



Partnerships through excellence

Facts and figures

Together we shine
www.dubal.ae

dubal
Dubai Aluminium

Partnerships through excellence

Established in 1979, DUBAL celebrated its 30th anniversary in 2009: a milestone that reflects an ongoing strategy to build and nurture mutually beneficial, successful partnerships with all stakeholders. Currently ranked as the world's largest modern aluminium smelter with a captive power station, DUBAL is renowned internationally for its high quality and service standards; premium purity products; and industry expertise.

Each year, DUBAL manufactures approximately one million tonnes of finished product, made-to-order for 300 customers in about 45 countries worldwide. This includes foundry alloy for the automotive industry; extrusion billet for construction, transport and industrial applications; billets for forging processes in automotive industries; and high purity primary aluminium for the electronics and aerospace industries.

General Information

Area of main site (Incl. Residential area)	480 ha
Start-up of first pot	October 1979
Start-up of Potline 4	October 1990
Start-up of Potline 5	September 1996
Start-up of Potline 6	May 1999
Start-up of Potline 9	September 2003
Start-up of Potline 7a	May 2005
Start-up of Potline 79b	June 2006
Start-up of Potline 5b	July 2007
Start-up of Potline 8	February 2008
Number of employees	4,035*
Percentage of national employees	22%

* as at December 2009

Markets

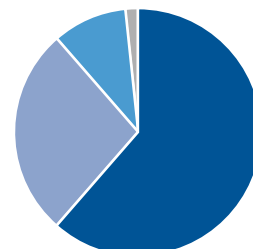
Product mix 2009

61.5% Extrusion billet

27.3% Foundry

9.6% High purity

1.6% Bus/Anode



Total exports 2009

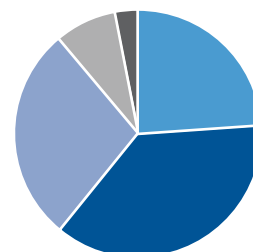
37% Asia

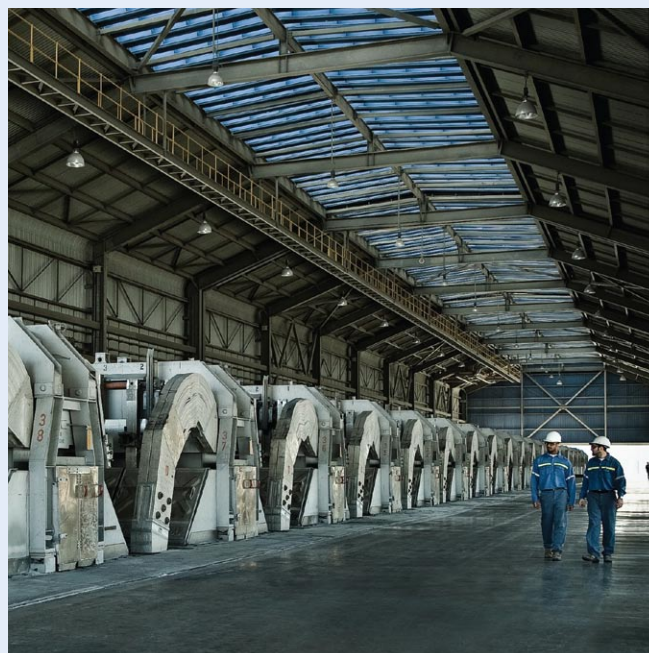
28% Middle East

24% Europe

8% North America

3% Africa





Smelter operations

Reduction plant

Number of potlines	8
Total number of reduction cells	1,573 pots
Hot metal production capacity	992,000 mtpa

Output of metal per cell/ technology

D18	1,488 kg/pot/day
CD20 and D20	1,816 kg/pot/day
D20	1,841 kg/pot/day
DX	2,830 kg/pot/day

Average pot current

Potlines 1 to 3	199 kA
Potlines 5 and 6	239 kA
Potlines 7 and 9	240 kA
Potline 8	370 kA

