

CHINA NICKEL 2005

FERRONICKEL A SPECIALTY PRODUCT FOR THE STAINLESS INDUSTRY

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10 September 2005

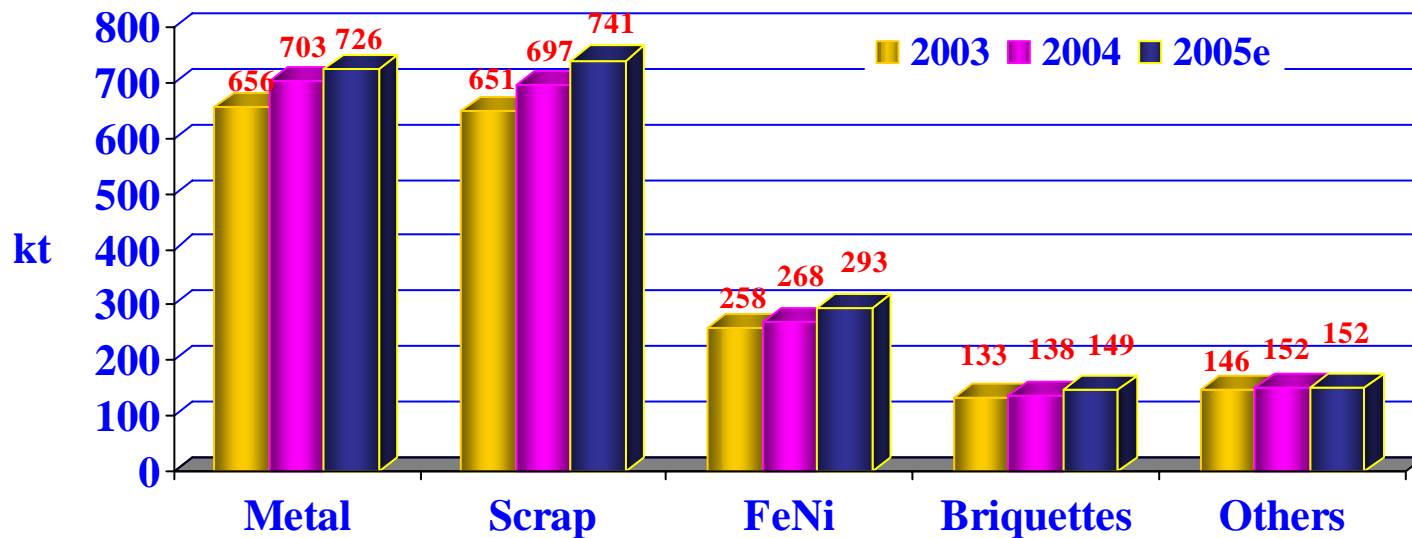
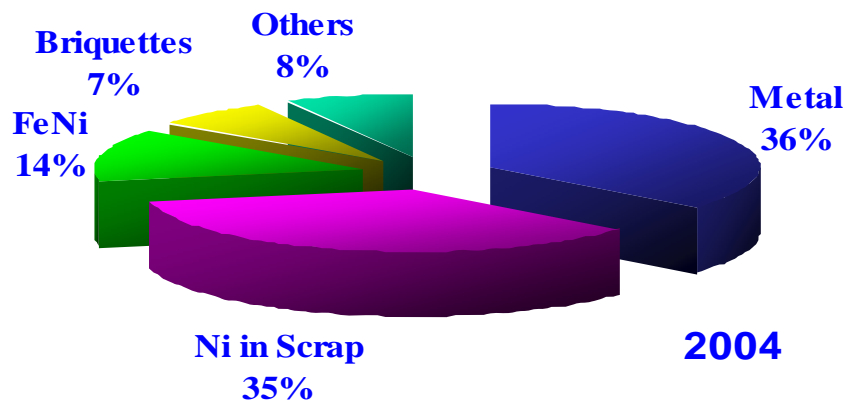


