

CIS Steel and Raw Materials in the World markets

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Development of electrical-furnace steelmaking in Russia as a factor of export flows forming

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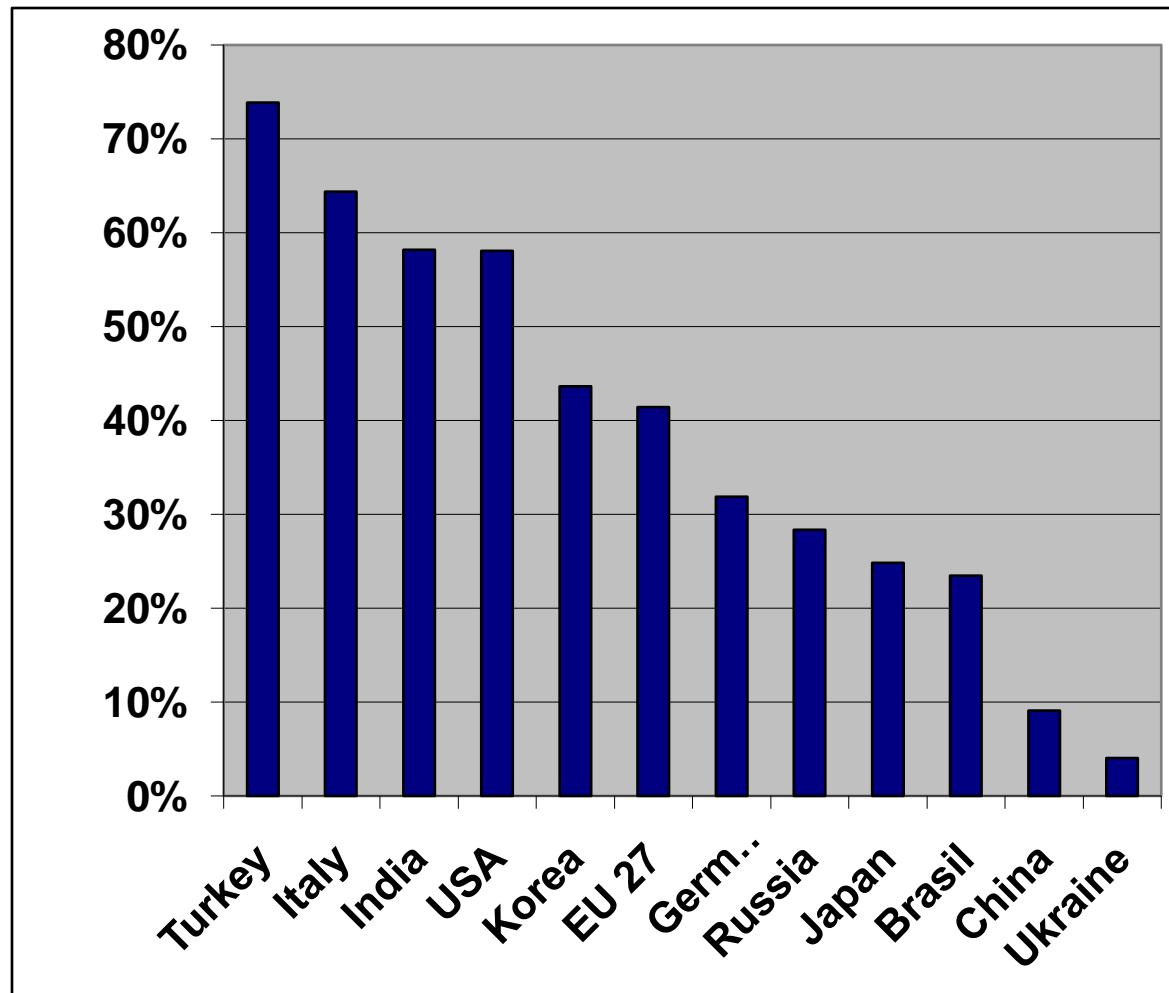
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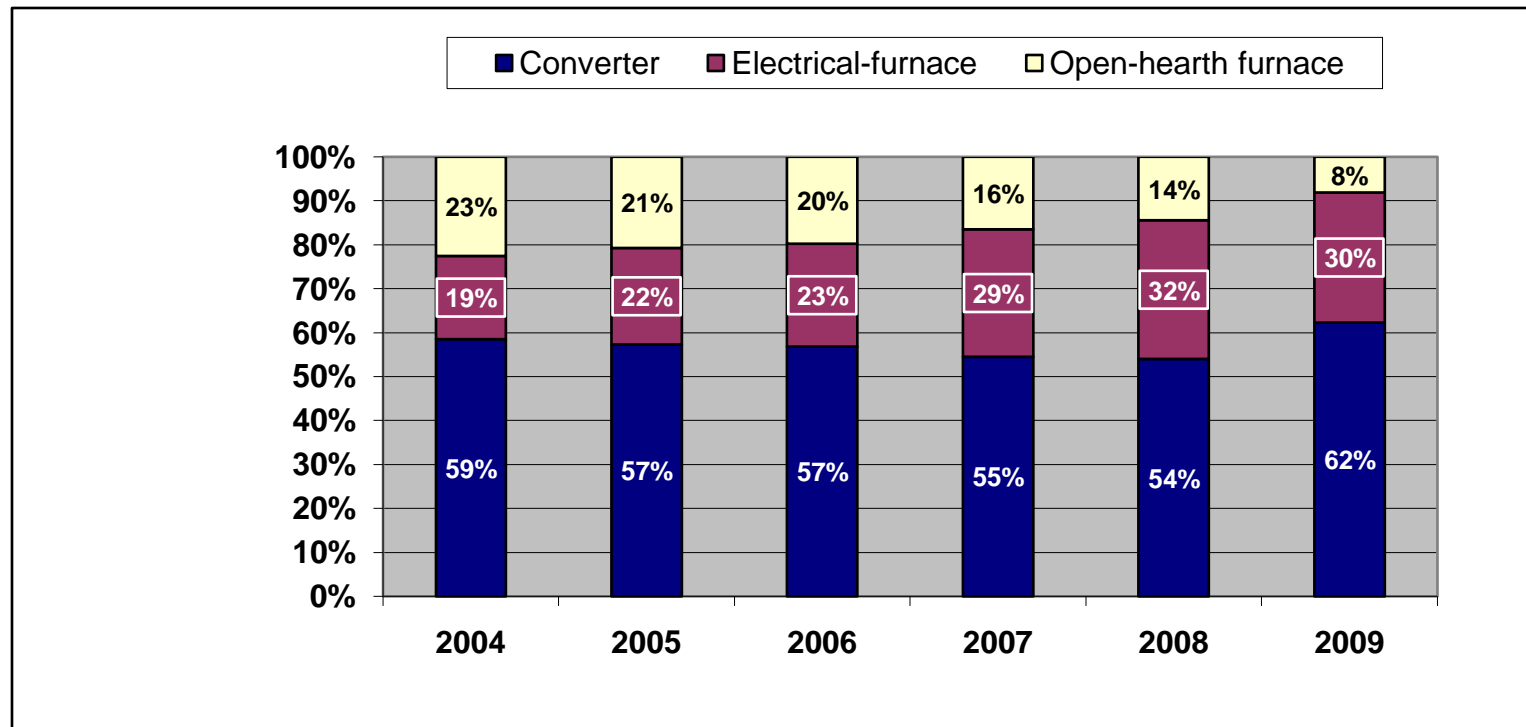
Share of electrical-furnace steelmaking in total steel production, 2008

