Operational Review
Zinc - India

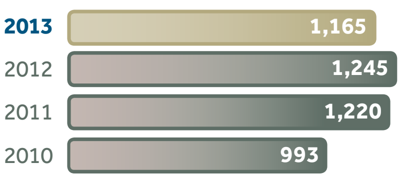
ZINC-LEAD-SILVER

Key achievements
- Highest ever mined zinc and lead production of 870kt
- Record integrated silver metal production of 10.35moz, up 36.0% over previous year
- Ramp-up of lead and silver production from the Dariba Smelter and Sindesar Khurd Mine
- Maintained lowest quartile cost position
- Gross addition of 25mt to Reserves and Resources

Strategic priorities
- Realise production capacity
- Develop cost efficient and reliable underground mines
- Achieve growth to 1.2mtpa mined zinc-lead metal
- Continue to focus on adding reserves and resources

Production – Mined metal (kt)

EBITDA (US$m)



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Operations

Mined metal production for the financial year was 870,000 tonnes, 4.8% higher than the previous year primarily due to increased production from the Rampura Agucha mine.

The integrated production of refined zinc was 660,000 tonnes, lower than the previous year but in line with the mine plan for the year. Sales of Zinc metal-in-concentrate ('MIC') were 61,000 tonnes, following surplus concentrate produced in second half. Integrated production of refined lead was up 19.7% at 107,000 tonnes for the financial year.

Integrated production of silver was a record 10.35moz for the financial year, up 36.0%, driven by higher output from Sindesar Khurd mine and Dariba lead smelter.

Unit costs

During FY 2012–13, the unit cost of zinc production was lower at US$998 per tonne as against US$1,010 per tonne in FY 2011–12 partially helped by the depreciation of the Indian rupee, even though acid credit was much lower than the previous year. During the year the fall in coal price and lower specific coal consumption helped in reducing the captive power cost. The business remains in the lowest cost quartile compared with other global producers backed by high quality assets.

EBITDA

EBITDA for FY 2012–13 decreased to US$1,165.3 million, as compared to US$1,244.8 during FY 2011–12. The positive impact of higher volumes of silver and lead and depreciation of the Indian rupee was offset by lower metal prices, lower zinc volumes and lower by-product credits. Metal prices were lower during the year: zinc was down by 7.2%, lead reduced by 6.9% and silver fell by 13.6%.

Projects

The Board of Directors of Hindustan Zinc Limited ('HZL') has approved the next phase of growth. HZL has been actively conducting exploration activities, which have increased net Reserve and Resources ('R&R') across all mines to 348.3mt of ore as at the end of FY 2012–13. Based on a long-term evaluation of assets and in consultation with mining experts, Zinc India has finalised plans for the next phase of growth, which will involve the sinking of underground shafts and developing underground mines.

Production performance

(In US$ millions, except as stated)	FY 2012–13	FY 2011–12	% change[3]
Production (kt)			
Total mined metal	**870**	831	4.8%
Zinc	**765**	739	3.5%
Lead	**106**	92	14.9%
Zinc refined metal – Total	**677**	759	(10.8)%
Integrated	**660**	753	(12.3)%
Custom	**17**	6	–
Lead refined metal – Total[1]	**125**	99	26.4%
Integrated	**107**	89	19.7%
Custom	**18**	10	–
Saleable silver – Total (moz)[2]	**13.11**	7.78	68.6%
Integrated	**10.35**	7.62	36.0%
Custom	**2.75**	0.16	–

1 Including captive consumption 7kt v/s 7kt in FY 2012–13 v/s FY 2011–12.
2 Including captive consumption 1,088 thousand ounces v/s 1,123 thousand ounces in FY 2012–13 vs FY 2011–12.
3 All % change in production figures have been calculated without rounding the number up to 1,000.

Unit costs

(In US$ millions, except as stated)	FY 2012–13	FY 2011–12	% change
Unit costs			
Zinc (US$ per tonne)	**998**	1,010	(1.2)%
Zinc (Other than Royalty) (US$ per tonne)	**835**	834	–

Financial performance

(In US$ millions, except as stated)	FY 2012–13	FY 2011–12	% change
Revenue	**2,263.3**	2,316.1	(2.3)%
EBITDA	**1,165.3**	1,244.8	(6.4)%
EBITDA margin (%)	**51.5%**	53.7%	–
Depreciation and amortisation	**107.3**	109.2	(1.7)%
Operating profit	**1,054.8**	1,126.6	(6.4)%
Share in group operating profit (%)	**42.0%**	47.2%	
Capital expenditure	**287.1**	220.8	30.0%
Sustaining	**51.6**	53.4	(3.4)%
Growth	**235.5**	167.4	40.7%

The plan includes developing a 3.75mtpa underground mine at Rampura Agucha and expanding the Sindesar Khurd mine from 2.0mtpa to 3.75mtpa. Other mines will also be expanded: capacity at the Zawar mines will expand from 1.2mtpa to 5.0mtpa, the Rajpura Dariba mine from 0.9mtpa to 1.2mtpa and the Kayad mine from 0.35mtpa to 1.0mtpa. It will also involve the opening up of a small new mine at Bamnia Kalan in the Rajpura Dariba belt.

Above: Engineers at control room of Chanderiya smelting complex, HZL.

Opposite: Operator operating driller at underground SK lead-zinc mine, HZL.

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CASE STUDY

Delivering efficiencies that drive environmental benefits

Two initiatives in Zinc India's operations have delivered both efficiency improvements and environmental benefits.

Process cooling for the acid and gas cleaning plants at the Dariba zinc smelter was carried out by induced draft cooling towers – a process that required a huge amount of water, around 37,000m^3 per month. Replacing these with adiabatic cooling towers that are not dependent on water evaporation for cooling, dramatically reduced water consumption to 1,000m^3 per month and also decreased maintenance costs.

Implementing advanced process control technology for the zinc roaster has reduced the standard deviations in the roaster bed temperatures significantly, by almost 50%, resulting in higher roaster throughput of 0.22 tonnes per hour and decreasing energy consumption.

The growth plan will increase mined metal production capacity to 1.2mtpa MIC. These mines will be developed using best-in-class technology and equipment, ensuring the highest level of productivity. The projects will be completed in six years and the benefit of these growth projects will start flowing in from the third year, even though project activities will continue until FY 2018–19. Annual capital expenditure for these projects will average US$250–US$300 million over the next six years (totalling approximately US$1.5 billion).

The Company's Board has approved HZL's proposal for the next phase of growth to 1.2mtpa MIC.

Exploration

Our exploration success has continued and during the year we added 24.6mt to R&R, prior to depletion of 8.6mt. With a total R&R of 348.3mt containing 35.1mt of zinc lead and 910moz of silver as at 31 March 2013, we have maintained our leading position with over 25 years of remaining mine life.

We have a strong track record of low cost exploration and have increased R&R five times, net of depletion, since 2003.

Outlook

Mined metal production in FY 2013–14 is expected to be close to 1mt, 15.0% higher than FY 2012–13. We expect commercial production to commence at the Rampura Agucha underground mine and the Kayad mine during the current financial year and normal operations at the Zawar mine will also contribute to increased mined metal production. In addition, we expect to produce around 11.2moz of integrated saleable silver in FY 2013–14. During the current year, we expect mined metal and refined metal capacities to be nearly balanced.

Above: Aerial view of Chanderiya smelting complex, HZL.

Opposite: Load-haul-dump unit loading truck underground, Lisheen.