Eramet SLN 25



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WORLD NICKEL SUPPLY BY PRODUCTS

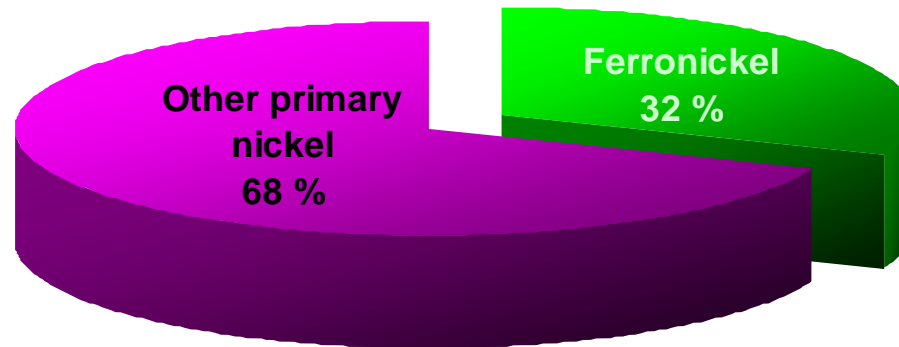




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FERRONICKEL USE : 100 % FOR STAINLESS STEEL PRODUCTION

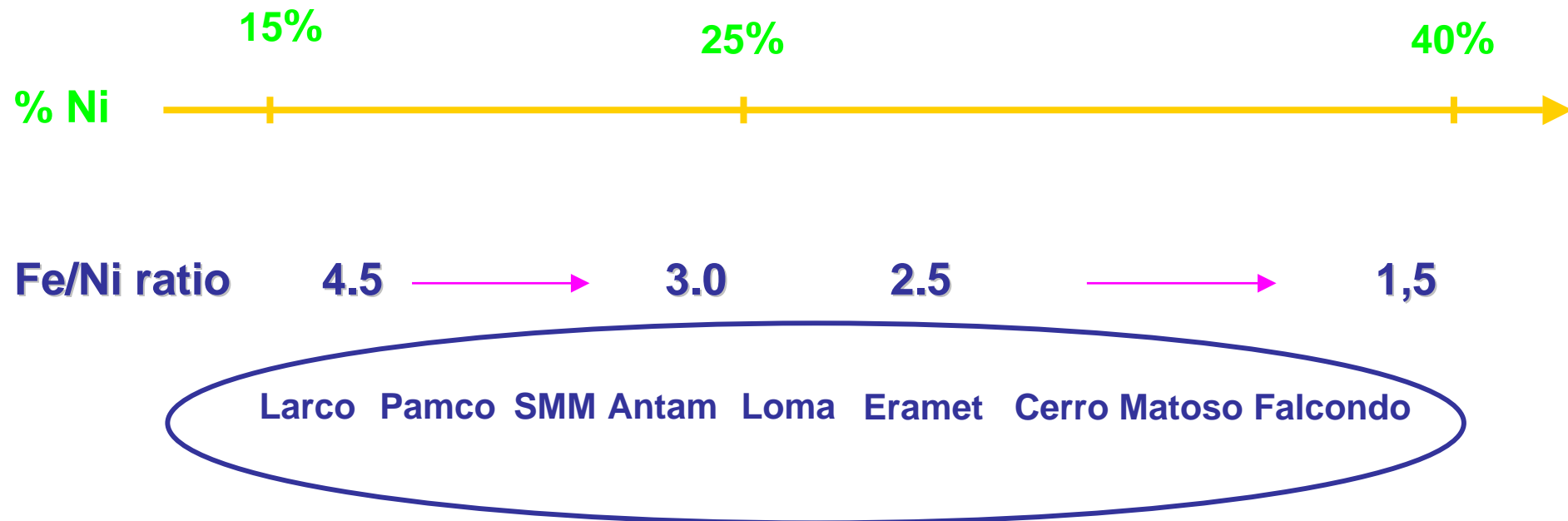
2004



FeNi share represents nearly one third of virgin nickel used for stainless steel production