Region	Total steel production	Electrical-furnace steel
	bln tn	bln tn

Turkey	27	20
Italy	31	20
India	55	32
USA	91	53
Korea	54	23
EU 27	198	82
Germany	46	15
Russia	71	20
Japan	119	30
Brasil	34	8
China	501	46
Ukraine	37	2



Steel Production in Russia



Type of Process	Steel Production, bln. tn					
	2004	2005	2006	2007	2008	2009
Total:	68	68	73	76	72	62
Converter	40	39	42	41	39	39
Electrical-furnace	13	15	17	22	23	18
Open-hearth furnace	15	14	15	12	10	5

Commissioning of productive capacities will be more than 6 bln tn till 2012

	Works	Equipment	Capacities '000 tn	Year
Group CHTPZ	Pervouralsk Tube Rolling Plant	EAF and continuous caster	1000	2010
Severstal	Balakovsky Steel Plant	EAF, Continuous caster, Rolling meel	1000	2011
NLMK	Kalugsky Electric Steel Plant	EAF, Continuous caster, Rolling meel	1200	2012
Maxi invest	Kovrov Steel Works	EAF, Continuous caster, Rolling meel	1200	2012
Ural Mining and Metallurgical Company	Tumensky Electric Steel Plant	EAF, Continuous caster, Rolling meel	550	2010
	Volgsky Steel Works	EAF, Continuous caster, Rolling meel	110	2011
	Abinsky Steel Works & Novoros Metal Co	Rolling meel	500	2010
MECHEL	Rostov Metallurgical Works	Rolling meel	550	2011

6110

Key factors of a company's decision making for balance: production volume and output distribution by directions

- Regional consumption change
- Imbalance of crude steel and finished steel products
- Scrap supplies security for electrometallurgy
- Affiliation to a holding
 - availability of foreign assets
 - strategy of assortment development
 - sales policy
- Prices of products in product portfolio
- Scrap cost
- Transportation tariffs for supplies to regional markets
- Limitations against import

PIPE BILLET

■	Electrical-furnace
■	Converter
■	Open-hearth furnace

	Capacities	2009		2010				
		Production	Export	Capacity Changing				
				' 000 tn				
' 000 tn		' 000 tn	not in use	decommissioning	production			
Volgsky TW	960	520	60%	0	260		700	100%
Seversky TW	950	590		0		950		
Oskolsky ESW	500	370		330	130	370		
Pervouralsky Novotrubny Works	950	0		0	0	950		
Uralskaya Steel		380	36%	40		-380	0	0%
NTMK		450		0		-450	0	
CHMK		60				-60		
Chelyabinsky TW		90	4%	0		-90	0	
		2460		370	390	-980	2970	

Additional export of billet from NTMK and Uralskaya Steel is 890' 000 tn

SECTIONS and REBAR

	Productive capacities		2009			2010... 2012				
			Production		Export	Expected change of volumes ' 000 tn			Expected directions of shipments	volume ' 000 tn
	' 000 tn	%	' 000 tn	%	' 000 tn	facilities not in use	production	%		
Nizhnie Sergy SW	1000	53%	982	45%	210	0	1000	70%	add. Export	200
Berezovsky MP	240		140		20	0	240			
Magnitogorsk SW	1400		715		238	700	700		add. Export	200
Severstal	1450		532		54	950	500		add. Export	100
Yartsevo MP	220		174		0	0	220			
Amurmetal	600		106		86	400	200			
Oskol MP	240		170		0	240	0		Billet for Exp	170
Rostov Metallurgical Works	550					0	550		Export	250
Abinsky Steel Works	500			0	500					
Kalugsky Electric Steel Plant	1200			0	1200					
Tumensky Electric Steel Plant	650			0	650					
Balakovsky Steel Plant	1000			0	1000	Export	200			
Kovrov Steel Works	1200			0	1200					
Volgsky Steel Works	110			0	110					
Chelyabinsky MP	1400	47%	1370	55%	550	0	1400	30%	add. Export	300
ZSMK	3200		2110		860	1100	2100		add. Export	500
9750			6299		2018	3390	11570			1920
plus 5210 new										

- Additional export of **rebar and sections** is **1 '750' 000 tn**
- Additional export of **billet** is **170' 000 tn**
- Overcapacities (**3' 390' 000 tn**) could provide the semi-product's export

