

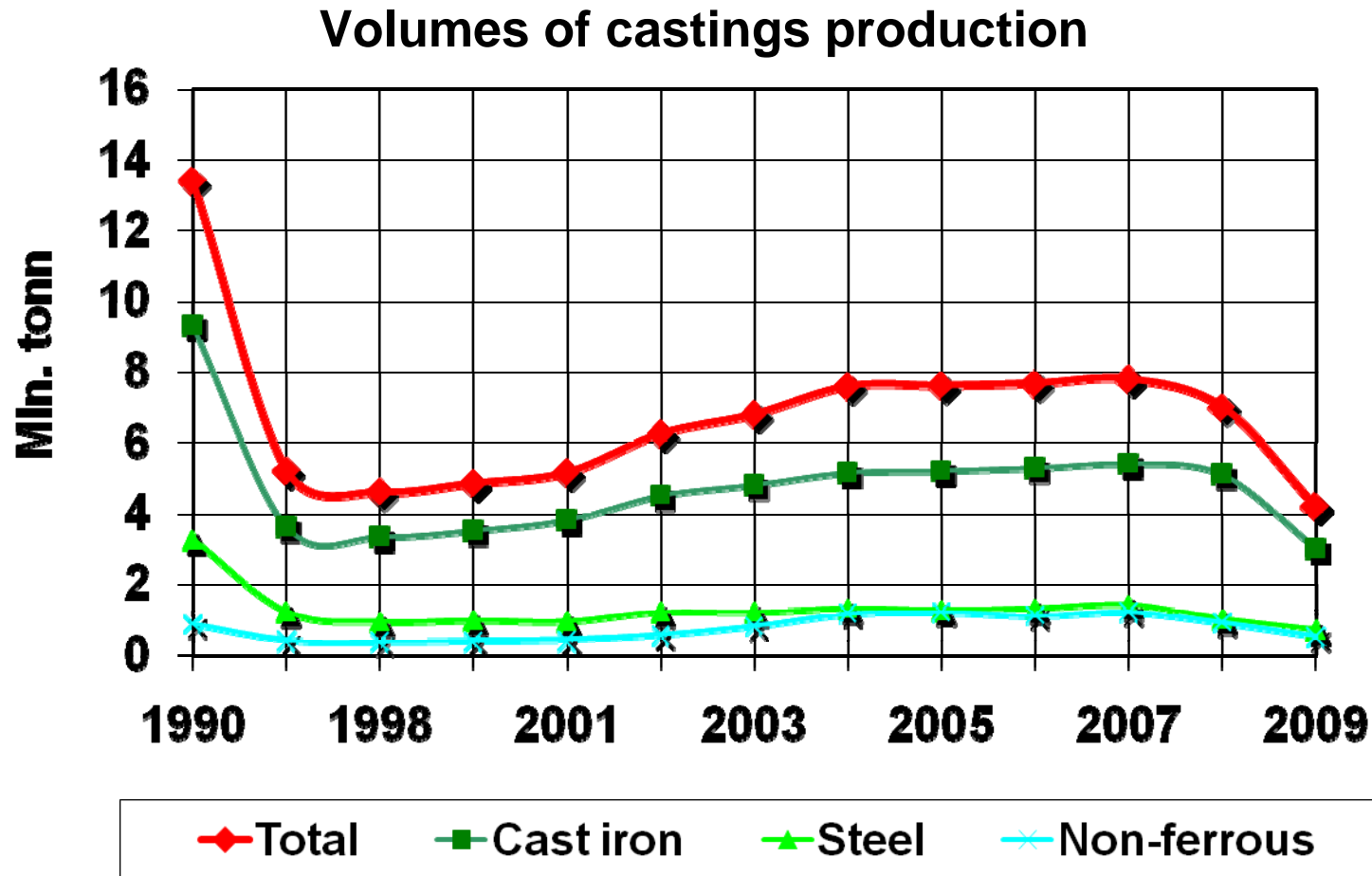
Presented by:
Andrew Dibrov,
Vice-President of Russian
Association of
Foundrymen



