

DOCUMENT REFERENCE NUMBER
012/AMINO

Energy Consumption Table

Amino Chemicals consume 2 base forms of energy, electricity and diesel fuel oil.

Appendices 012 / Amino/1 and 006 / Amino / 2 show the relevant diesel and electrical energy consumption rates.

Diesel Oil Consumption

54000 ltrs of fuel were consumed in 167 working days. This means that the average rate is 323ltrs/day.

Anticipated consumption for the remaining period of this year would be

$323 \text{ ltrs/day} \times 73 \text{ days} = 23579 \text{ ltrs.}$

Total diesel consumption is therefore $23579 + 58000 = 81579 \text{ ltrs.}$

Electrical Energy Consumption.

Electrical units of energy consumed between 7 Feb. 2003 and 06 June, 2003 were 260540 KWhrs. Total number of working days is 83 out of the total 119 days.

Therefore, average electricity demand is 3139 KWhrs/day.

To estimate the total electricity used in 2003:

Period:

1st Jan – 6th Feb: 25 working days x 3139 = 78475 KWhrs

7th Feb.- 6th June: 260540 KWhrs

7th June – 31st Dec: 141 working days x 3139= 442604 KWhrs

Total units = 781619 KWhrs

Assume a variance of 5%

Anticipated electrical consume = 820699 units

Energy Consumption Table	
Diesel Fuel Oil	81579 ltrs
Electricity	820699 kWhrs

Diesel Oil Purchase January – August 2003		
Date	Quantity In ltrs.	Working Days between Purchases
07/01	4000	
16/01	4000	8
31/01	4000	11
07/02	4000	5
19/02	4000	8
03/03	4000	8
25/03	4000	16
18/04	4000	10
02/05	4000	18
21/05	3000	13
02/06	4000	8
24/06	4000	16
16/07	3000	16
31/07	4000	11
27/08	4000	19

Appendix 012/Amuho/1.

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Energy Efficiency Programme

Amino Chemicals have from the onset of their venture in Malta taken energy efficiency very seriously.

One may say that the capital investment carried out by Amino in energy saving technology can be divided into two areas –

1. Power factor correction for electrical motors and similar loads,
2. Industrial quality thermal insulation for pipework and systems were applicable.

Amino Chemicals has installed a large power factor correction unit in its central electrical control room in order to enhance electricity usage on the main motors. Although quite an expensive piece of equipment, the unit has saved the company money on its electricity bill and was well worth the cost.

In industrial plants where heating and cooling processes are daily operations, thermal insulation of pipework is essential to keep running costs low. Heat losses from pipework working continuously can create heavy financial losses due to energy wastage. In view of this, Amino have from the onset invested heavily in industrial quality insulation and cladding. A visit to the factory indicates just how professional this undertaking was made. Amino have all process lines insulated and cladded and we feel there is no room for improvement in this particular field.

The steam boilers are regularly cleaned and kept running at the best possible efficiency.

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Environment Contingency Plan

Amino Chemicals is a very environmentally orientated company, so much so that it exports its waste to mainland Europe for disposal at a great cost. The disposal of its wastes is fully documented and according to the Basle Convention.

In-house, Amino is very active in instructing employees about environmental matters. All employees have been sent for training in the field of fire fighting and fire prevention. Fire teams are being organized and the company is in the process of finalizing its Fire and Evacuation Policy.

The Company's Quality Department has also prepared Standard Operating Procedures (SOP's) for all processes and activities concerned with production. Amino is committed to preparing SOP's for all incoming, outgoing and internal movement of goods within the next 6 months. These SOP's would indicate procedures for dealing with spills and contamination.

As part of its environmental contingency plan, Amino has purchased an industrial liquid spill vacuum for spillage control. Within 6 months Amino will also have the appropriate chemical suits and gear to handle spillages and the containment procedures will be available.

The factory is a very well, naturally ventilated place, and a new fire fighting system has just recently been commissioned. The fire system consists of both a sprinkler system for drenching purposes and a foam system for extinguishing purposes.