	Electrical-furnace
	Converter

WIRE ROD

Electrical-furnace
Converter

	Productive capacities		2009			2010...2012		
			Production		Export	Expected change of volumes ' 000 tn		
	' 000 tn	%	' 000 tn	%	' 000 tn	facilities not in use	production	
Berezovsky SP	1000	57%	256	36%	27	400	360	40%
Magnitogorsk SW	800		207		23	500	300	
Severstal	800		367		20	400	400	
Chelyabinsky SP	430	43%	385	64%	179	0	430	60%
Beloretsk SP	550		542		252	0	550	
ZSMK	1000		560		421	400	600	
	4580		2317	0%	922	1700	2640	0%

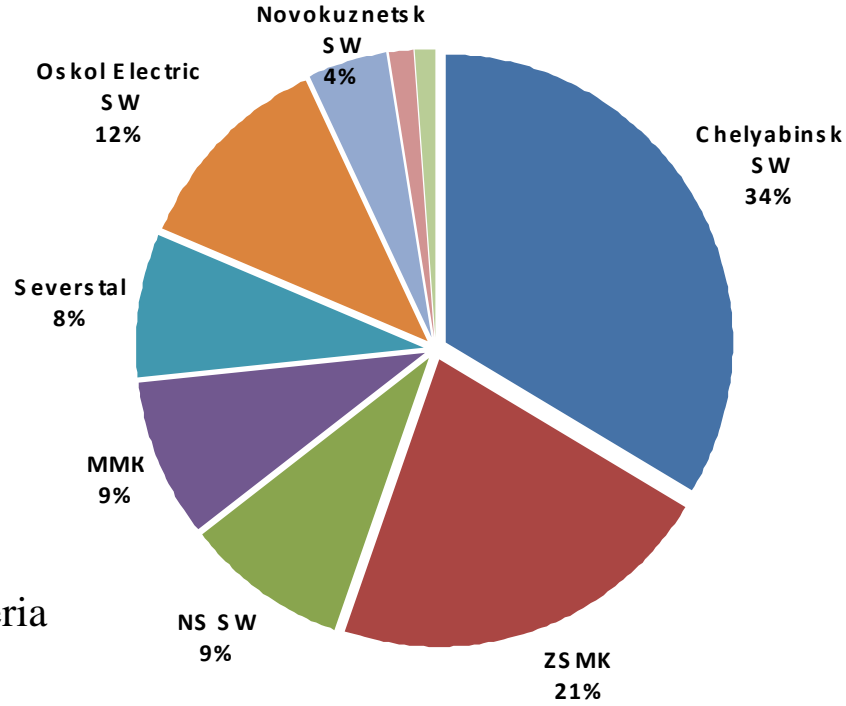
- There is Potential for export increasing to **1' 700' 000 tn** of wire rod due rolling capacity utilization
- Wire Rod export from Moldova SW in 2009 is **102' 000 tn**
- Wire Rod export from Byelorussia SW in 2009 is **146' 000 tn**
- Wire Rod export from ArcelorMittal Steel Kriviy Rih in 2009 is **1' 031' 000 tn**

Long Product Delivery in South Federal District

	Volumes, '000 tn	railway tariff, \$/tn	
		2010	2004
Total	670		
C helyabinsk S W	220	46	31
Z S M K	140	73	49
N S S W	60	47	31
M M K	58	45	30
S everstal	52	39	26
O skol E lectric S W	76	25	17
N ovokuznetsk S W	29	73	49
G urievsky S W	10	71	48
C husovsky S W	7	47	31
Import	87	17	11

New plants are expected in 2010...2011

Abinsky Steel Works & Novoros Metal Co	500	10
Rostov Metallurgical Works	550	13



- Tariff increasing on 50% from 2004 to 2010
- 78% of steel products is delivered from Ural and Siberia
- More than 50 \$ per tn is saved due to railway tariff

RESUME

- **Development of electric steel production will continue in Russia**
- **In 2010...2012 new electric steel capacities of 6 mln tonnes will be commissioned**
- **EFS products will be competitive in Russian regional markets**
- **Structure of steel product suppliers to Russian regions will be changed**
- **Export of Russian steel products is expected to increase**

Metal Expert Consulting

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