

North America & Europe Investment Casting Markets 2013

Ronald Williams

Richard Hirst

The Blayson Group Ltd

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Introduction

- This presentation reviews the investment casting markets of North America and Europe
- These 2 major areas represent a major portion of the World Investment Casting industry
- This review of these markets gives a summary for 2012 and estimates likely results for 2013



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CAEF (Casting Association of European Foundries)

EICF (European Investment Casters' Federation)

ICI (Investment Casting Institute - United States)

cmf (Cast Metals Federation - UK)



North America & Europe

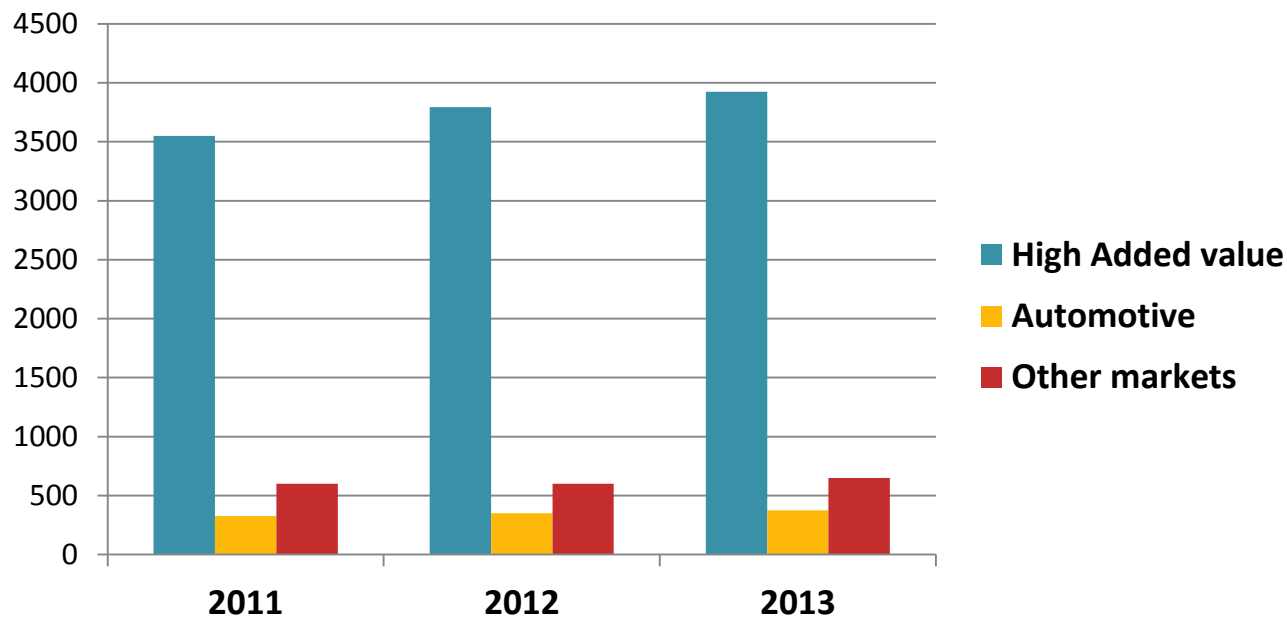
- North America and Europe together represent
 - 25% of the world investment casting foundries
 - 60% of the total world investment casting sales value
- Due to the high level of production of castings for the aerospace and industrial gas turbine industries
- The performance of these two markets has a significant effect on investment casting worldwide



North America

North America

- Total North American sales in 2012 US\$4.75 Billion
 - Increased 6% over 2011
 - Represents 41% of global investment casting sales
 - Growth in commercial aerospace, automotive, petrochemical
- Investment casting expected to grow 5% in 2013



North America - Aerospace

- Record aircraft orders and deliveries
- Production capacity full for 7 years
- Due to airline fleet renewals
 - Improved economy of new aircraft and engines
- Increasing number of casting applications
- Business aircraft sector shows improving activity
 - Need to replace older planes
- Military sector being affected by reduction in defence budget



