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ESI is the pioneer and worldleading solution provider in virtual prototyping.

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# ESI honored at NUMISHEET 2011 conference in Korea For most accurate predictions of Drawing & Ironing processes with PAM-STAMP 2G

Paris, France – 7 November, 2011 – <u>ESI Group</u>, pioneer and worldleading solution provider in <u>virtual prototyping</u> for manufacturing industries, announces that <u>NUMISHEET</u> has recognized ESI engineer Jan Novy for his latest simulation results using ESI's Sheet Metal Forming Simulation Suite, <u>PAM-STAMP 2G</u>.

The 8<sup>th</sup> <u>NUMISHEET</u> conference was held in June in Seoul, Korea, bringing together scientists, engineers and industrial users in the field of the numerical modeling of sheet metal forming processes, . Held since 1989, this year the conference addressed challenges associated with lightweight and high strength materials; increasingly needed to help industries move to greener technology.

Jan Novy, <u>ESI</u> metal forming expert based in the Czech Republic, obtained the best results in part of the <u>NUMISHEET</u> Benchmark study, which tested the accuracy of simulation against experimental results He ranked first among 10 participants with his report entitled "*Simulation of Earing Evolution during Drawing and Ironing Processes*".

For this simulation work, **Jan Novy** used the Vegter material model: a highly accurate material model developed by Tata Steel in Holland to address the need of the global automotive industry for an improved material model to support simulation of metal forming processes.

**Jan Novy** also used the newly developed Through Thickness Stress Element (TTS) of PAM-STAMP 2G to better predict the ironing process. Together with the Vegter model, TTS enabled an accurate prediction of the springback after ironing.





<u>Image:</u> NUMISHEET 2011 ironing benchmark study results, comparing experimental results (in dark blue) to the 10 competitors' simulation results. ESI's PAM-STAMP 2G (in dark green) was ranked first thanks to closely matching results.

# About PAM-STAMP 2G

<u>PAM-STAMP 2G</u>, <u>ESI</u>'s sheet metal forming solution for automotive, aerospace and general sheet metal forming applications, takes into account the entire tooling process and provides tradeoriented virtual manufacturing.

<u>PAM-STAMP 2G</u> Version 2011 extends the scope of sheet metal forming process simulation beyond standard stamping. For this latest release, the following areas were especially extended: hot forming including metallurgy and cooling, line die simulation including flanging with ironing, springback after hemming, and optimization.

More information about Sheet Metal Forming prediction can be found on the <u>Tata Steel Automotive</u> <u>website</u> that highlights current challenges and solutions for the automotive industry. "*In the automotive industry, formability analyses using PAM-STAMP 2G can help reduce the cost and time of new vehicle development. It can also help optimize manufacturing processes.*"

For more ESI news, visit: <u>www.esi-group.com/newsroom</u>

# About ESI Group

ESI is a pioneer and world-leading solution provider in virtual prototyping for manufacturing industries that takes into account the physics of materials. ESI has developed an extensive suite of coherent, industry-oriented applications to realistically simulate a product's behavior during testing, to fine-tune manufacturing processes in accordance with desired product performance, and to evaluate the environment's impact on performance. ESI's solutions fit into a single collaborative and open environment for End-to-End Virtual



Prototyping, thus eliminating the need for physical prototypes during product development. The company employs about 850 high-level specialists worldwide covering more than 30 countries. <u>ESI Group</u> is listed in compartment C of NYSE Euronext Paris. For further information, visit <u>www.esi-group.com</u>.

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