

Spillage and dust matters

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Is **dust** a challenge?



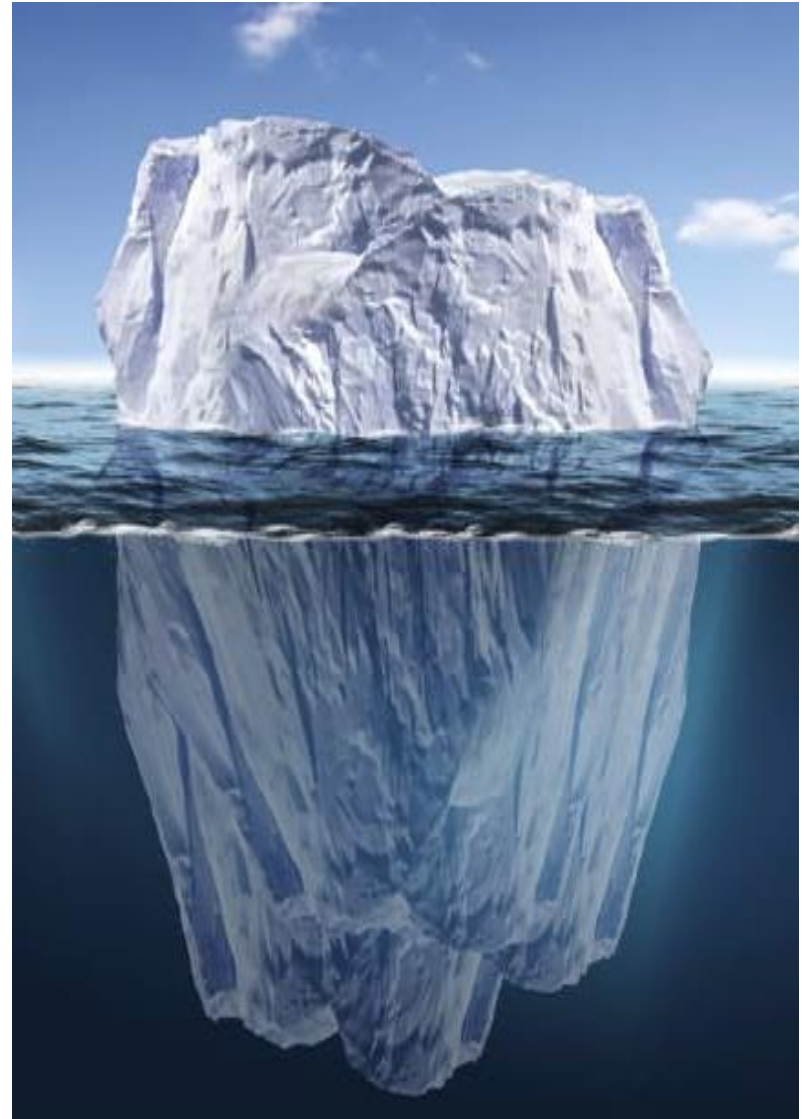
Is **spillage** a challenge?



Spillage and dust free plant, is not just “nice to have”

- **Visible effects:**
 - ▶ Visual appearance.

- **Invisible effects:**
 - ▶ Increased maintenance/
reduced lifetime of equipment.
 - ▶ Availability of main equipment.
 - ▶ Impact on Safety pyramid.
 - ▶ Cleaning costs.
 - ▶ Production losses.
 - ▶ Environmental complaints.
 - ▶ Permitting issues from
authorities.
 - ▶ Employee attraction and moral.



Basic calculation: **Example from a single conveyor**

- Spillage materials from conveyors accounts!

