



ArcelorMittal

# Multimetallic emission from a steel producer: return of experience from ArcelorMittal

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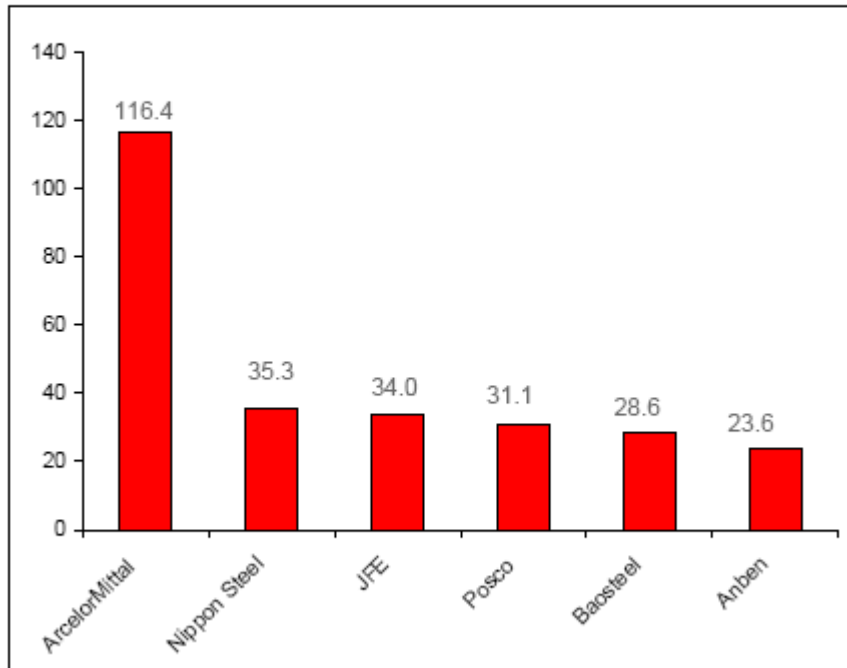
# The world's number one steel company

- With around **310,000** employees in more than **60** countries and an industrial presence in **20** countries, ArcelorMittal is the only truly global steelmaker, leader in the steel sector.
- ArcelorMittal has outstanding financial strength and sustainability, with revenues in 2007 of **\$105.216** billion and crude steel production of **116** million tonnes.
- ArcelorMittal is not only a steel producer but an integrated Metals and Mining leader capturing opportunities along the value chain. **From mining to distribution, transformation and trading of finished products...**
- ArcelorMittal is the only producer offering, leveraging and developing the full range of steel products and services. **From commodities to value added products, from long to flat products, from standard to speciality products, from carbon steel to stainless steel and alloys...**

