to Chapter 9; 3 minutes.

Video

Statically Stressed Bolts in Dynamically Loaded Connections (Statically_Stressed_Bolts.mpg)
demonstrates the Q&A 6.7 of Chapter 6; 7 minutes.

Computer program

NASCon (NASCon.exe)
enables a joint analysis by the component method including the
nonlinear behaviour of components. To Chapter 6.

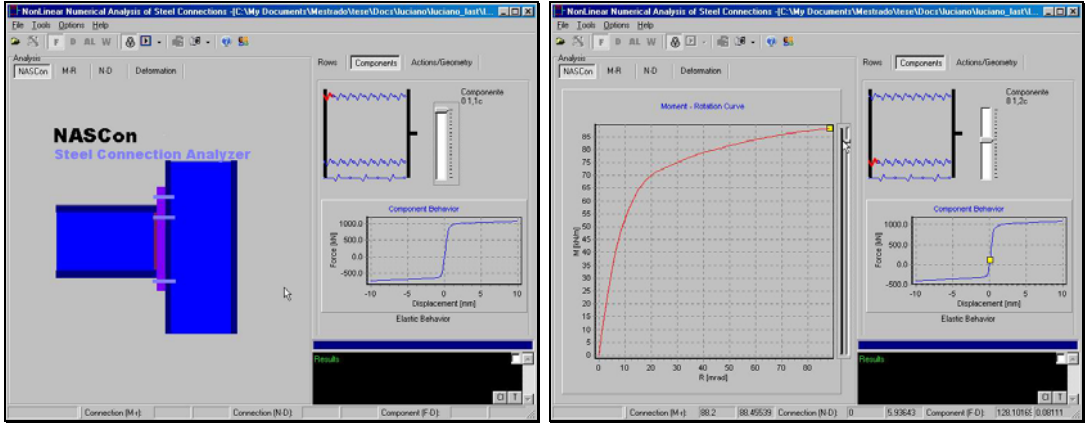
The examples of the design tools for connections include demos/presentations of programs
COP, CSC, FINE, RSTAB, and SCIA.

List of worked examples

- 2.1 Bolted Connection of Tie, see [Wald et al, 2001]
- 2.2 Bolted Truss Connection
- 2.3 Bolted Slip Resistant Connection
- 2.4 Single Lap Connection with One Bolt
- 3.1 Welded Connection of Tie
- 3.2 Welds of a Fin Plate Connection
- 5.1 Header Plate Connection, see [Jaspart et al, 2003]
- 5.2 Fin Plate Connection
- 7.1 Simple Column Base, see [Wald et al, 2001]
- 7.2 Fixed Column Base

Program Non-linear Analysis by Component Method

The NASCon (Non-linear Analysis of Steel Connections) program was built using Borland Delphi 6 (Object Pascal) development tool, main menu is shown on Figure 14.1. It offers a computer user-friendly tool for the component method which allows modelling the nonlinear behaviour of different components; see [Costa Borges, 2003]. The file NASCon/intro opens the program menu. Project manual (file: NASCon_manual.pdf) explains program features.



a) menu of program *b) component behaviour*
 Figure 14.1 Program nonlinear analysis of steel connections NASCon

Video - Statically Stressed Bolts in Dynamically Loaded Connections

The video film to Q&A 6.8 demonstrates the correct design of T-stub connections and bolted splices to avoid a fatigue failure of bolts, see Figure 14. The video film is in MPEG 1 format (file: Statically_Stressed_Bolts.mpg).

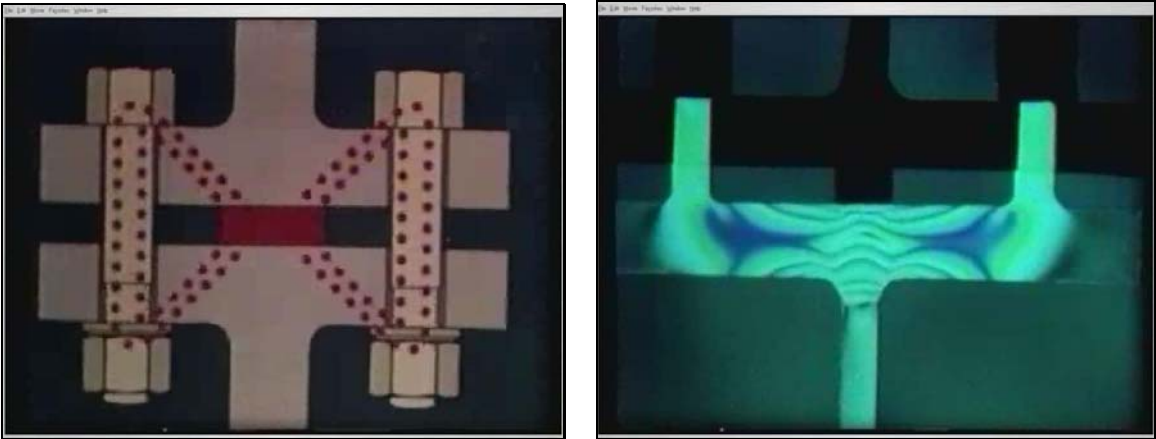


Figure 14.2 The flow of the stresses in the connection in video film *Statically Stressed Bolts in Dynamically Loaded Connections*