ArcelorMittal Dofasco

Presentation to the Hamilton Industrial Environmental Association & Community Action Panel (HIEA-CAP)

November 19, 2013
ArcelorMittal is world’s largest steel and mining company

- World's leading integrated steel and mining company.
- 84 Mt produced in 2012.
- More than 245,000 employees at 85 plant sites in 60 plus countries.
- Approximately 35% of our steel is produced in the Americas, 47% in Europe and 18% in other countries such as Kazakhstan, South Africa and Ukraine.
- Key global markets: automotive, construction, household appliances and packaging.
ArcelorMittal employs 10,000 Canadians and makes 40,000 indirect jobs possible

- More than 10,000 employees in Canada:
  - >4,400 in Quebec
  - >5,600 in Ontario
  - Support over 40,000 indirect jobs.

- Operations in Flat Rolled, Tubular and Long product steels.

- Extensive Iron Ore Mines in Quebec

- Addition of Mary River iron ore mine located on Baffin Island.
ArcelorMittal Dofasco

• Established in 1912 – Dominion Steel Castings

• Acquired in January 2006 by Arcelor

• Integration of Dofasco into ArcelorMittal Flat Carbon Americas began February 2007

• Canada’s largest producer of flat rolled steels

• Leading supplier to automotive

• Manufacturing focused in the Great Lakes Region (Hamilton, Windsor, Montreal)
Vision and Values

• We are committed to setting globally recognised standards and managing our growth and profits with the needs of future generations in mind.

• Our values:
  – Quality
  – Leadership
  – Sustainability
    • Environment
    • Employees
    • Community
Our Hamilton Facilities - ISO 14001 Registered

Coke Making
3 Batteries

Iron Making
3 operational blast furnaces

Steel Making
1 Electric Arc Furnace
1 Basic Oxygen Furnace
2 Casters

Rolling
1 Hot Strip Mill

Cold Rolling
2 Pickle lines
1 Tinning Line
4 Galvanizing Lines
1 Galvalume

Property
750 acres
In a major urban centre
Facilities: Coke Making and Byproducts

- No.1 CP
- No.2 CP
- No.3 CP
- No.1 BF
- No.2 BF
- No.3 BF
- No.4 BF
- EAF
- No.2 LMF
- No.1 LMF
- No.1 TDG
- No.1 Caster
- No.2 Caster
- Reheat Furnaces
- Hot Strip Mill
- Scrap
- Hot Metal
- EAF
- Scrap
- Cold Iron
- PCI
- Iron Ore Pellets
- Purchased Slabs
Facilities: Coke Making and Byproducts

- 3 Coke Plants
  - Coke Plant No. 1 - Commissioned in 1958
    - 3 Batteries - 105 Total Ovens
  - Coke Plant No. 2 - Commissioned in 1971
    - 2 Batteries - 106 Total Ovens
  - Coke Plant No. 3 - Commissioned in 1978
    - 1 Battery - 35 Ovens

- By-Products 1, 2 and 3
  - COG, Tar, Light Oil, Ammonia Sulphate Production
  - Ammonia Removal and Destruction
  - Cyanide and Fluoride Water Treatment Facility
#1 Coke Plant Closure

- Expected out-of-service date: March 2015
  - Continued repair and maintenance investments
  - Safe, orderly shutdown
  - Infrastructure changes

- Permanent improvement in local air emissions:
  - ~40% reduction in Benzene
  - ~12% reduction in NOx
  - ~10% reduction in TSP
  - ~8% reduction in B(a)P
  - ~4% reduction in SO$_2$
  - ~33% reduction in visible emissions
Facilities: Iron Making

- No.1 CP
- No.2 CP
- No.3 CP
- No.1 BF
- No.2 BF
- No.3 BF
- No.4 BF
- Scrap
- Hot Metal
- EAF
- No.1 LMF
- No.1 TDG
- No.1 Caster
- No.2 Caster
- Purchased Slabs
- No.1 & No.2 Reheat Furnaces
- Hot Strip Mill

PCI
Iron Ore Pellets

KOBM
Steelmaking

Cold Iron
Scrap
Facilities: Iron Making

• #2 Blast Furnace
  – Commissioned in 1954
  – Relined in 2005

• #3 Blast Furnace
  – Commissioned in 1963
  – Relined in 2010

• #4 Blast Furnace
  – Commissioned in 1971
  – Scheduled for Reline in 2018
Facilities: Steelmaking
Facilities: Steelmaking

ArcelorMittal Dofasco is divided into two streams:

1) Basic Oxygen Furnace (KOBM)

2) Electric Arc Furnace (EAF)

**KOBM:**
Commissioned in 1978
1 LMF / 1 Tank Degasser
1 x 2 Caster
Higher Quality Steel
  - Automotive
  - Tinplate

**EAF – 100% Recycled Input:**
Commissioned in 1996
1 LMF
1 x 1 Strand Caster
Services: Material Handling and Logistics

- Manage the flow and inventories of materials including:
  - scrap
  - steel slabs
  - hot band coils
  - work in process
  - finished goods
  - by-products
Facilities: Hot Rolling

– #2 Hot Mill Commissioned in 1983

– Transform Slabs into Hot Band Coils for
  • Shipping direct to customers
  • Further processing downstream

– Typical end uses of Hot Band
  • Structural components for automotive
  • Pipe (oil and gas)
  • Tubes
  • Water Heaters
  • Agriculture
  • Electrical Panels
Facilities: Pickling / Cold Rolling

- **#1 CPCM:**
  - Commissioned in 1991
  - Light gauge cold roll
  - Tin/automotive exposed

- **#2 CPCM:**
  - Commissioned in 2006
  - Heavier gauge cold roll
  - High throughput

- **#4 PL:**
  - Commissioned in 1985
  - Pickle and oil hot roll

No. 2 CPCM
Facilities: Galvanize Lines

- No. 1 Galv
  - Commissioned in 1955
  - Galvalume/Galvanize for Construction
  - Will be decommissioned by Q4 2014

- No. 2 Galv
  - Commissioned in 1960
  - Galvanneal/Galvanize for Automotive and Construction
  - Will be decommissioned by Q4 2014

- No. 3 Galv
  - Commissioned in 1971
  - Galvanneal/Galvanize for Construction and Automotive

- No. 4 Galv
  - Commissioned in 1981
  - Galvanize for Automotive and Construction
  - Will be upgraded by Q4 2014 to produce Galvalume

- DSG
  - Commissioned in 1999
  - Galvanize/Galvanneal for Automotive Exposed

- No. 6 Galv
  - Will be commissioned by Q4 2014
  - Galvanneal/Galvanize for Automotive and Construction

- Coteau-du-Lac – Montreal
  - Commissioned in 1991
  - Galvanneal/Galvanize for Construction

- DJG – Windsor
  - Commissioned in 1993
  - Galvanneal/Galvanize for Automotive Exposed
Facilities: Tinplate

- #3 E Line
  - Commissioned in 1972
- ArcelorMittal Dofasco is the only producer of Tinplate in Canada
- Dofasco’s tinplate is found in approximately 90% of cans on Canadian grocery store shelves.
Facilities: Tubular Products

- Slitters
- Tube Mills
  - No. 1 Tube Mill
    - Commissioned in 1997
  - No. 2 Tube Mill
    - Commissioned in 2000
- Fabrication cells
- Tube Warehouse
- Uses and Applications
  - Oil and Gas Industry
  - Domestic water systems
  - Structural Steel
  - Mechanical systems
  - Automotive
    - Hydroforming