

Press Release

data M Sheet Metal Solutions GmbH
Am Marschallfeld 17
83626 Valley, Germany
Phone: +49 8024 640-0
Fax: +49 8024 640-300
e-mail: datam@datam.de
www.datam.de
www.roll-design.com

FABTECH 2009
Chicago / USA
November 15-19, 2009

data M
Sheet Metal Solutions:
Software and Services
for the Sheet Metal and
Roll Forming Industry

data M Sheet Metal Solutions GmbH
FABTECH International 2009, Chicago / USA
booth 7121, south hall

The company – data M
A highly technical Service Center
COPRA® Roll Form Software and Finite Element Simulation

At the **FABTECH 2009**, which takes place in Chicago from November 15th to 19th 2009, data M Sheet Metal Solutions GmbH will present the main functions of the latest software version COPRA® Roll Form 2009 (Release: July 2009).

When taking the first steps of development in the middle of the Nineties of the last century the data M team had some visions about what Simulation Technology might be able to do one day. Today these visions have become a reality. **COPRA® FEA RF** helps to understand the roll form process, traces occurring problems and generates a target-oriented optimisation. Of course, the roll form technology itself is also subject to development which implies that every now and then it will become necessary to add some new features to the FEA software.

COPRA® RF 2009 comes with a new commercial package and a lot of additional features for the simulation of roll formed tubes and sections. This new version has come closer to reality than any other simulation or analysis software ever. However, not only the FE Analysis software, but also the well known data M design package COPRA® RF has been enhanced.

The company – data M

data M Sheet Metal Solutions GmbH was founded in June 1987 with the objective of developing mere software. In those days everyone was convinced that as much as possible in a production process should be automated. That was the mainstream trend. Out of this work slowly arose the process simulation sector, but very soon the founders, Dipl.-Ing. **Albert Sedlmaier and Stefan Freitag**, realised that the design software alone was not sufficient since the customers requested additional technical services. Consequently in 1989 they themselves offered services and commenced design work. Beside software development this sector very soon became a business pillar of its own.

“That changed a lot with us“, so Albert Sedlmaier, “we increasingly focused on process simulation, i.e. a designing engineer designed something and we wrote an analysing program, which calculated the result of the rollforming process and simulated the rollforming process.”

A highly technical Service Center

So far data M delivered the feasibility studies and the tooling as well as the roll forming concept to its customers. These services will in future be added by a machine, which can produce prototypes of rolled sections. Not only on the basis of “**flexible roll forming**” or so-called “**3D roll forming**”, on which data M has been working for many years, the company in future will be in a position to offer its customers a complete concept consisting of theory and practical experience – from feasibility studies and the tooling concept as well as the roll forming concept to the prototype of the section.

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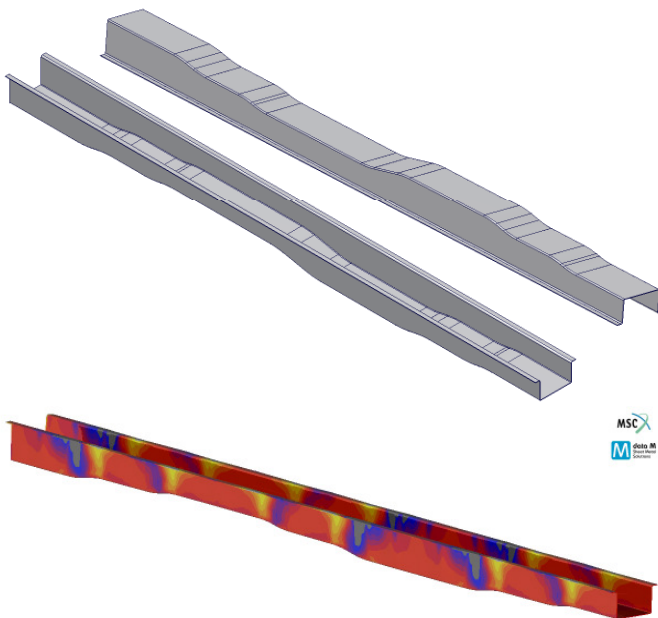


Fig.1: True "discontinuous in depth" roll formed profile in CAD and FEA

COPRA[®] Roll Form Software and Finite Element Simulation

The COPRA[®] RF software technology provides a powerful software package for every roll form designer. Design in a professional way for simple as well as highly complex profiles, tubes, drawn tubes und trapezoidal sections. COPRA[®] RF guides you through the whole process chain – from flower design (bending steps), flower simulation, roll tool design to finite element analysis (with **COPRA[®] FEA RF**), generation of NC-codes up to technical documentation. COPRA[®] RF is state-of-the-art technology for cold rollformed sections – worldwide.

