



LCI Data Collection

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3 Data Collection: Why?



▶ Good data:

- ▶ Are needed for inter-material competition
- ▶ Are requested by
 - ▶ Customers
 - ▶ Organizations (UN, EU commission, US EPA...)
 - ▶ Government (for IPP, EPD ...),
 - ▶ Consultants
 - ▶ Other stakeholders in the future? (investors, media ...)

▶ We need to update existing database:

- ▶ Data are from 1993 to 2000: 10 years old
- ▶ We expand the coverage by companies and regions
- ▶ Additional products are included

3 Data Collection: Who?



▶ 34 companies:

- ▶ more than 350 Million metric ton of steel
- ▶ all over the world: Australia, Canada, China, EU, India, Indonesia, Japan, Korea, North and South America

▶ List of participating companies (as of end August,2006):

- ▶ Aichi Steel /AK Steel / Arcelor / Baosteel / Bluescope Steel / China Steel Corporation / Corus UK – Corus NI / Daido Steel / Dofasco / Dunaferri / Essar / Georgsmarienhütte / Gerdau / Hadeed / Ispat / IPSCO/ JFE Steel / Kobe Steel / Mittal / Nippon Steel / Nisshin Steel / Nucor / Posco / Ruukki / SAIL / Salzgitter / Sanyo Special steel / SSAB / Sumitomo Metal Industry / ThyssenKrupp Steel / Timken / USS / Vizag Steel / voestalpine

▶ Most of IISI members are participating!

- ▶ More sites are requested

3 Data Collection: How?



- ▶ Contact person in your company
- ▶ Company administrator:
 - Decides what process have to be collected:
the tool is ready for BF, EAF, DRI and 21 products!!
 - Enter site specific values (IISI default may be 10% too high or too low):
 - Net Calorific Value
 - [Fe] , [C] content
- ▶ Data collector
 - Collect data

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- Properties
- (C) Coke Making (new)
- (D1) Sinter (new)
- (F1) Blast Furnace (new)**
- (G1) BOF Steel Making (new)
- (G2) EAF Steel Making (new)
- (H) Hot Strip Mill (new)
- (J) Heavy Plate Rolling (new)
- (K3) Wire Rod (new)
- (L) Pickling (new)
- (M1) Seamless Pipe Making (new)
- (M3) Welded Pipe and Tube Making (new)
- (O) Cold Rolling (new)
- (P) Annealing and Tempering (new)
- (Q) Electrogalvanising (new)
- (R) Hot-dip Galvanising (new)
- (T) Tinsplating (new)
- (U) Organic Coating (new)
- BF Gas Combustion Master Process (new)
- BOF Gas Combustion Master Process (new)
- Boiler I (new)
- Boiler II (new)
- CO Gas Combustion Master Process (new)
- Destination / Application Basic Oxygen Furnace Gas
- Destination / Application Blast Furnace Gas
- Destination / Application Coke Oven Gas
- Fresh Water I (new)
- Fresh Water II (new)
- Input
- Fresh Water III (new)

(F1) Blast Furnace (new)

Input		Output		Overview	
Positions	Value	Costs	Quality	Source	Year
Sub-period: Annually					
Flows	overview				
Production residues in life cycle	overview				
Waste for recovery	overview				
BF Shop dust	<input type="text"/> kg (reference unit)	<input type="text"/> 0 €	n.a.	Literature	<input type="text"/>
BF Slag	<input type="text"/> kg (reference unit)	<input type="text"/> 0 €	n.a.	Literature	<input type="text"/>
Sinter / Pellet Dust	<input type="text"/> kg (reference unit)	<input type="text"/> 0 €	n.a.	Literature	<input type="text"/>
Resources	overview				
Material resources	overview				
Renewable resources	overview				
Water	overview				
Water (fresh water)	<input type="text"/> kg (reference unit)	<input type="text"/> 0 €	n.a.	Literature	<input type="text"/>
Water (softened, deionized)	<input type="text"/> kg (reference unit)	<input type="text"/> 0 €	n.a.	Literature	<input type="text"/>
Valuable substances	overview				
Energy carrier	overview				
Electric power	overview				
Power	<input type="text"/> MJ (reference unit)	<input type="text"/> 0 €	n.a.	Literature	<input type="text"/>
Fuels	overview				
Hard coal products	overview				
Coal (for injection)	<input type="text"/> kg (reference unit)	<input type="text"/> 0 €	n.a.	Literature	<input type="text"/>
Other fuels	overview				
Basic Oxygen Furnace Gas (MJ)	<input type="text"/> MJ (reference unit)	<input type="text"/> 0 €	n.a.	Literature	<input type="text"/>
Blast furnace gas (MJ)	<input type="text"/> MJ (reference unit)	<input type="text"/> 0 €	n.a.	Literature	<input type="text"/>

Site:

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Properties

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- BF Gas Combustion Master Process (new)**
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- Boiler I (new)**
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- Destination / Application Coke Oven Gas**
- Fresh Water I (new)**

kg (reference unit)	U €	n.a.	Lit
Metals <i>overview</i>			
Graded sinter	kg (reference unit)	0 €	n.a.
Iron ore	kg (reference unit)	0 €	n.a.
Manganese (Mn, ore)	kg (reference unit)	0 €	n.a.
Pellet feed (Fe carrier)	kg (reference unit)	0 €	n.a.
Sinter / Pellet Fines	kg (reference unit)	0 €	n.a.
Minerals <i>overview</i>			
Dolomite (CaCO3.MgCO3, crude)	kg (reference unit)	0 €	n.a.
Limestone	kg (reference unit)	0 €	n.a.
Refractories (magnesia, lime, carbon)	kg (reference unit)	0 €	n.a.
Refractories (silica, alumina)	kg (reference unit)	0 €	n.a.
Operating materials <i>overview</i>			
Blast Air	m ³ (reference unit)	0 €	n.a.
Grease	kg (reference unit)	0 €	n.a.
Water for industrial use	kg (reference unit)	0 €	n.a.
Waste water treatment <i>overview</i>			
Aluminum sulfate	kg (reference unit)	0 €	n.a.
anticorrosing agent	kg (reference unit)	0 €	n.a.
Coagulation agent	kg (reference unit)	0 €	n.a.
Flocculating agent	kg (reference unit)	0 €	n.a.
Polyelectrolyte	kg (reference unit)	0 €	n.a.
Sodium bicarbonate	kg (reference unit)	0 €	n.a.

3 Data Collection: Confidentiality for data



- ▶ All individual data will be seen by:
 - ▶ IISI LCA Manager
 - ▶ J Pflieger (LBP) & M Russ (PE).

► Thank you!