Press Line Simulation

Faster setup of multi-stage transfer presses – using simulation and the motion control system SIMOTION

Press Line Simulation from Siemens is an innovative software for comprehensive programming, analysis and simulation of multi-stage transfer presses. Digitally simulating the complete sheet steel forming process allows all the necessary operations to be prepared in advance, and virtually optimized at an early planning phase. As a consequence, the software provides valuable information for designers and planners, long before the components are actually produced.

Press Line Simulation supports various tasks in the press process – for instance, material flow planning, tooling design, die design and press setup. The interface to the press controller (SIMOTION®) allows an easy data transfer to the real application.

The advantages at a glance:
- Virtual optimization and verification of all function components
- Possible errors are minimized as a result of the simulation
- The real press is set up faster
- Shorter ROI time as a result of significantly lower setup times and increased material throughput
- Increased productivity by varying programming parameters
- Fast commissioning

Press Line Simulation being applied – an overview
- Simulation of a high precision model of the press
- Simulation of a complete press line
- Interactive setpoint/actual value comparison via the press controller
- Collision detection
- Open software architecture
Customized functionality – modular and precisely tailored to your requirements

The PLS modular system

An overview of the modules – to address your particular requirement, select the basis module and the modules that are relevant for you from the modular Press Line system

PLS gateway (basis module)
Visualization of the scenario
- Load job
- Load press
- View scene
- View press motion

Die verification
Check the die for internal collisions
- Die import
- Die re-assembly
- Kinematic definition
- Cam / Driver definition
- Collision calculation
- Sheet metal part import
- Tooling installation
- Collision report
- Measuring functions

Press setup
Production plan & optimization
- Static setting values
- Offline programming and test
- Press synchronization
- Signal setting
- Motion curves
- Die import
- Sheet metal part import
- Tooling installation
- Tooling library
- External collision calculation
- Analytical functions

PLAdmin
Administration of press lines
- Importing kinematic press models
- Adding/changing the CAD geometry
- Parameter change for the setting and programming values

TLibMaker
Generating tooling libraries
- Automatic tooling placement at the transport system
- Generating parts lists, assembly structures and CAD data – without collision and verified

PLMaker
Press lines
Creation & processing
- Creating press models
- Changing existing press models

Dynamic calculations
Corresponding to the actual parameters
- Holding force calculation
- Bending calculation