North America - Sectors

Industrial Gas Turbines

- Improvement in small and medium IGT sector
- Market for large generators flat
- Long term forecast good

Automotive

- Sales of cars and light trucks up
- Hurricane replacements a factor
- Increased sales of vehicles with turbochargers
- 2013 sales remain strong



North America - Sectors

Medical

- 5% annual growth
- More joint replacements
- Increased casting applications in diagnostic equipment
- Medical product demand will increase

Commercial

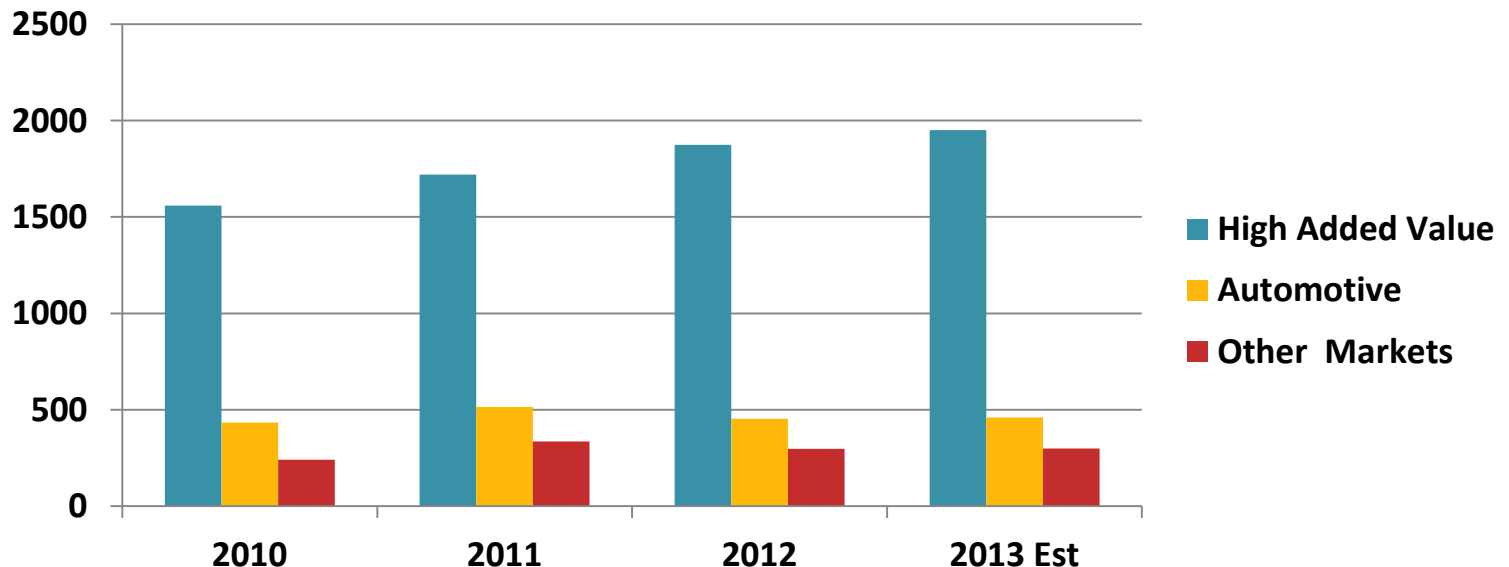
- Overall expanding
- Oil and gas industry very busy
- Repatriation of castings



