



## Partnerships through excellence

Facts and figures

Together we shine  
[www.dubal.ae](http://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 one of the world's largest single-site primary aluminium smelters, DUBAL is renowned internationally for its high quality and service standards; premium purity products; and industry expertise.

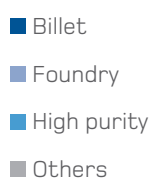
Each year, DUBAL manufactures more than one million tonnes of finished product, made-to-order for more than 300 customers in at least 45 countries worldwide. This includes foundry alloy for the automotive industry; extrusion billet for construction, transport and industrial applications; billets for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

## General information

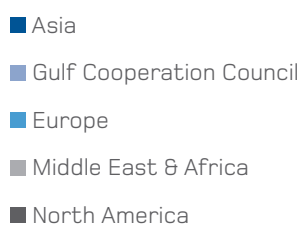
Area of main site (Incl. Residential area)	480 ha
Start-up of first pot (Potlines 1 to 3)	October 1979
Start-up of Potline 4	October 1990
Start-up of Potline 5	September 1996
Start-up of Potline 6	May 1999
Start-up of Potline 9	September 2003
Start-up of Potline 7a	May 2005
Start-up of Potline 7b & 9b	June 2006
Start-up of Potline 5b	July 2007
Start-up of Potline 8	February 2008
Number of employees	3,827*
Percentage of national employees	15.5%

## Markets

### Product mix 2010



### Total exports 2010





## Smelter operations

### Reduction plant

Number of potlines	7
Total number of reduction cells	1,573 pots
Hot metal production in 2010	1,002,014 mt

### Output of metal per cell/technology

D18	1,500 kg/cell/day
CD20	1,859 kg/cell/day
D20	1,874 kg/cell/day
DX	2,907 kg/cell/day
DX +	3,213 kg/cell/day

### Average cell current

Potlines 1 and 3	200 kA
Potlines 5 and 6	243 kA
Potlines 7 and 9	245 kA
Potline 8	380 kA
DX + cells	420 kA

### Current efficiency

Potlines 1 and 3	93.1%
Potlines 5 and 6	95.0%
Potlines 7 and 9	95.0%
Potline 8	95.0%
DX + cells	95.0%

### Average metal purity

Standard purity cells	99.89%
High purity cells	99.96%
Overall average metal purity	99.90%

### Carbon plant

Greenmill production capacity	72 mt/hour (2 lines)
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### Baking kilns open type

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

All four kilns are connected to two dry fume scrubbing systems. DUBAL imports a portion of its anode requirements.

### Rodding room

5 x induction furnaces and 2 x casting stations	
Production	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
Billet	152, 155, 178, 203, 216, 228, 254, 279, 305, 355, 406 mm
High purity	500 kg/680 kg/20 kg
Busbar	From 7 kg to 4,820 kg
Anode bar	From 96 kg to 182 kg

### Casting machines/equipment

Sow casting stations (high purity)	180,000 mtpa
Standard ingots (high purity wheel alloy grade)	175,000 mtpa
Properzi ingots (high purity wheel alloy grade)	95,000 mtpa
Horizontal DC (foundry alloy grade)	131,000 mtpa
Vertical DC casting machines (billets)	695,000 mtpa
<b>Total</b>	<b>1,276,000 mtpa</b>

## Electric power generation

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

### Equipment

8 x	Gas turbines with 4 x condensing steam turbines Equipped with Evaporative Coolers 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 co-generation cycle Equipped with Evaporative Coolers Equipped with Dry Low NOx burners (less than 20 ppm)
52 x	Rectifier transformers converting AC to DC (including boosters x 44)
372 x	Distribution transformers

The Evaporative Coolers enhance the plant electrical output and reduce CO<sub>2</sub> emissions by 350,000 mtpa. The plant's overall thermal efficiency has improved from 33.8% in 1999 to 43% in 2010.

## 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
Net steam requirement	750 mt/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	1,930,000 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

<b>Alumina silos</b>	<b>Total: 245,000 mt</b>
2 x 30,000 mt	
2 x 35,000 mt	
1 x 45,000 mt	
1 x 70,000 mt	
<b>Petroleum coke silos</b>	<b>Total: 50,000 mt</b>
2 x 5,000 mt	
2 x 10,000 mt	
1 x 20,000 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:

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