Light columns for lighting columns

IN PRAISE OF ALUMINIUM

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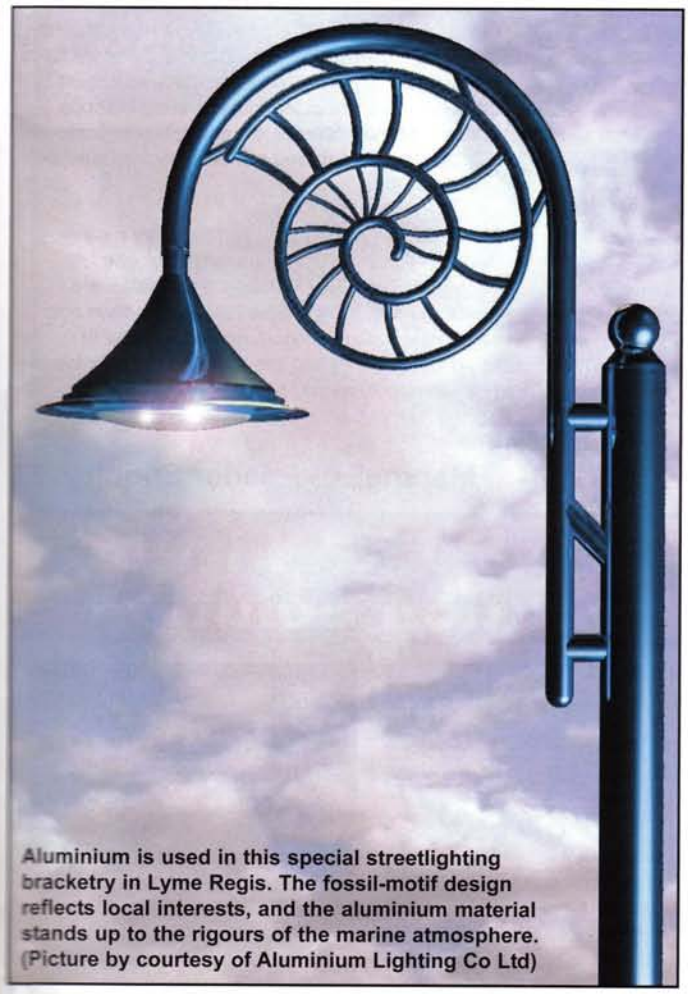
supported by data provided by The Aluminium Lighting Company

Aluminium is zero maintenance, 'green', less costly and safer



Aluminium is used in this special streetlighting bracketry in Lyme Regis. The fossil-motif design reflects local interests, and the aluminium material stands up to the rigours of the marine atmosphere. (Picture by courtesy of Aluminium Lighting Co Ltd)

For a material which has only been available in industrial quantities for just over 100 years, aluminium has seen a meteoric rise in usage. In it's short history it has already become the world's second most used metal, and without aluminium, much of today's technology would simply not be possible. From aircraft to kitchen utensils, aluminium revolutionised product design. Low weight, ease of use, freedom from corrosion, and plentiful supply all added up to a new material with massive benefits. It could be argued that aluminium has done for metal products what penicillin did for medicine!

ENVIRONMENTAL CONCERNS

Aluminium is among the world's top 'green' materials. It is very easy to recycle, and the increased use of recycled material is dramatic. In 1900, the global production of aluminium was 1000 tonnes. By the millennium it had reached 32 million tonnes, and by then, 25% was coming from recycling. While aluminium usage continues to rise overall, the percentage coming from recycling grows even faster, to the point where the next 20 years could see this constant rise to over 50%.

And while it is often said (and quite rightly) that production of aluminium from primary ore uses a lot of energy, improvements in process efficiency have dramatically reduced the levels. Energy consumption in producing new material from ore has been cut by 37% in the last 50 years, and overall by 75% in the last century. Material produced from a recycling programme uses only about 5% of the energy used in extracting new aluminium from ore, and as the recycling content grows, aluminium stands out even more as the friend of the planet.

Aluminium can be recycled infinitely, and there is now a vast stock of the stuff around, held in products in use. These stocks of aluminium in use are estimated at 400 million tonnes, and these represent a permanent asset to society, since they will in the future be recycled many times, at low energy cost, and without loss of material quality.

As the whole world becomes more conscious of the environment, and as governments adopt responsibilities in reducing environmental damage, then such factors come more often into buying decisions. Governments have a habit of cascading their responsibilities to local level for implementation, and using aluminium is one way in which end users can demonstrate their compliance with the environmental improvements demanded by world agreements.

UK PUBLIC LIGHTING

So why is it that our streets are crowded with lighting columns made in steel, many of which are old, and suffering extensive corrosion. This corrosion is not always obviously visible, but severe weakening of the column does take place, and there have been a number of cases of falling columns in the UK where people have been injured, and in a few cases tragically killed.

The problem has been that funding for lighting has always been tight, and product decisions based on initial cost alone will usually select steel. But when whole-life costing is considered, and the full benefits of zero maintenance aluminium products are added in to the equation, then an aluminium column is often the better option.

Practically every street lighting lantern in the UK, and there are some 6.5million of them, is made from either plastic or aluminium. Nobody has steel lanterns, not wanting the corrosion problems this would entail. So why are these lanterns then mounted on steel columns?

In some countries, aluminium streetlighting columns are mandatory for reasons of passive safety. Colliding with an aluminium structure is likely to produce less damage to you than hitting an equivalent steel column. With increasing traffic volumes, and more crowded roads, how long before the passive safety argument becomes a loud and insistent voice?

PROTECTING THE FUTURE

As things stand, steel is still the material used in about two thirds of the UK's 6.5million lighting columns. But steel stocks include around 1 million which are over 20 years old, and a further 0.75 million which are over 30 years old. So a lot of columns are coming towards replacement. Having in mind that the necessity of their replacement is due almost entirely to the long term effects of corrosion, it is time to re-assess the merits of aluminium, and see if we can't bequeath future generations a low maintenance, less costly, and better looking inheritance.

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