FERRONICKEL CHARACTERISTICS : A LARGE RANGE OF PRODUCTS

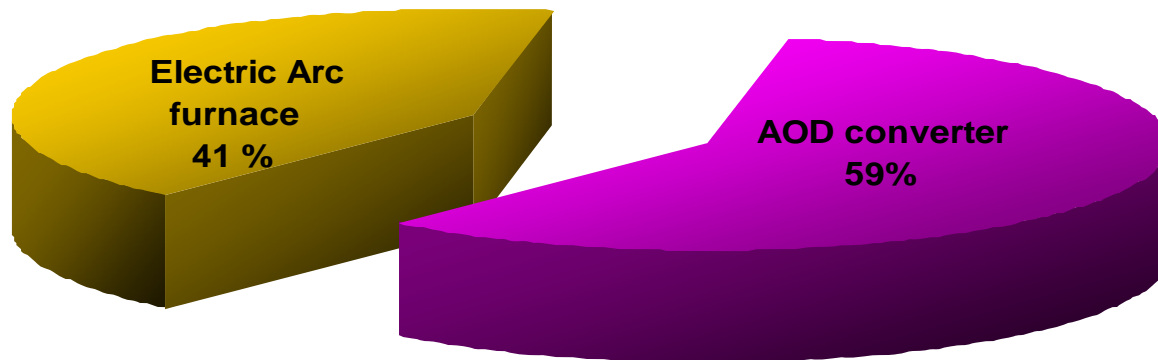
IN INGOTS OR GRANULES CONTAINING MORE
THAN 95 % OF NICKEL AND IRON



FERRONICKEL : A SPECIALTY PRODUCT SPECIALLY DESIGNED FOR CONVERTER USE, WITH BENEFITS IN EAF AS WELL

Melting
(ingots and granules)

Refining
(granules)



2004

World share of ferronickel used in the two main
steps of stainless steel production



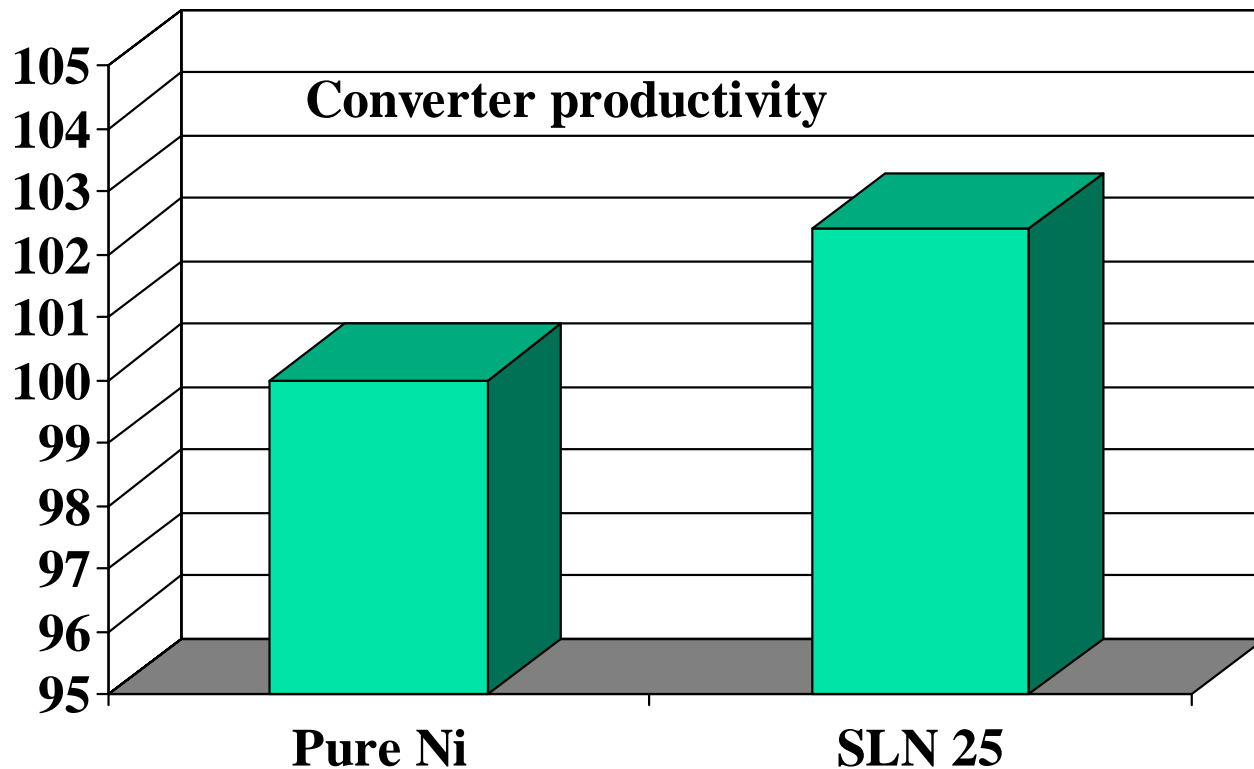
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VALUE OF FERRONICKEL IN STAINLESS STEEL MAKING