**Trends in Russian Foundry
Industry
Revision 2010**



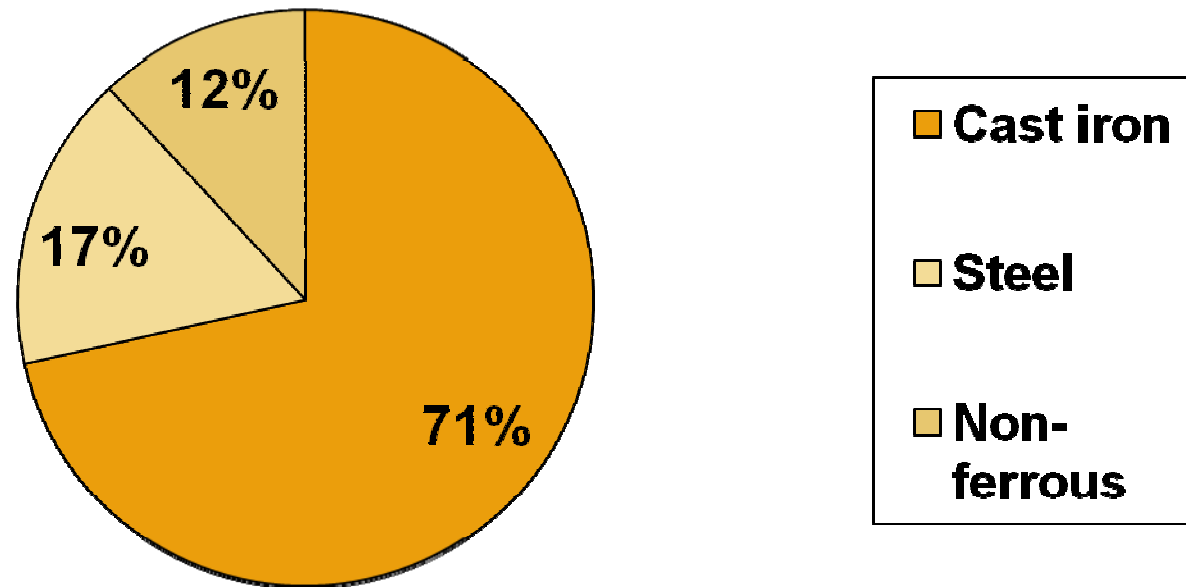
“Trends of Foundry Development in Russia”



Total number of foundries: 1350 – produced in 2009 – 4,2 mln. tonn of castings
but Export – 90.000 t = about 2%

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Distribution of castings by alloys in 2009



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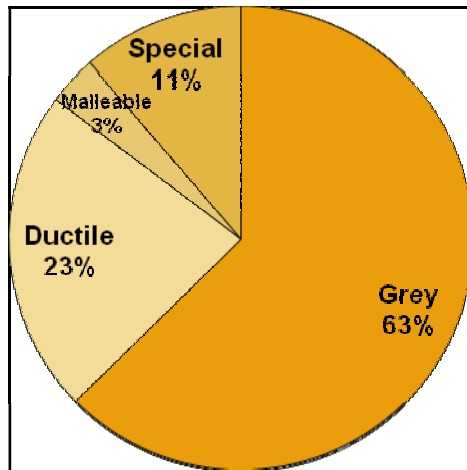
Distribution of castings by alloys in 2009:

■ Cast iron (total)	: 3000 th. t – 71%
Grey iron	: 1740 th. t
Ductile iron	: 840 th. t
Malleable iron	: 600 th. t
Special irons	: 360 th. t
■ Steel (total)	: 700 th. t – 17%
Carbon steel	: 450 th. t
Alloyed steel	: 250 th. t
■ Non-ferrous (total)	: 500 th. t – 12%
Aluminium	: 340 th. t
Magnesium	: 35 th. t
Copper	: 90 th. t
Zinc	: 15 th. t
Others	: 20 th. t

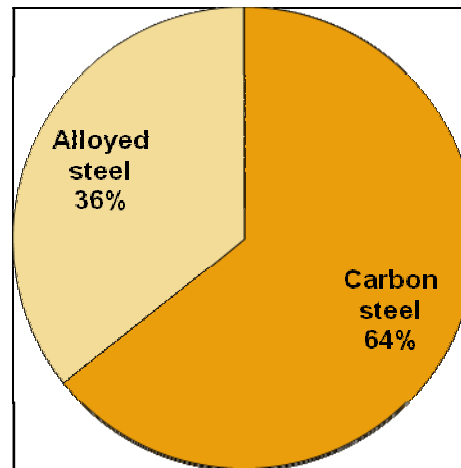
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Distribution of castings by alloys in 2007