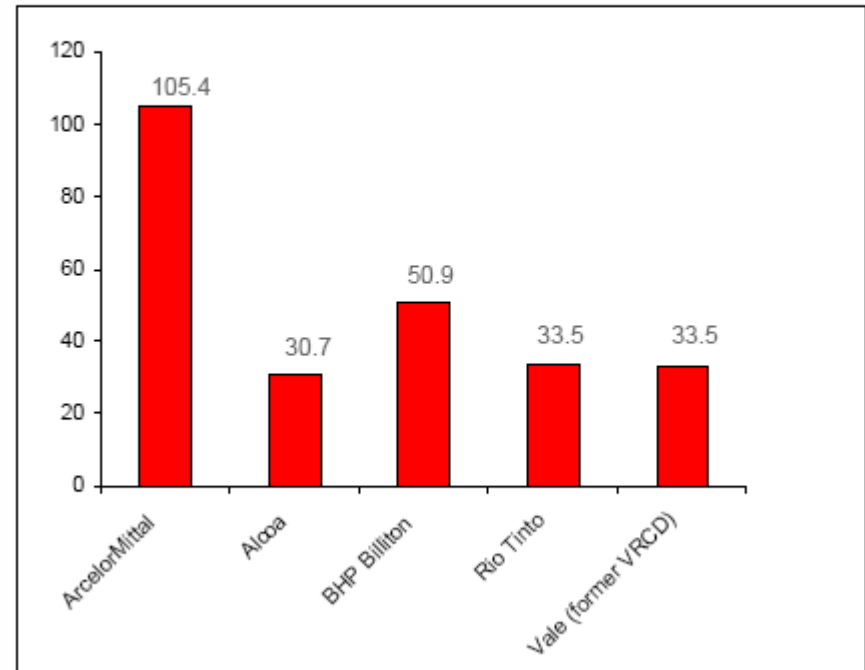


# Not only leading the steel industry but the Metals and Mining sector

Crude Steel production in 2007 (MT)\*



Sales in 2007 (US\$ billion)