- Ni units
- Pure iron units
- Productivity : thanks to continuous addition as coolant in the AOD converter

AN EXAMPLE OF PRODUCTIVITY INCREASE WITH THE USE OF SLN 25 IN THE AOD CONVERTER WHICH ALLOWS THE OPTIMISATION OF THE BLOWING CYCLE

t/h





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VALUE OF FERRONICKEL IN STAINLESS STEEL MAKING THE IRON VALUE

Iron value = iron scrap price x ((100-%Ni) / % Ni)

Some examples :

Iron scrap (double shredded) price	FeNi with :	
	40% Ni	20% Ni
	iron value in FeNi	
200 USD/t	300 USD/t Ni	800 USD/tNi
300 USD/t	450 USD/t Ni	1200 USD/t Ni

THE WORLD PRODUCTION OF FERRONICKEL

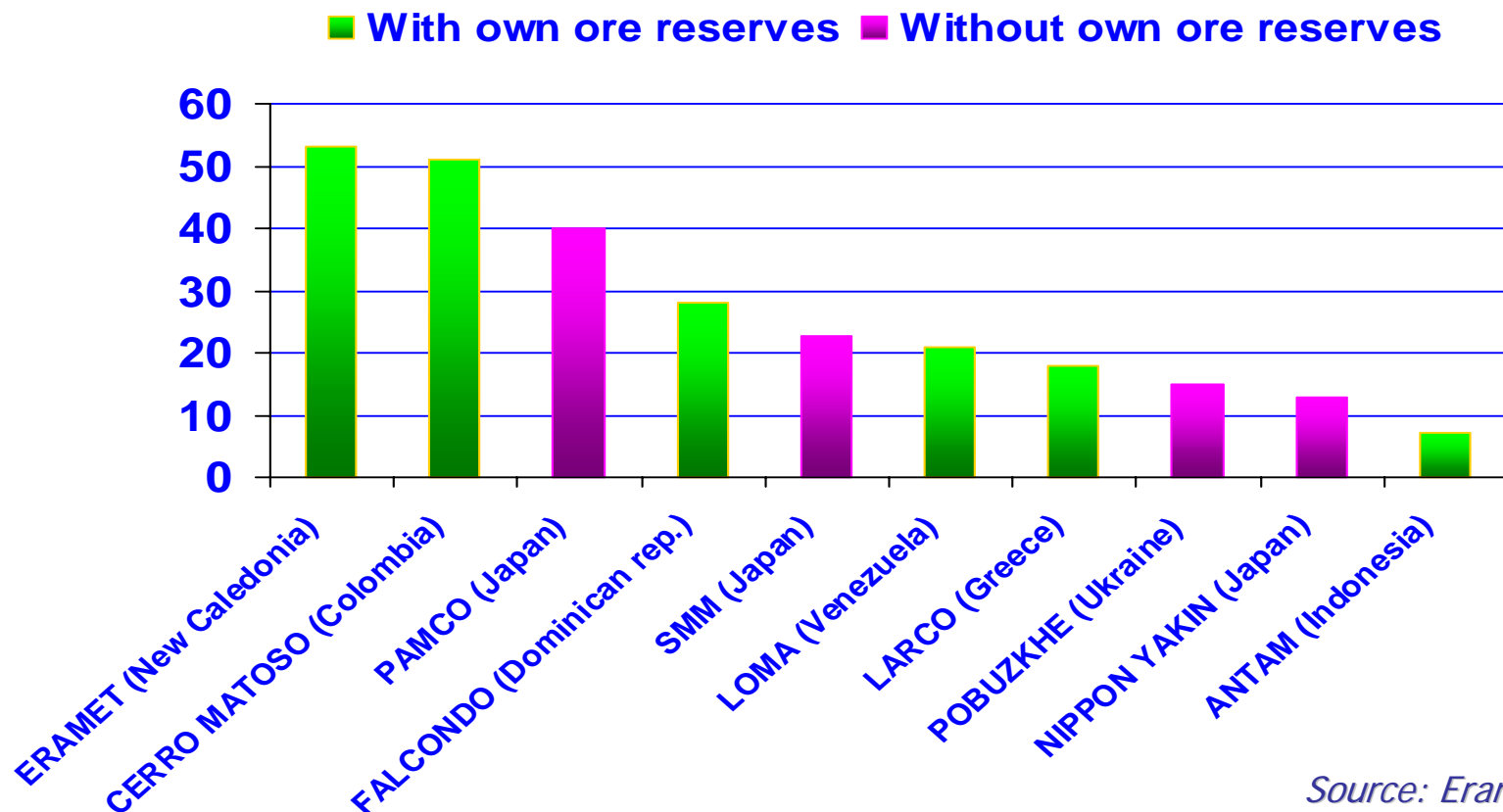




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MAIN FERRONICKEL PRODUCERS (2005e)