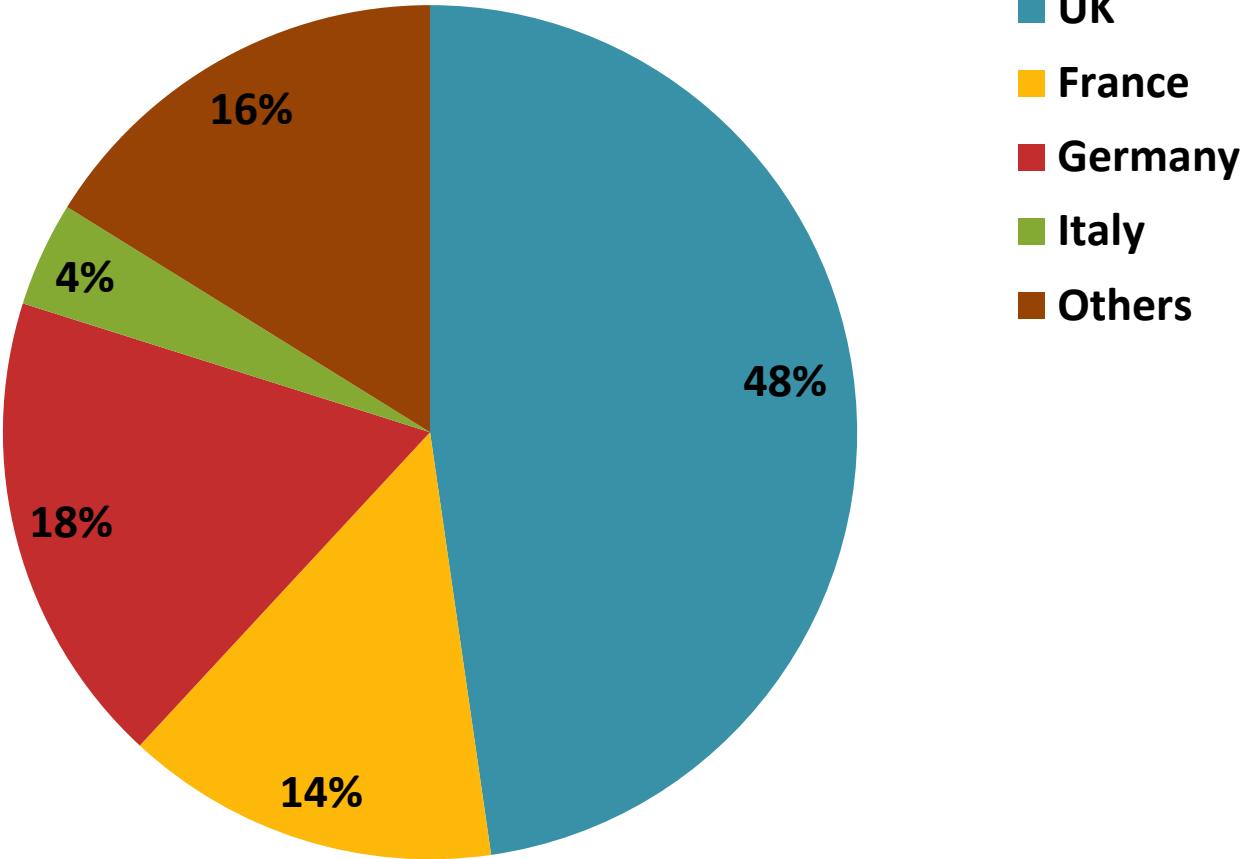
Europe

Europe - 2012

- Total 2012 European investment casting sales US\$2.62 Billion
 - Increase of 2.1% over 2011
- Differing sector performance, High Added Value +9%, other sectors down more than -10%
- European sales expected to increase 3.3% in 2013
- Aerospace growth to continue



European Market by Country 2012



Europe - Aerospace

- High demand for new aircraft
 - Increasing sales to developing economies
 - Fuel efficiency
- Airbus very successful at Paris Air Show
 - Achieved 60% market share
- A350 first flight June 2013
- Rolls Royce order books full
 - Supplying engines for 3 new aircraft
 - Dreamliner, A380 and A350
 - 1,400 Trent XWB engines on order
 - Doubling engine build capacity in 2014



Europe - Sectors

Industrial Gas Turbines

- European IGT market remains at a low level
- New tooling being ordered indicates likely improvement in 2014

Automotive

- 2012 European sales -12%
- Vehicle sales down in all countries apart from UK
- Car production operating below 75% capacity
 - Closures planned by Peugeot, Ford, General Motors
- Market improvement predicted to be slow



Europe - Sectors

Medical

- Limited growth despite ageing population
- Strong competition from foundries in developing regions

Commercial

- 2012 sales -11%
- 2013 some foundries busy others operating below capacity
- Sales for petrochemical industry good



Thank You