

1 Properties of a Casting, Depending on

- 1.1 Design
- 1.2 Stresses by Strain, Pressure, Torsion
- 1.3 Static and Dynamic Conditions
- 1.4 Defects like Pores, Shrinkage Holes, Cracks

2 Aluminium Casting Alloys

- 2.1 Composition along DIN EN 1706
- 2.2 Influence of the Production Parameters by Sand, Die, and Pressure Die Casting Parameters
- 2.3 Influence of the Alloying Elements Si, Cu, Mg, Zn, and Others on the Alloy Properties

3 Aluminium Pressure Die Casting Alloys

- 3.1 Production Parameters by the Pressure Die Casting Process
- 3.2 Influence on the Grain Size and Grain Size Distribution
- 3.3 Influence on the Porosity, Coming from
 - 3.3.1 Air and Gas inclusions (Pore Holes)
 - 3.3.2 Insufficient Feeding, Shrinkage Holes (Micro and Macro Holes)
 - 3.3.3 Internal Strains

4 Strength of the Casting Alloys Depending on the

- 4.1 Wall Thickness
- 4.2 Cavity Fill Speed of the Melt
- 4.3 Influence of the Temperature
- 4.4 Part Cooling after Deforming (Quenching)

5 Mechanical Properties Depending on the

- 5.1 Temperature
- 5.2 Deformation Speed
- 5.3 Relation between Strength, Rate of Elongation, Yield Strength
- 5.4 Porosity

6 Influence of the Thermal Treatment

- 6.1 Cast State
- 6.2 T₆ Treatment
- 6.3 T₅ Treatment
- 6.4 Stress Free Annealing

7 Discussion

Aage Entwicklungsgiesserei (Development Foundry)

For questions and further information, please contact:

Aage GmbH
Entwicklungsgiesserei
Roentgenstrasse 24
73431 Aalen
Tel.: +49-(0)7361 / 490812-0
Fax: +49-(0)7361 / 4908118

Referee: Prof. Dr. rer. nat. Dr. h.c. Friedrich Klein

Fee

2 days training in company

Traveling costs and expenses in Germany

€ 6.500,--

The fee is to be transferred after invoice receipt within 10 day purely netto, plus value added tax and traveling costs.

Component Strength

In-house Training

Aluminium Pressure Die Castings

Component Strength

Questions on your castings we willingly involve.

Aage Entwicklungsgiesserei

Aalener Gesellschaft für Leichtbauteile mbH

