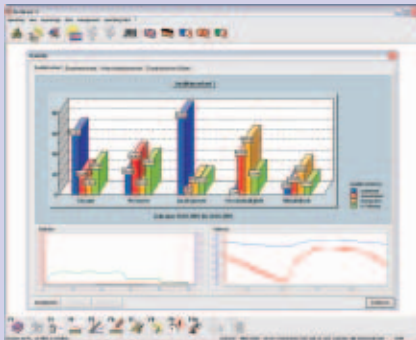


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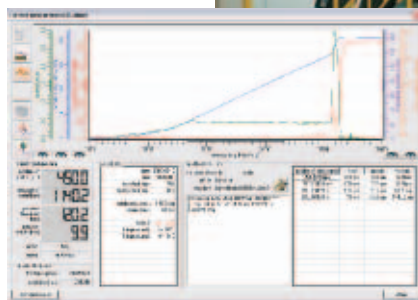
Shot data acquisition and shot control



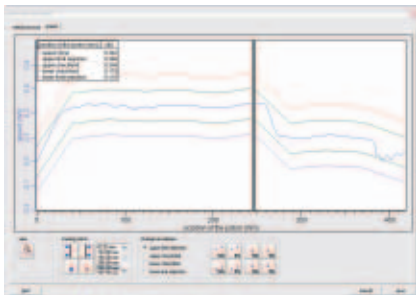
Statistic module



New Rheocasting Machine



Actual measurement



Definition of envelope curve

These days the use of modern light alloys enables possibilities never have been there before to increase quality, safety and life of products from all areas in our daily life. Not insignificant is the use of light alloys which contributes to reduce pollution by the achieved weight reduction of engine assemblies or other automotive parts. Straight for parts which demand a constant high quality standard or which find use in safety-sensitive areas like for example chassis-parts a complete quality-proof is required. Proficast offers you all necessary possibilities of recording, putting into archives, analysing and observing your production of light metal die casting parts. Furthermore Proficast is able to optimize the shot control of your Die Casting Machine by means of open or closed loop control of the shot cylinder. Many useful modules complete the

through concept of the shot data acquisition and production planning with Proficast.

The open client/server structure of the software gives you the possibility to access at anytime the actual production- and quality data of your machine from anywhere. The putting into archives of all shot data, long-term measurements, tool- and die data, order information and production data from your Die Casting Machine, also years in advance, is possible by use of efficient and well-thought out data base systems.

An access from systems like SAP who have a higher priority over Proficast to all data, collected and put into archives is possible at anytime by standardized interfaces.



Proficast 3

Shot data acquisition and shot control

Functions

During the running casting cycle the pressure of head and rod side, the position and the speed of the shot cylinder is measured and saved each millisecond by means of a measuring-data processor which was optimized especially for that purpose. The metal pressure is calculated and the speed profile as well as the stroke is identified by this data.

Provided with an envelope curve it can be checked how the speed profile and the metal pressure differ from the values specified by the envelope curve. By that the necessary data for the open and closed loop control of the shot cylinder is identified, the optimization of the shot is made and the quality of the part identified. The simple construction of an envelope curve-profile from an existing shot curve and the clear input of the access limits used for the quality judgement

like biscuit or die temperature, the quality assessment, makes it possible to make a quick statement on the quality of the casting part.

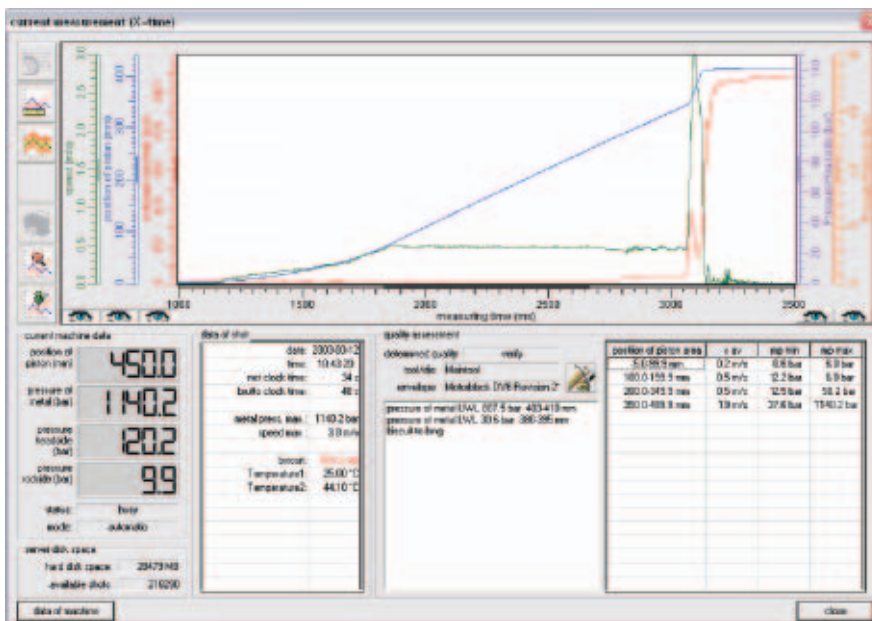
The putting into archives of the shot data happen in a standardized data base which is accessible not only from the machine but also from each office workstation. A direct query of the data from the machine is therefore anywhere possible.

The adjustment of the parameters for the quality assessment, shot control or part identity number can be directly assigned to a tool or die.

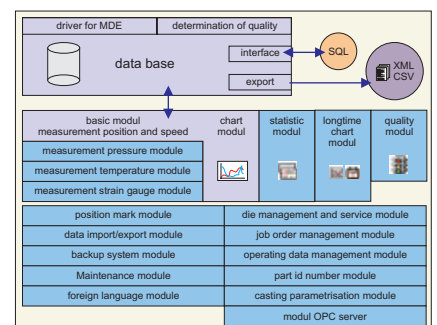
With that Proficast enables the machine-comprehensive administration of tools and dies.

Technical Data

- ◆ Registration of stroke and speed of shot.
- ◆ Recording of the metal pressure.
- ◆ Measuring resolution adjustable from 1 to 200 ms.
- ◆ Maximum resolution of the shot cylinder position 10 µm.
- ◆ Up to 256 analogue measuring values.
- ◆ Shot cylinder open or closed loop control optional.
- ◆ Quality assessment of metal pressure and shot cylinder speed profile.
- ◆ Simple definition of envelope curve by use of a reference shot.
- ◆ Long-term recording of analogue measuring values.
- ◆ Statistical analysis of the shot data.
- ◆ Tool- or die administration.
- ◆ Administration of part identity numbers with interface to signing device.
- ◆ Order administration and operation data management.
- ◆ Client/Server structure.
- ◆ SQL data base based.
- ◆ Interfaces to systems with higher priority.



Display of actual shot measuring values with quality assessment



Modular software architecture



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