Kt contained Ni



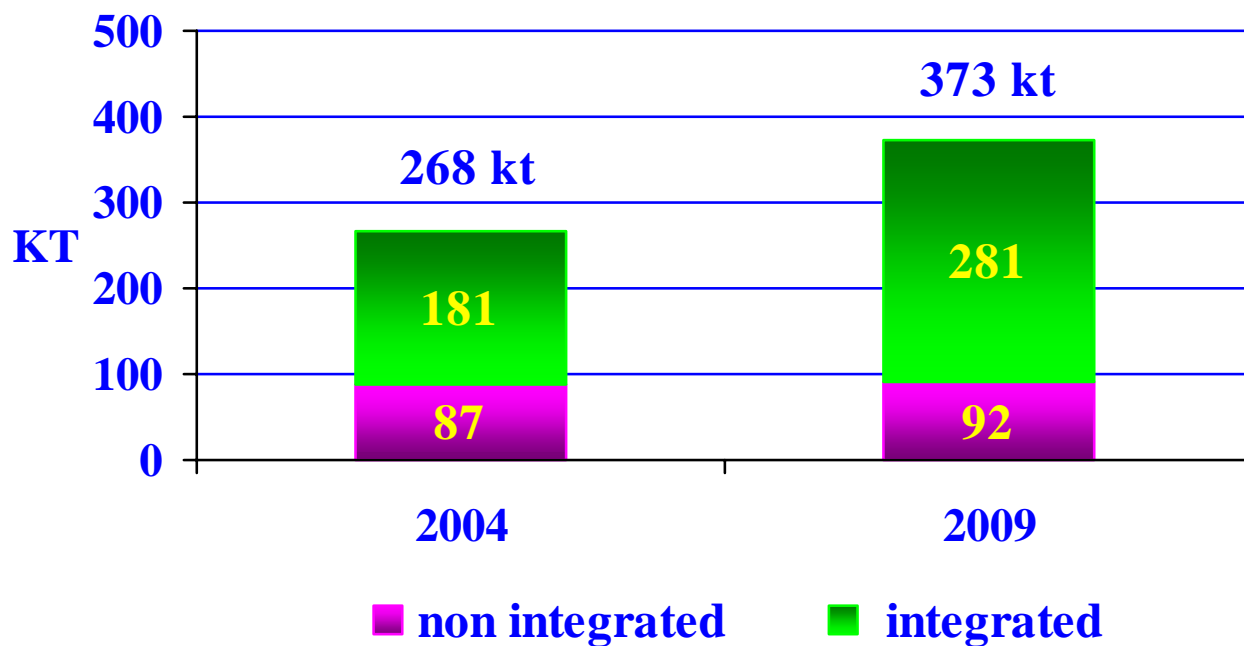
Source: Eramet



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THE FERRONICKEL SUPPLY

FeNi production forecast

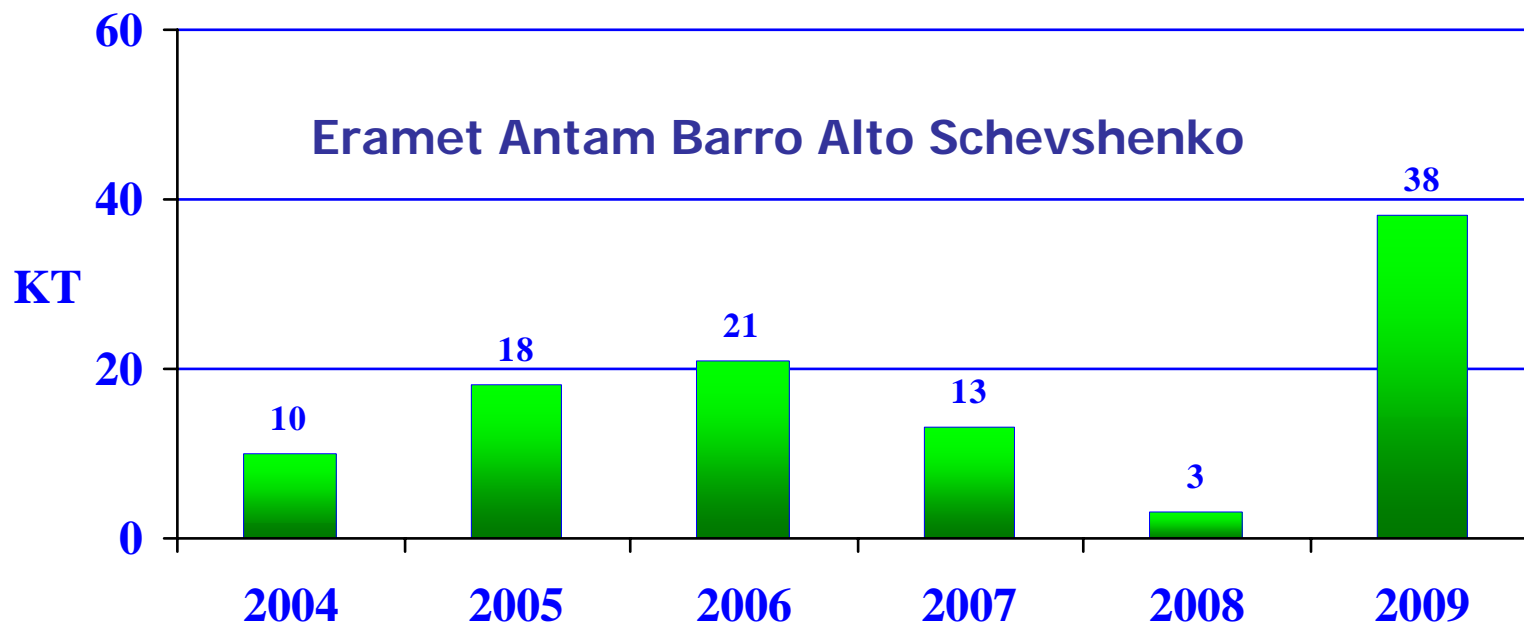




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THE FERRONICKEL SUPPLY

Additional FeNi quantity per year

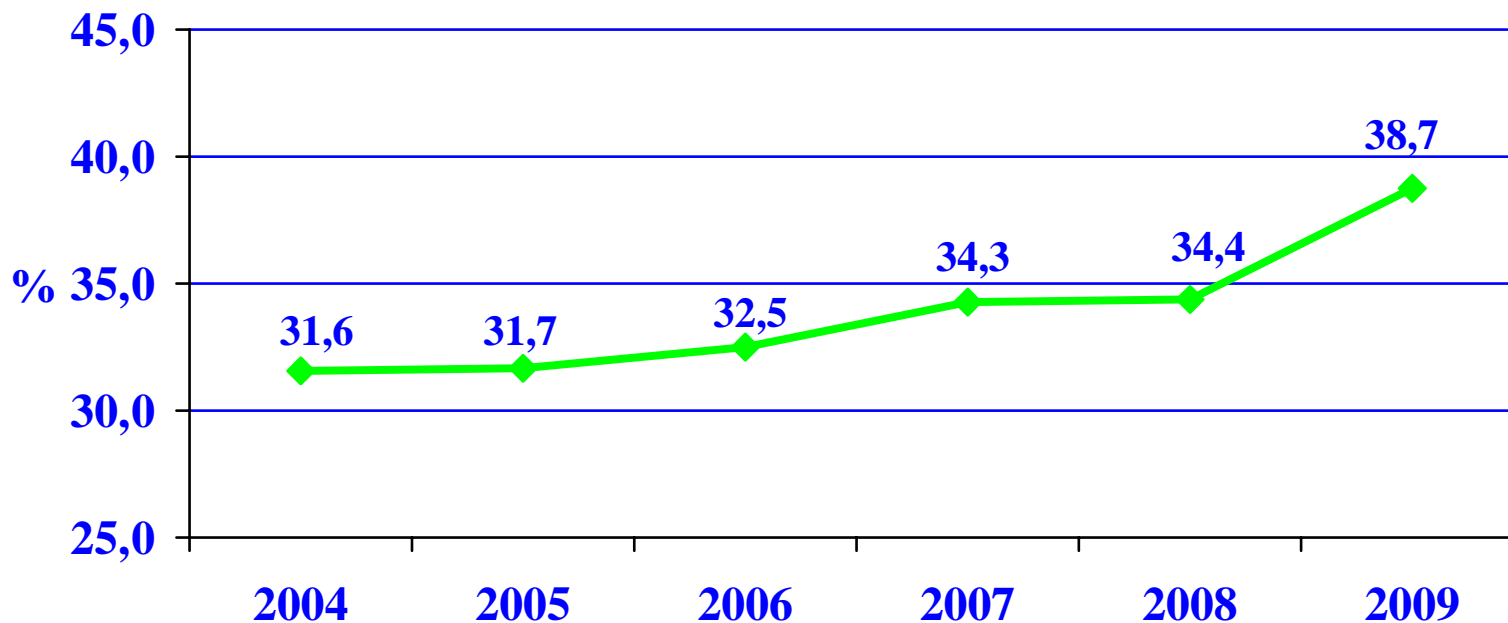


Limited capacity increase per year until 2008



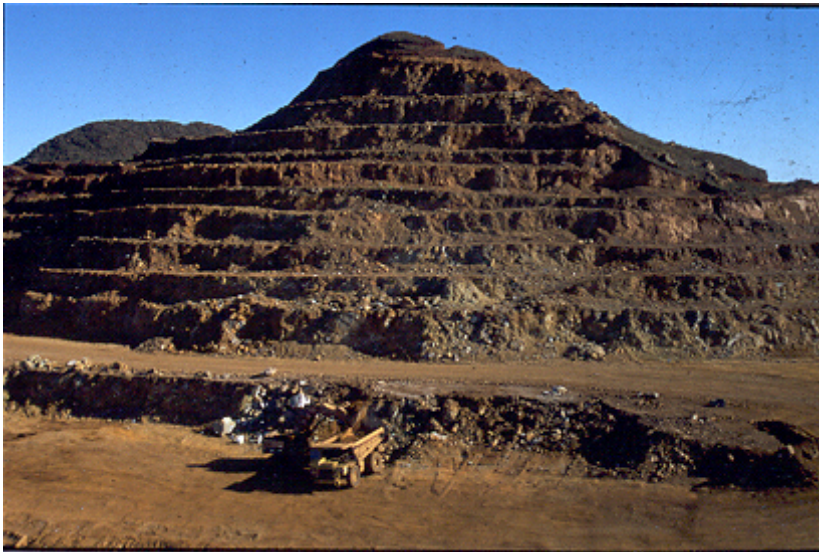
THE FERRONICKEL SUPPLY

FeNi market share in the stainless steel industry



Just enough FeNi to follow the Stainless steel increase until 2006

NEW CALEDONIA : SLN CAPACITY EXPANSION





SLN FERRONICKEL PRODUCTION

- 1950 : first ferronickel production in the world by **SLN**.