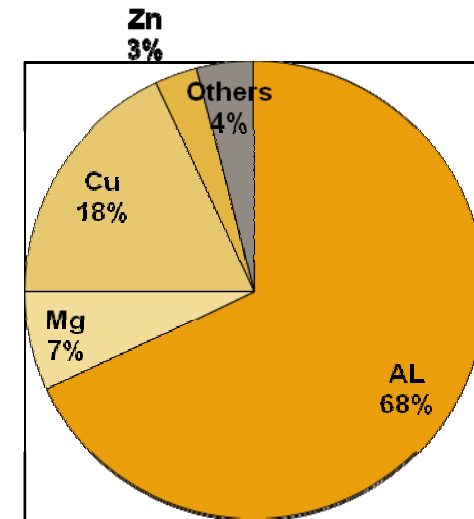
Cast iron - 71%



Steel - 17%



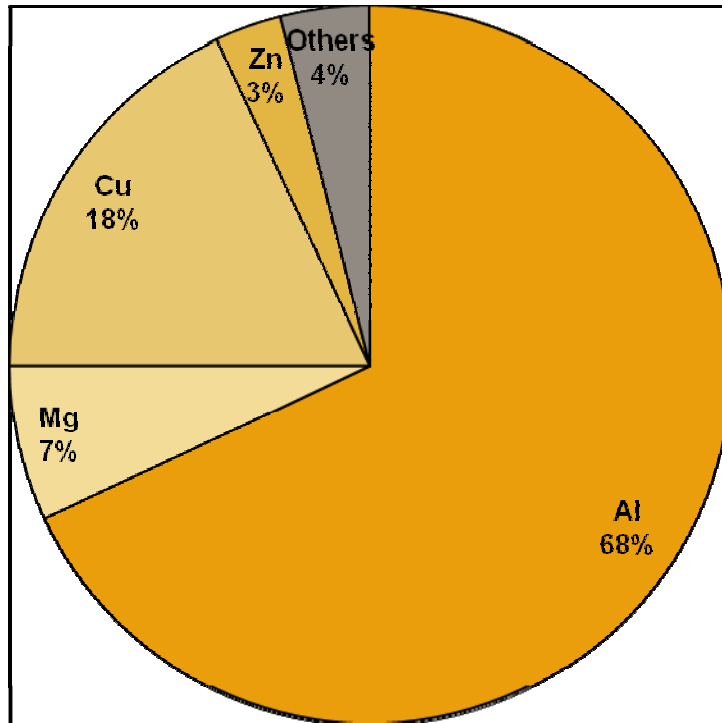
Non-ferrous - 12%



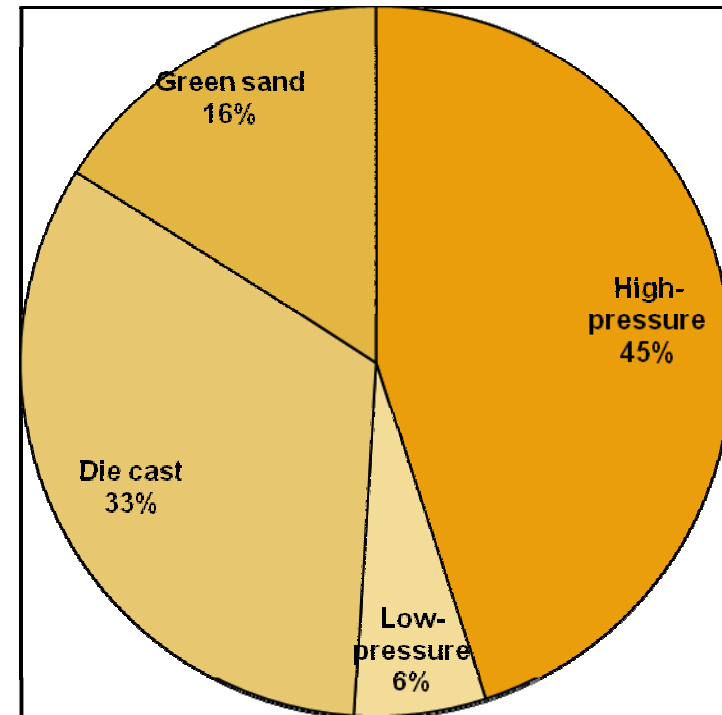
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Non-ferrous castings production