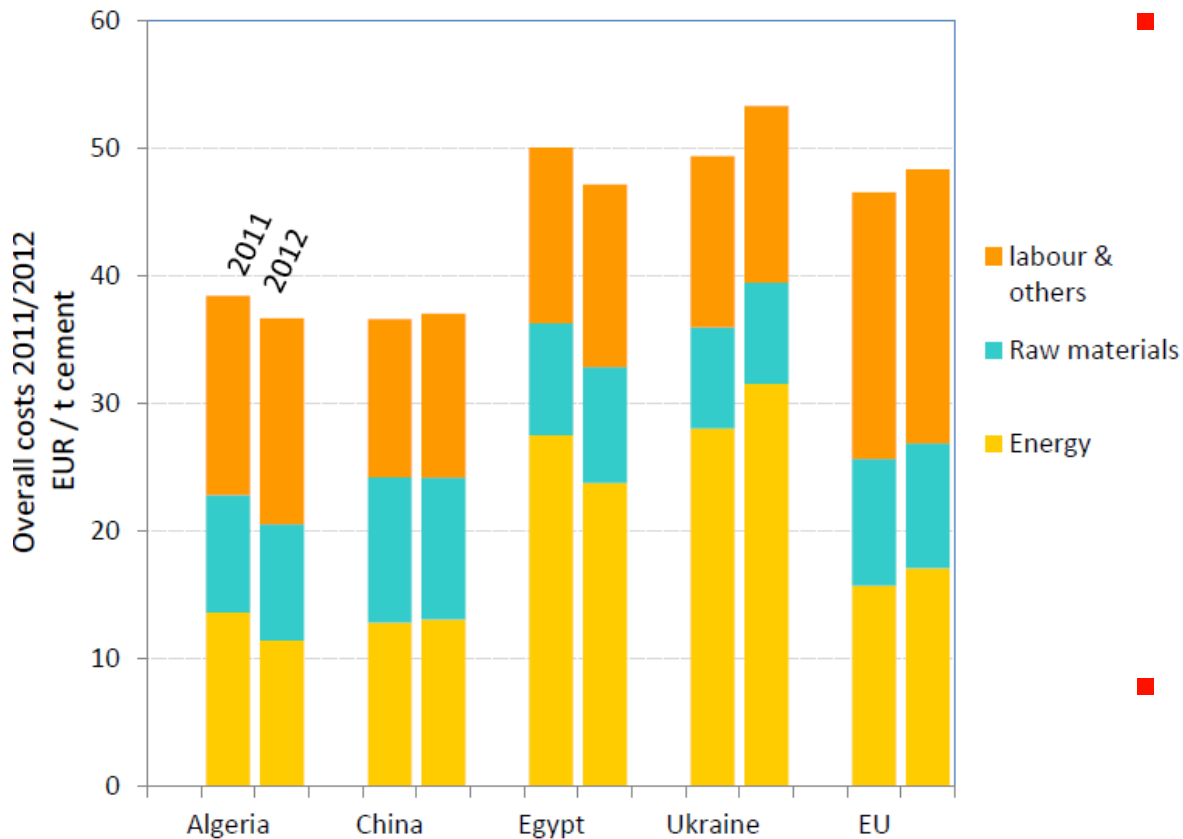


- 1 Bucket of collected material per hour accounts to:

- ▶ 0.5 T per day
- ▶ 3.3 T per week
- ▶ 14 T per month



Estimated effects of spillage and dust



Example of total manufacturing costs per t of cement
Source: European Commission

- Cost for:
 - ▶ Loss of processed materials.
 - ▶ Extra maintenance.
 - ▶ Equipment unavailability.
 - ▶ Cleaning costs.
 - ▶ Special costs attributed to employees.
- Are estimated to be in the range of:

0.5 – 1.5 USD/t cem

Economics on a **small plant**

- Budgeted cement production/year: 1 Mio Tonns.
- EBITA margin: 12 USD/t cem
- Estimated losses: 0.5 – 1.5 Mio USD/year
 - ▶ Equals: 4 – 12% of the EBITA margin (!)



It is possible to achieve a **dust free** plant...



No dust at clinker silo



Clean and dust free packing plant



It is possible to achieve a **spillage** free plant...



What do we offer?

Our competencies to eliminate spillage & dust

- **Technical due diligence** with simple & hands-on visual reports with action list generation for follow-up and ease of tracking.
- **Organisational gap analyse:**
 - ▶ Missing knowledge (technical or about the consequences)?
 - ▶ Commitment from individuals?
 - ▶ Commitment from management?
- Our **solutions** to address organisational gaps:
 - ▶ **Technical training** and capacity building (e.g. plant engineers and supervisors).
 - ▶ Definition of environmental **KPI's** at various levels.
 - ▶ **Cultural change** to be targeted.
 - ▶ ...