- 1980 : ferronickel granules introduced by Eramet-SLN (vs.ingots) to suit the fast-spreading development of AOD type converters.
- With a continuous capacity increase and a new major investment step in 2004.

AN INVESTMENT EXCEEDING

280 MILLION €

2004 - 2006

- A capacity increase of the Doniambo smelter : from 60,000 to 75,000 tpa (+25%) :
 - 60 000 t ferronickel
 - 15 000 t matte
- The expansion of the Tiébaghi mine capacity to over 1 Million tpy.



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LARGE ORE RESERVES

- Adequate high grade saprolites ore reserves for expansion :
 - Approximately 2 M. mt Ni content,
 - 30 years of production.
- Additional resources of lower grade ore.





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TIEBAGHI

A COMPLETELY NEW MINE, THE LARGEST IN
THE NORTHERN PROVINCE OF NEW CALEDONIA





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TIEBAGHI

A NEW SHIP LOADING EQUIPMENT

A 1,2 KM LONG JETTY





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TIEBAGHI

A NEW ORE BENEFICIATION PLANT IN 2006
SIMILAR TO THE KOPETO PLANT





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TIEBAGHI

THE APPLICATION OF ALL ENVIRONMENTAL CONTROL
TECHNIQUES DEVELOPPED BY SLN SINCE 30 YEARS





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DONIAMBO

A 25 % CAPACITY INCREASE





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A NEW 75 MW FURNACE REBUILT IN LESS THAN 4 MONTHS IN 2004





CONCLUSION

- Ferronickel is a high value product for stainless steel production especially today with the high price of iron units.
- Ferronickel is a specialty product which could be used as coolant by continuous addition in the AOD converter providing improved productivity to the stainless steel mill.

Eramet-SLN has developed a technical support service to help its customers in this field.

- Ferronickel represents one third of the virgin nickel used for stainless steel and this share looks likely to increase in the next years.
- Eramet-SLN is the world leader since 1950 and invests continuously to increase its capacity with a major step in 2004-2006 (+ 25%).