Current efficiency

Potlines 1 to 3	92.8%
Potlines 5 and 6	95.2%
Potlines 7 and 9	94.8%
Potline 8	95.0%

Average metal purity

Standard purity cells	99.89%
High purity cells	99.96%
Overall average metal purity	99.89%

Carbon plant

Greenmill production capacity	72 mt/hour (2 lines)
-------------------------------	----------------------

Baking kilns open type

Kilns 1 and 2	175,000 anodes/year
Kilns 3 and 4	205,000 anodes/year
Total	380,000 anodes/year

All four kilns are connected to two dry fume scrubbing systems.

Rodding room

5 x induction furnaces and 2 x casting stations	
Capacity	1,260 anodes/day

Casthouses

Number of furnaces 27

Type of finished product

Foundry alloy	7 kg/8 kg/10 kg/20 kg/ 500 kg/885 kg
Extrusion billet	152, 155, 178, 203, 216, 228, 254, 279, 305, 355 mm
High purity	500 kg/680 kg/20 kg
Busbar	500 kg/680 kg/20 kg
Anode bar	500 kg/680 kg/20 kg

Casting machines/equipment

Sow casting stations (high purity)	180,000 mtpa
Standard ingots (high purity wheel alloy grade)	205,000 mtpa
Properzi ingots (high purity wheel alloy grade)	105,000 mtpa
Horizontal DC (wheel alloy grade)	126,000 mtpa
Vertical DC casting machines (extrusion billets)	655,000 mtpa

Electric power generation

Power station installed capacity 2,350 MW at 30°C

Equipment

8 x	Gas turbines with 4 x condensing steam turbines
7 x	GTs equipped with Evaporative Coolers
8 x	GTs equipped with Dry Low NOx burners (less than 20 ppm)
1 x	Gas turbine in combined cycle with 1 x steam turbine
13 x	Gas turbines in large co-generation cycle
1 x	Gas turbine in open cycle Equipped with Evaporative Coolers Equipped with Dry Low NOx burners (less than 20 ppm)
2 x	Back pressure steam turbines supplied from the large co-generation cycle
52 x	Rectifier transformers converting AC to DC (including boosters)
372 x	Distribution transformers

The Evaporative Coolers enhance the plant electrical output by about 65 MW, and reduce CO₂ emissions by 350,000 metric tonnes/year. The plant's overall thermal efficiency improved from 33.8% in 1999 to 43.3% in 2008.

Desalination plant

Fresh water production capacity 30 million gallons/day

Producing two grades of water:

- Potable water meeting WHO quality requirement
- High purity distilled water

Equipment

6 x multi-stage flash evaporators	
First evaporator inaugurated on	26 February 1979
2 x Back pressure steam turbines	36 MW each
Steam requirement	750 tonnes/hr
Reservoir storage capacity	10 million gallons
Water filling station capacity	18 million gallons/day

Raw materials, port and storage facilities

Annual consumption of process materials

Alumina	1,880,000 mt
Petroleum coke	300,000 mt
Coal tar pitch	70,000 mt
Area of port facility	130,204 sq.m
Water depth at quay	14 m
Maximum vessel size	Up to 75,000 mt cargo capacity
Number of berths	2

Storage capacity

Alumina silos	(Total: 245,000 mt)
2 x 30,000 mt	
2 x 35,000 mt	
1 x 45,000 mt	
1 x 70,000 mt	
Petroleum coke silos	(Total: 30,000 mt)
2 x 5,000 mt	
2 x 10,000 mt	
Liquid pitch	2 x 10,000

Liquid pitch raw materials are transported from dedicated dock facilities to the plant site by road tankers.

For additional information, contact:

Dubai Aluminium Company Limited
P O Box 3627, Dubai, United Arab Emirates
Tel: + 971 4 884 6666, Fax: + 971 4 884 6646
www.dubal.ae