**Non-ferrous -12%
from total**

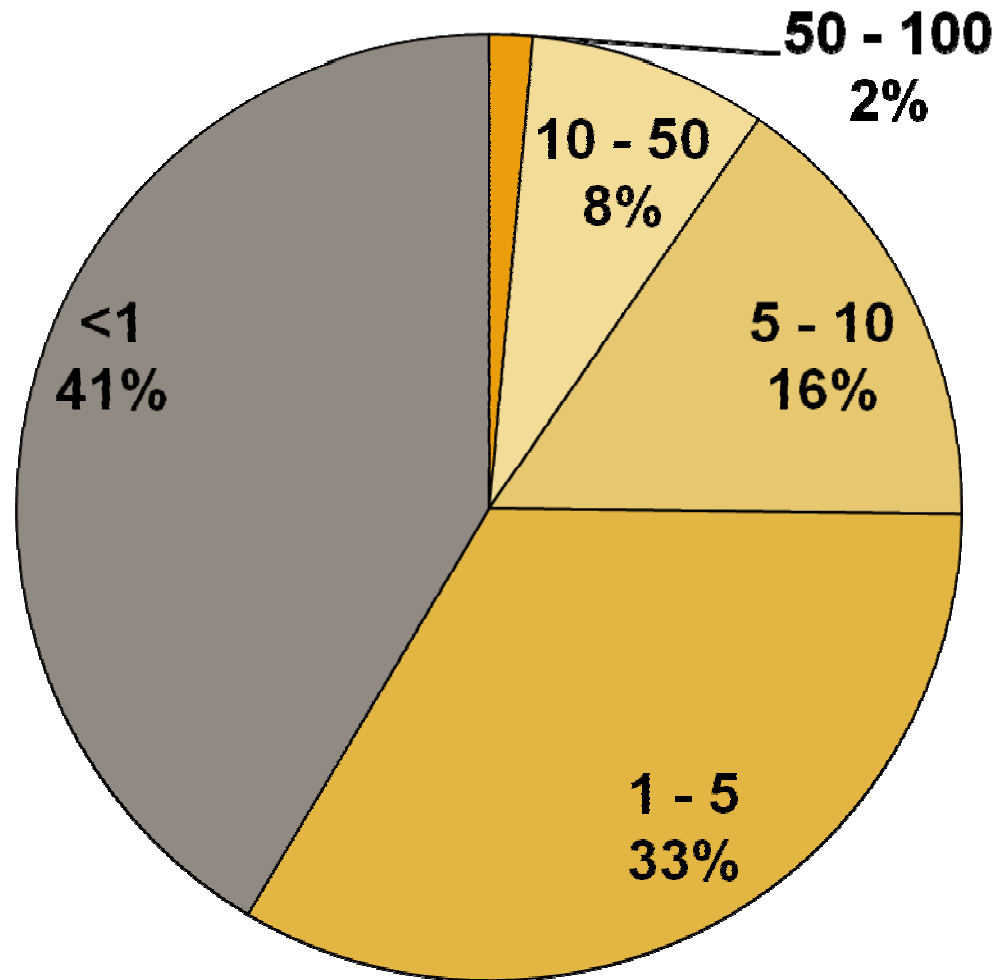


**Aluminium - 68%
from total non-ferrous**



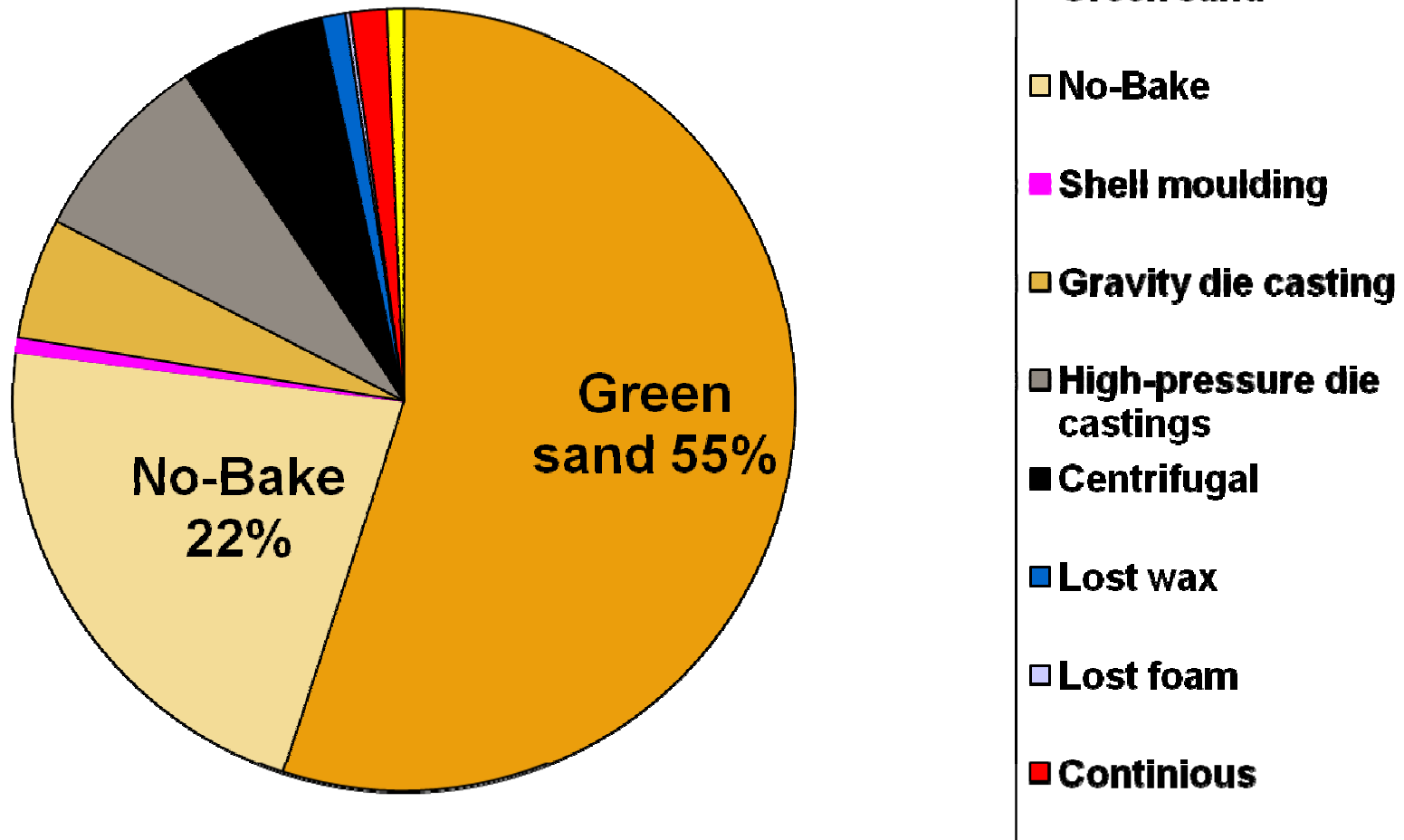
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Distribution of foundries by capacity, 1000 t/year



