

Casting Seminar Brass High Pressure Diecasting

John W. Taylor

Regon Ltd. Station Lane, Witney,
Oxfordshire

Brass High Pressure Diecasting

Introduction

- Cost effective manufacturing and design for the production of High Pressure Brass castings.
- John Taylor Works Director of Regon Ltd. (Brass High Pressure Diecastings) Oxford.

Topics of Discussion

- To present an overview of the various Brass Casting techniques. Outline the advantages and characteristics of Brass High Pressure Diecasting.

Overview

- Sand casting
- Shell moulding
- Gravity diecasting
- Investment casting
- Centrifugal casting
- Continuous casting
- Low pressure casting
- High pressure diecasting

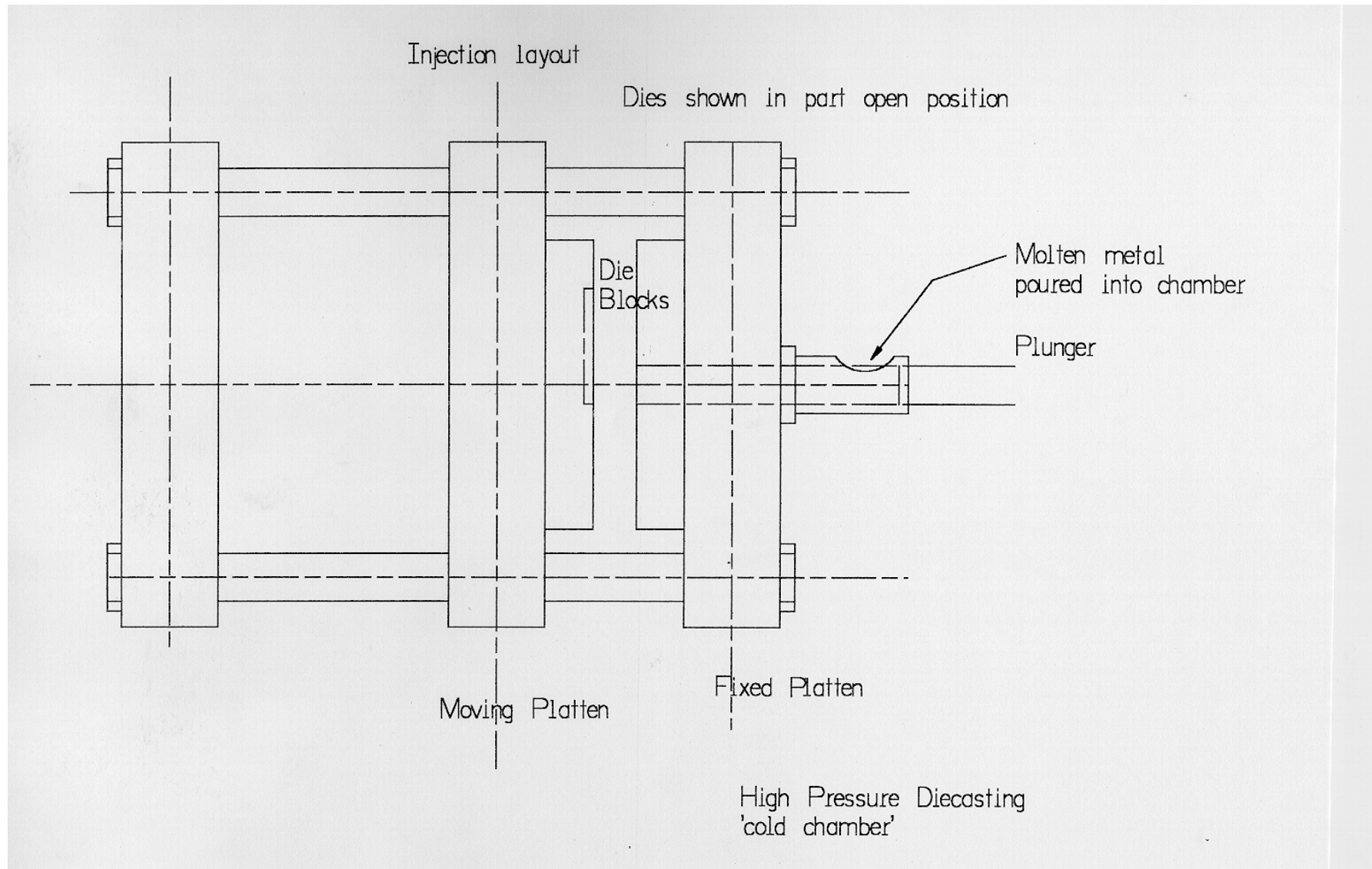
Characteristics of Casting Processes

Relative position of Brass High Pressure Diecasting in relation to other Casting Processes				
Process	Batch size	Preferred Weight (kg)	Surface Finish	Shapes that can be produced
Sand Casting	1-10,000	Any weight upto 50 the usual.	poor surface finish	Complex shapes with hollows and projections low est cost for small production runs.
Shell moulding	50-10,000	0.005-20	good surface finish	as above but with closer tolerances Restricted to small and medium castings
Gravity diecasting	100- 10,000	0.01-10	Detailed surface, good finish. Joint lines usual.	Complex shapes with hollows and projections Higher tensile properties & hardness than sand castings
Investment casting	1-10,000	0.002-50	Intricate shape and good surface finish. No joint lines.	Almost no restriction on shape. Dimensional accuracy high but an expensive process
Centrifugal casting	1-10,000	0.005-1000	good surface finish.	Used for producing discs or rings. Thick walled cylinders may also be cast.
Continuous casting	1-10,000 and above	Diameter limited 10-150mm	good surface finish	Rods, section,tubes and profiles.
Low pressure casting	50-5,000	1.5-50	good surface finish	Intricate internal cavities ability to use sand cores to form shapes. higher cycle times.
High pressure	500-10,000 and above	0.005-5	Intricate surface finish minimal joint lines.	Complex shapes but with thinner w all sections and detail. Multi-cavity and high production rates. Reduced need for finishing operations and machining.

Brass High Pressure Diecasting

- Process of High Pressure Diecasting
- Finishing
- Recycling

Cold Chamber Diecasting Machine



Summary

Brass High Pressure Diecastings give

- High production rates
- Repeatability-close dimensional control
- Efficient use of Material-less waste
- Recyclable material
- More detail
- Good surface finish
- Fettling and Filing Eliminated
- Wide selection of Brass materials used
- Irregular Shapes
- Thinner wall sections