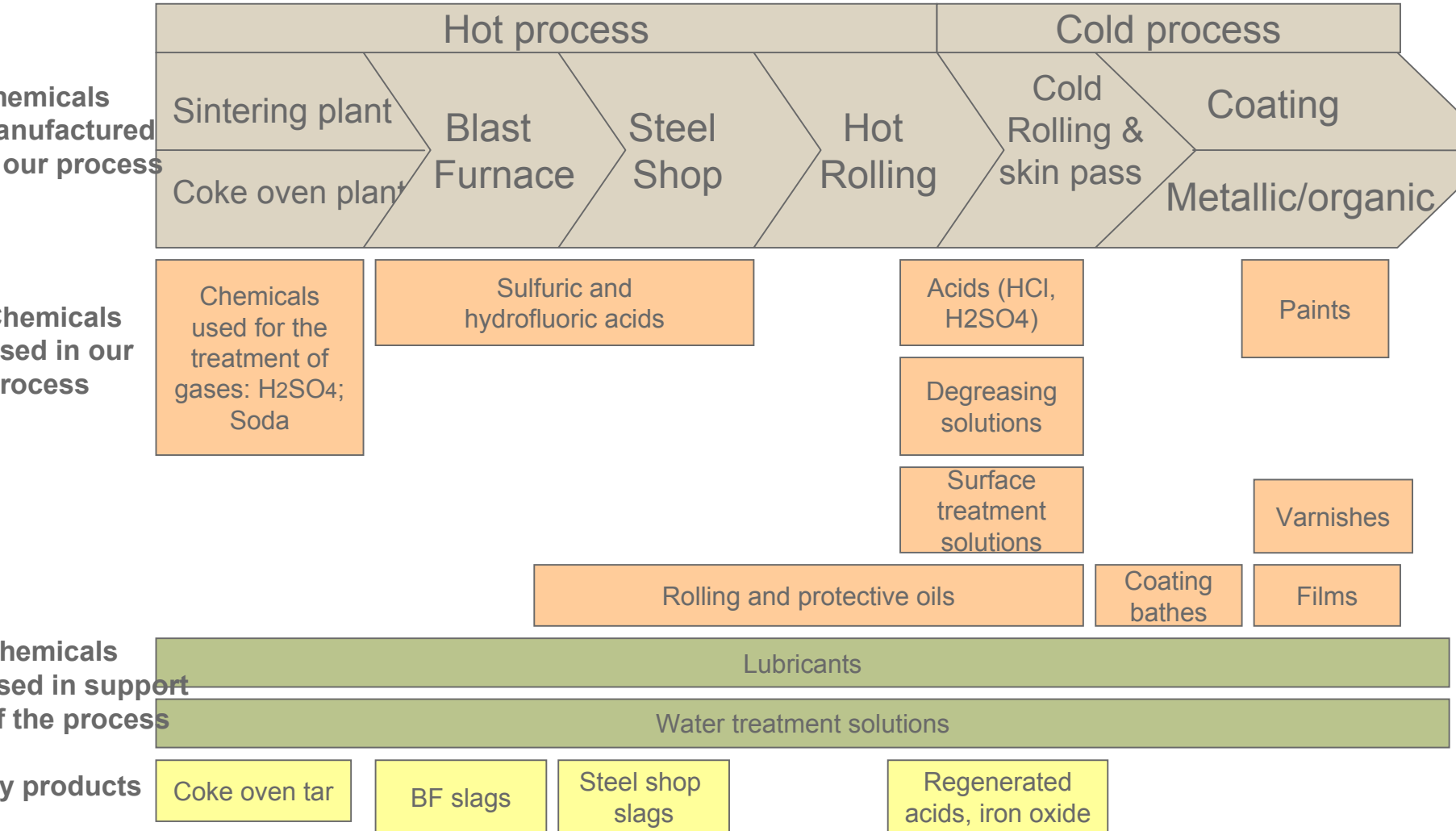


\* Metal bulletin

**More than 3 times larger than our next competitor**



# REACH and Steel process



## Exposure scenario as Downstream User: prioritization

- Set up of a internal list of Substances of High Priority Substances
  - due to their hazard properties: CMR 1&2, PBT/vPvB, Endocrine disruptors, R50/53,
  - due to their critical applications (ex: Acids),
  - due to the tonnage associated: Metals & metal compounds,  
&
- Identification of the associated processes (including production activities, maintenance ...)

## Exposure scenario as D.U.: building the Exposure Scenario

- **Our entry to build the ES : the process and not the substance. The exposure is driven by the ‘process, the working environment’.**  
Example: Hot dip galvanizing, and not zinc, as we are using other chemicals on the process.
- **Pros:**
  - Understanding by the legal entities and in our sectors
  - Consistency with the current reporting internally and at EU level (BREF documents)
  - Access to existing database
  - Cover the issue of the multi-exposure issue.
- **Cons:**
  - Translation into the REACH language (substance driven).



## Collection of the information for the Metallic compounds

- The basis: the Multimetallic questionnaire from Eurometaux
- However, Adaptation of the spreadsheet to cover all our interests:
  - In-depth description of the process.
  - Addition of descriptors for our processes, our products and uses .
  - Addition information to be consistent with the information provided to the local authorities.
  - More friendly use of the spreadsheet

## The objective: capture existing monitoring data

- The objective of our ES project: consolidate and use the monitoring data available on Health & Environment
- The analysis & challenges:
  - Human health:
    - Few data, available on site
    - Good knowledge of the working environment.
  - Environment:
    - Lots of data available, centralised
    - Limited understanding of the local environment .

# Environment: our approach

- Reporting: per site, per year
- Source emission:
  - Air: stack emissions
  - Water:
    - Yearly emission ( ex: Zn total kg/yr)
    - WWTP yearly flowrate ( m<sup>3</sup> /yr)
- Receiving water body
  - Yearly flowrate (m<sup>3</sup>/yr)
  - Suspended Solids : yearly average (mg/L)
  - Kd: from the Risk Assessment

⇒ **Conc local added dissolved**

Suggestion: add the code of the local monitoring station

- Solid waste: fate of the sludges and dusts from the WWTP (internal storage, landfill or recyclage )

# Human Health: our approach

- Reporting: compilation of the existing data per process, to conduct robust statistical analysis.
- Tier 1: expression of the exposure in total concentration ( ex: Zn total) per process.

## Suggestion

Tier 2: inclusion of a section on speciation

Ex: Distinction between the soluble and insoluble forms of metal.

# Conclusions

## Confidentiality and sensitive information in the steel industry

- As a manufacturer:
  - The process and the composition of the products could be sensitive, but usually covered by the BREF documents & standards.
- As a Downstream user:
  - The association ‘Tonnage used’ and the localisation are/could be a sensitive information.
- Recommendations:
  - Collection of the information via a trustee and/or experimented consultancy firm.

**Thank you ....**

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