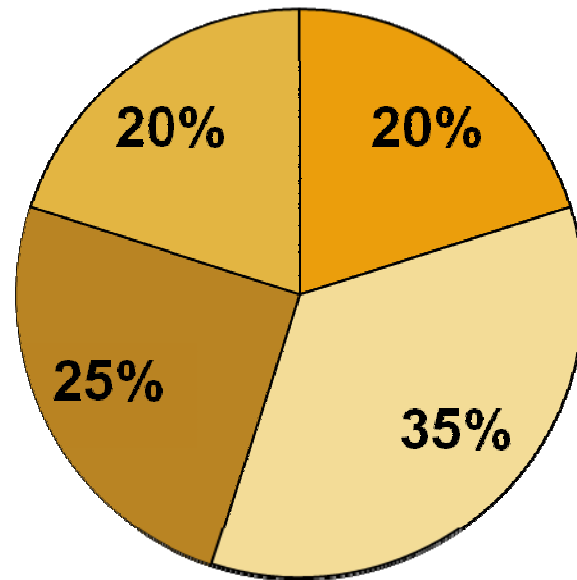
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Distribution of Foundries by moulding technology



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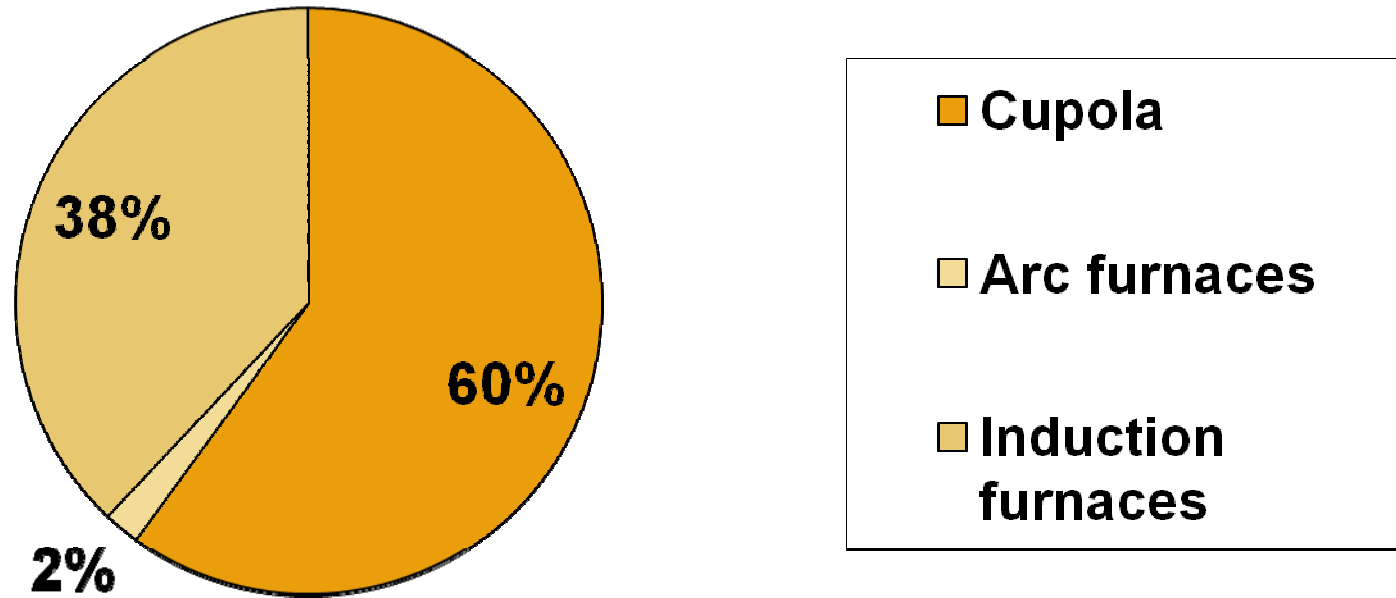
Level of foundries automatization by q-ty of castings produced on:



- Automatic lines
- Semi-automatic lines
- Single machines
- Manually

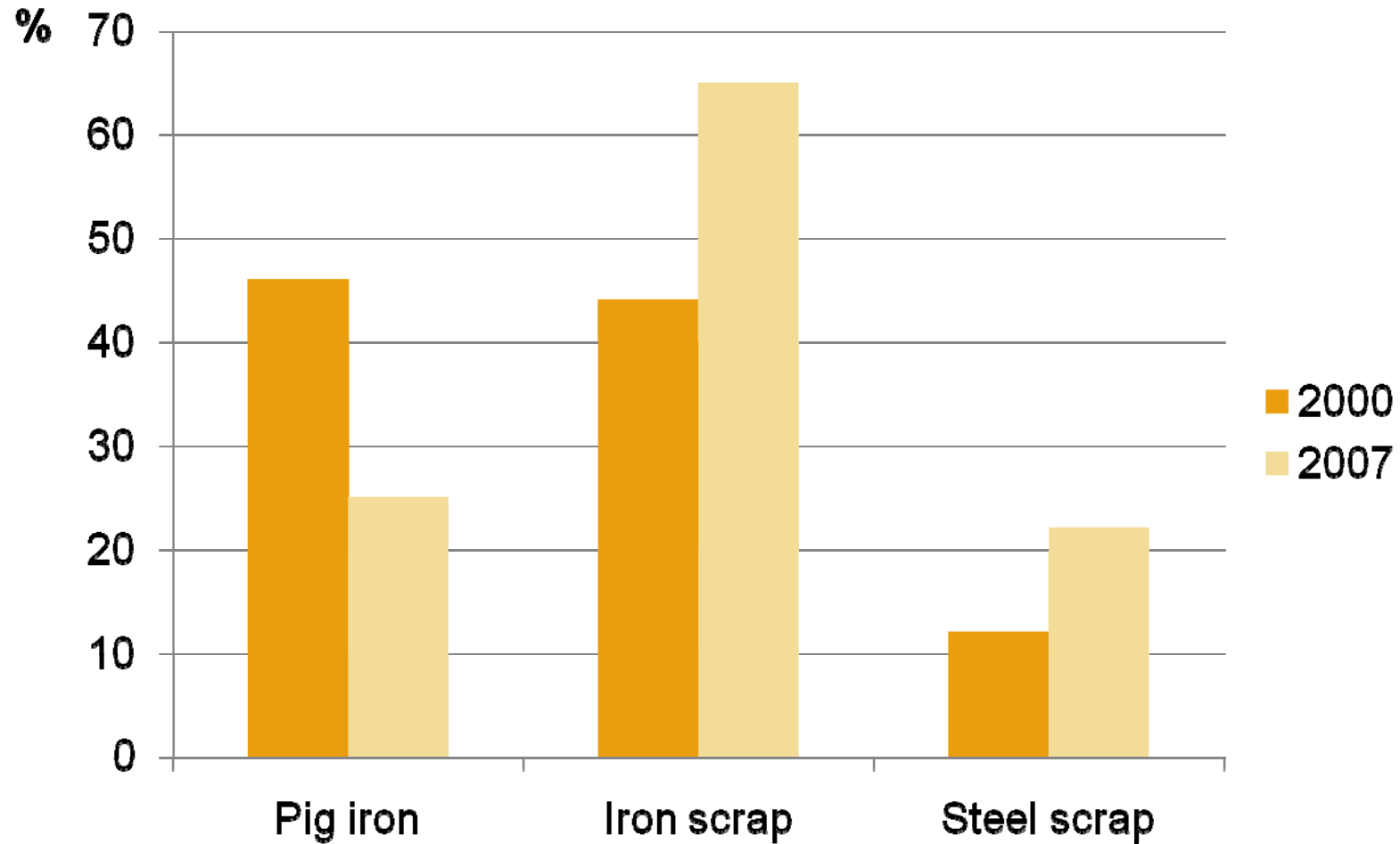
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Melting of cast iron (by q-ty of castings)



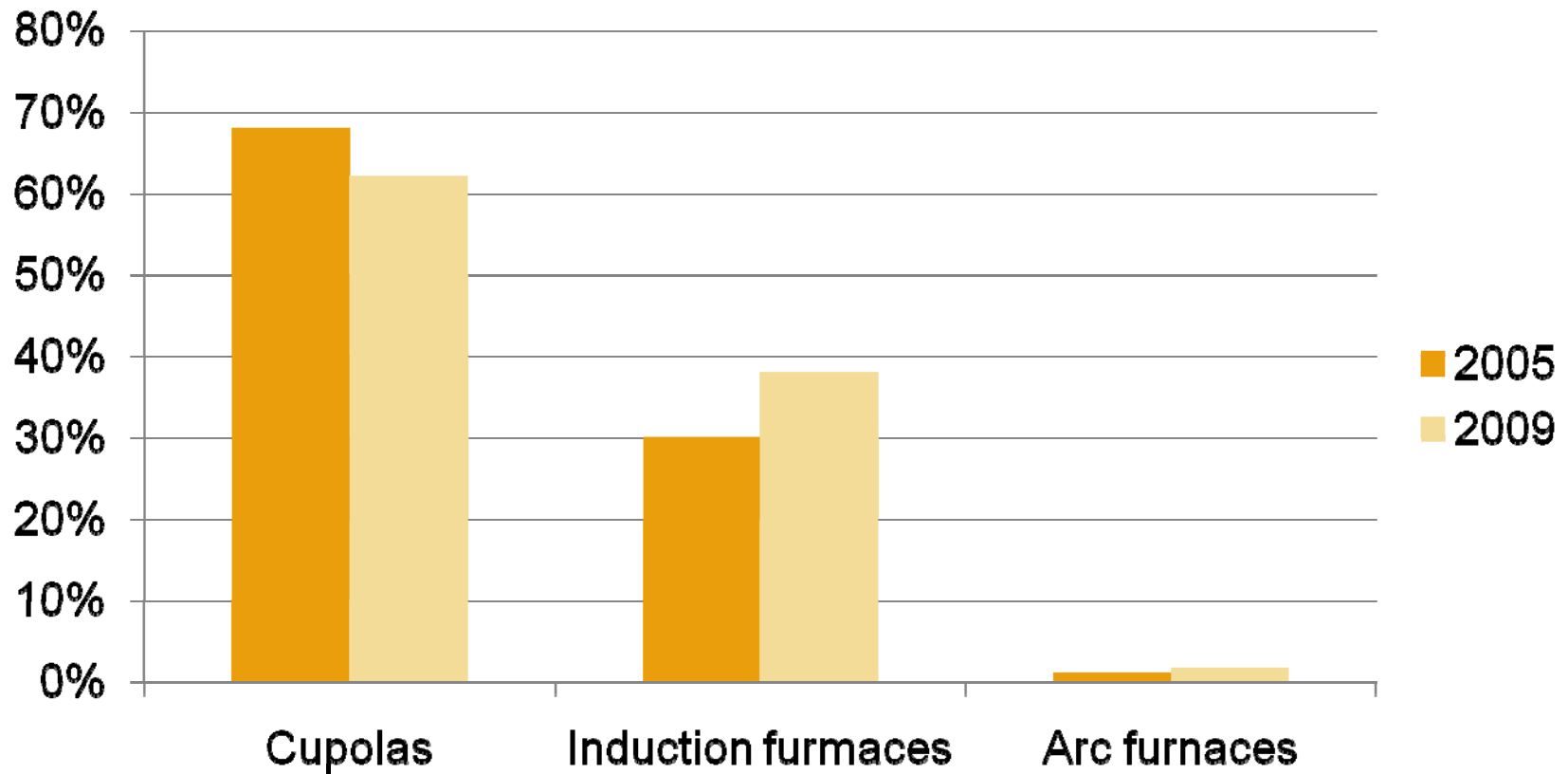
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Composition of the melting charge



