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Strain analysis system *AutoGrid*®

Outstanding characteristics

The *AutoGrid*® system is an automated opto-electronic measuring system designed for both:
- strain analysis in deformed parts *and*
- in-process evaluation of formability material tests (e.g. FLC determination, bulge test).

All features, also the type of pattern (line grids) and the grid application method, are *identical in both applications*, and therefore, the results for the same material are absolutely *comparable* and well suited to check the formed part against the forming limit curve (FLC).

Use
- the system is specifically taylored to satisfy the particular needs in forming technology
- the hard- and software is very convenient to use and easy to operate
- mobile AutoGrid solutions are available
- the measuring equipment can be directly integrated into the customers sheet metal testing environment giving access to in-process analyses

Functionality
- complete strain and sheet metal thinning data are available 2-5 minutes after recording
- standard deviation in technical strain is better than +/- 0.5%
- various measured areas can be matched together by common points (for part analyses)
- the repeated determination of forming limit curves (FLCs) is directly supported and significantly accelerated
- in-process application allows for ultimate strain determination just *before* failure of material
- recording of image sequences is coupled with the acquisition of machine data (e.g. punch displacement and force or pressure)
- the fast and automatic analysis of image sequences yields the incremental strain field development in time with a resolution of 1/30 s
- animation of result development during the analysed tests

Compatibility
- software operates under MS-Windows 2000/XP facilitating the export of numerical and graphical results for other Windows applications
- all results can be exported into an ASCII-file, and the measured grid can be exported into PAM-STAMP, AutoForm and AutoCAD