It is the standard tool for designers in more than 50 countries and is available in 7 languages.

In this new version **COPRA® RF 2009** the **data M Sheet Metal Solutions GmbH** has been concentrating on 4 major issues, that will make the design of sections with pre-punched material, or the handling of trapezoidal and corrugated sections, much easier; and also the design process for complex open sections will be more effective.

The focus has been put on the following features:

- **A 3D punch hole editor for use with pre-punched material**
- **The possibility to automatically mesh pre-punched material**
- **The possibility to clone rolls**
- **The possibility to re-use / recycle existing roll tools**

In recent years it has become apparent that the use of **Finite Element Simulations** will be more and more important in the roll forming industry. Due to growing popularity of light weight construction, the sheet thickness is constantly being reduced, to compensate the loss in stability; more and higher strength materials are being used.

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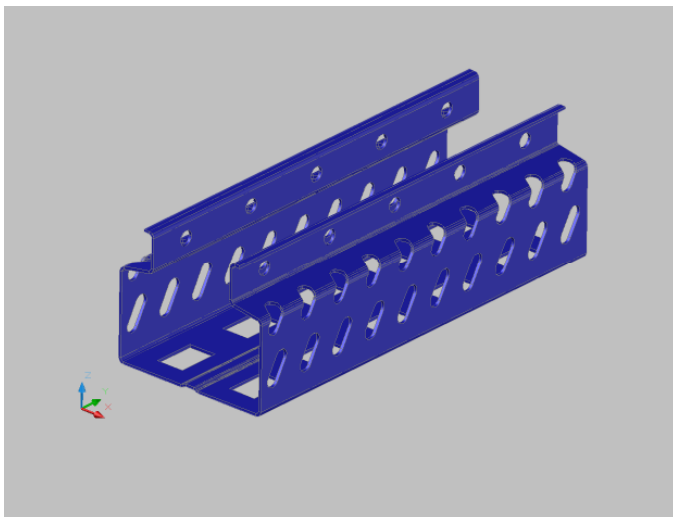


Fig.2: 3D Punch-Hole Editor

More and more profiles are also being rolled with **pre-punched** material, where the quality of the holes in the final section in terms of correct position and shape are also an important issue.

For all cases, only little experience and trial and error method are available within the roll forming industry. Therefore, the only way to avoid expensive and time wasting experiments is to virtually simulate the process with FEA. This is the reason why data M Sheet Metal Solutions GmbH has on the one hand focused upon making the roll design faster, and on the other to take away the time wasting modification of the **FEA mesh** when using pre-punched material, with **COPRA® FEA RF**. The target being to significantly reduce the time required for preparing an FEA simulation.

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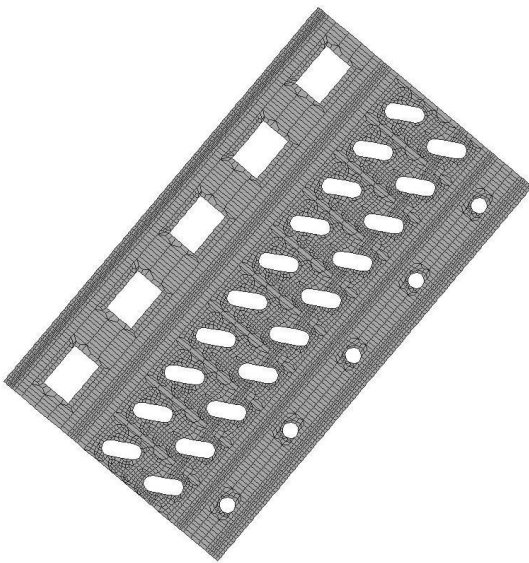


Fig.3: Punch-Hole Meshing

**data M Sheet Metal Solutions will be present at the
FABTECH International 2009 on booth 7121, south hall**

If you like to download this Press Release (words and pictures),
and all technical information to COPRA® RollForm 2009
please go to our website:

<http://www.datam.de/en/shows-press/press/FabTech2009>

In case of further questions, please do not hesitate to contact:

Mr. Albert Sedlmaier

Phone: +49 8024 640-0

Fax: +49 8024 640-300

e-mail: datam@datam.de

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Author's copy kindly requested.
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