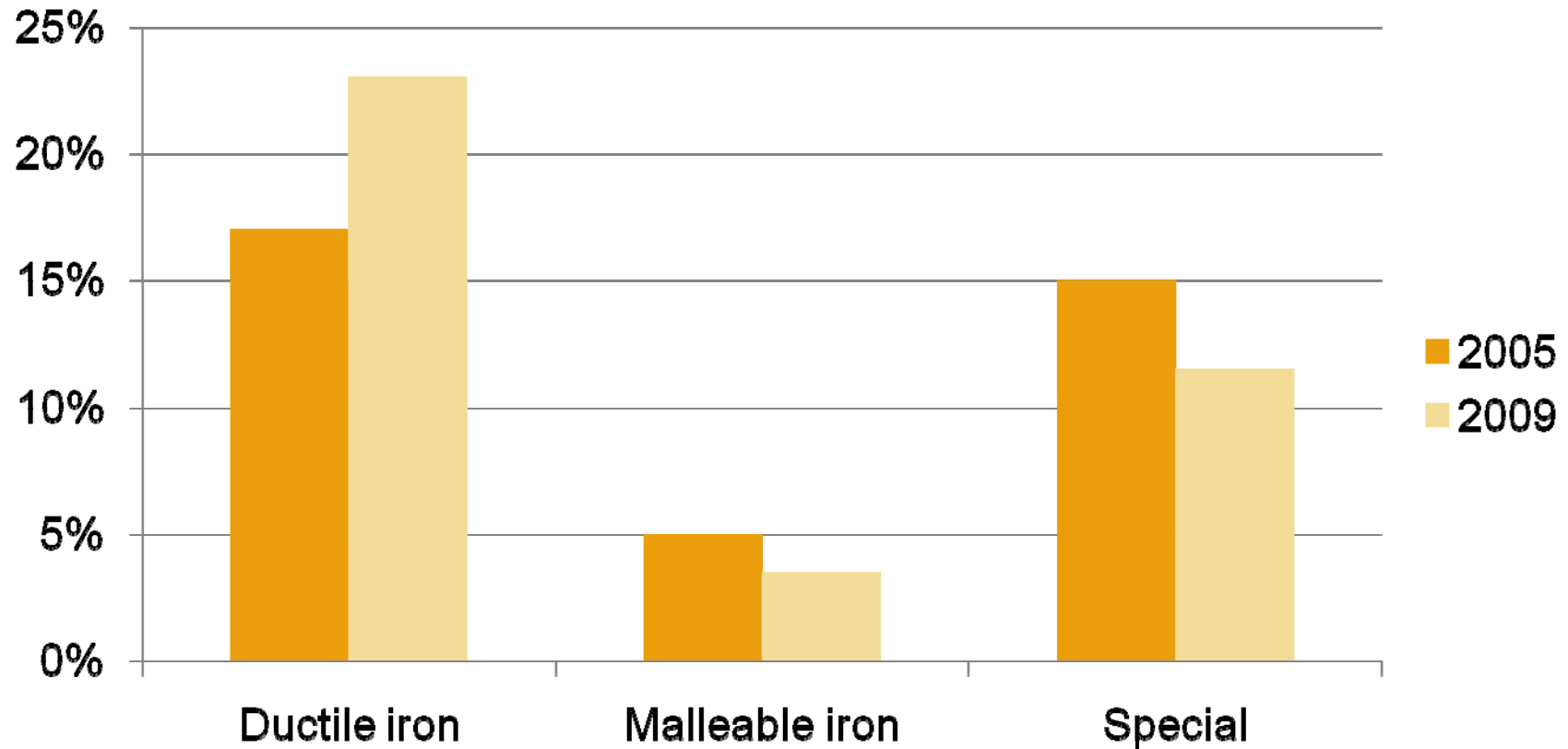
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Trends in melting for cast iron (by quantity of castings)



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Production of ductile and malleable iron castings, in % to the total production



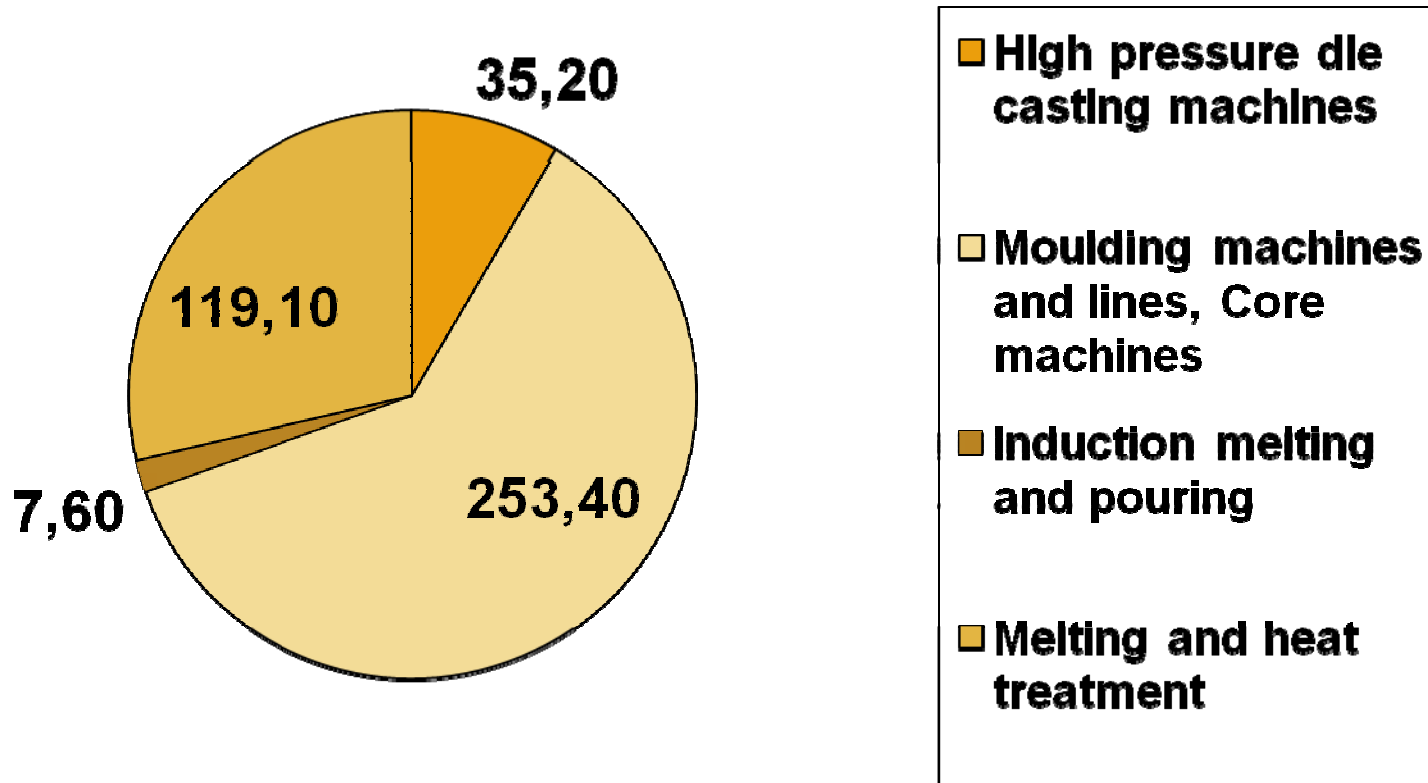
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Most perspective directions of development:

- Production of No-Bake / Core moulds
- Production of cold-box cores
- Melting in medium frequency induction furnaces and DC arc furnaces
- Growth in production of ductile iron and Al alloys as replacement of malleable iron and steel
- Building of new foundries and reconstruction of existing

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Import of foundry equipment (in mln. US \$):



Total import for foundry and satellites: 2009 - 632 mln. \$

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Main developing areas:

- Transport / railway
- Oil / gas (valves etc.)
- Mining (wear parts)
- Aerospace (Al and Mg castings)
- Automobile (cars and trucks) – starts again

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Main economical trends:

- Cost increase for energy and materials
- Growth of expenses for environmental protection
- Lack of skilled workers and engineers – high cost of castings
- Reduction of number of foundries (only in 2009 – minus 300 foundries)

THANK YOU!