european
aluminium association

SUSTAINABILITY OF THE EUROPEAN ALUMINIUM INDUSTRY 2010

THE ALUMINIUM INDUSTRY

a sustainable industry for future generations

The aluminium industry – a sustainable industry for future generations

Over the last 30 years, the aluminium market has increasingly expanded in Europe. This trend can be explained by the specific properties of aluminium, which are more and more making it the material of choice for engineers and designers as well as consumers, to fulfil the needs of society.

The European Aluminium Association (EAA) and its member companies launched, in 2002, a pioneering exercise: a list of more than 30 measurable Sustainable Development Indicators (SDIs) was identified in collaboration with the UNEP/ Wuppertal Institute Collaborating Centre on Sustainable Consumption and Production (CSCP), the University of Versailles and an additional peer group of internal and external stakeholders.

The SDIs published in 2004, 2006 and in the present report clearly show a committed industry making improvements in areas such as:

- Reduction of environmentally damaging emissions and natural resource use,
- Share of renewable electrical energy,
- Workers safety and training,
- Community dialogue penetration,
- Recycling rates and more…

This set of results shows important positive trends, despite the recent economic crisis which had a severe impact on our industry.

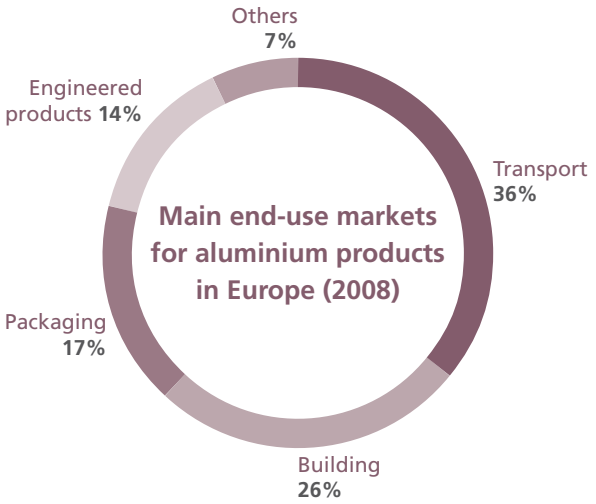
The aluminium industry in numbers

An estimated **255 000 people are directly employed in the aluminium value chain**, mostly in downstream activities (rolling, extrusion, castings, foil, wire rod, finishing, etc.). Considering indirect services and the fabrication of aluminium for end-user industries, the whole aluminium value chain provides employment for more than one million people in Europe.

European aluminium production grew since 1997 to mid-2008. However, the industry was strongly affected by the economic downturn and experienced significant volume reductions for all its sectors in 2009 compared to 2008. Alumina production fell by more than 30%, primary production by 20%, and rolling and extrusion by 18% and 22% respectively.

The **recycling** of aluminium saves up to 95% energy and greenhouse gas emissions and helps to save natural raw materials. Currently about 700 million tonnes, that is more than 70% of all aluminium ever produced, is still in use, thanks to its long life cycle (10 to 20 years in transport and up to 50 to 80 years in buildings). As it can be recycled infinitely without loss of quality, aluminium has impressive recycling rates of over 90% in transport and building applications and more than 55% in packaging, up to over 90% in some countries for beverage cans.

It is mainly during its **use phase** that aluminium is able to show its impressive contribution to sustainability, more than offsetting the consumption of raw materials and energy needed for its primary production. In fact, aluminium is a light material which helps reducing weight in all transport applications, thus contributing to reduced fuel consumption. Additionally, aluminium also allows for lightweight construction and energy efficient solutions in buildings. Due to its unique properties as an efficient barrier for air and light, a minimal amount of aluminium is sufficient to pack valuable foodstuffs and drinks, and helps to prevent food spoilage.



The **automotive & transport sector** is the largest end-use market for aluminium in Europe, accounting for about 36% of aluminium applications. Today, aluminium is widely used in cars, trucks, buses, coaches, trains, metros, ships, ferries, aircraft and bicycles. The new generation of fast ferries and cruise ships would never have been possible without the unique combination of sturdiness and weight reduction. Also Europe's ultra-fast trains and in particular double-decker carriages owe their existence to the newest aluminium alloys.

The **building and construction sector** accounts for approximately 26% of the European aluminium end-use markets, with a wide range of applications that go from curtain walls, window frames to other glazed structures. The main drivers for aluminium in buildings are its high strength-to-weight ratio, its long service life, the low maintenance it requires, its high reflectivity and a huge design flexibility thanks to the wide choice of alloys and surface finishes that are available. The latest breakthrough is the unique combination of aluminium structures with solar panels to give light, weather resistant structures for all types of roofing with no need to modify the architecture or engineering of the buildings.

About 17% of all aluminium in Europe is employed to produce beverage and food cans, containers, trays, aerosols, tubes, capsules and a wide range of thin (laminated) foil applications such as wrappings, lids and pouches. Aluminium **packaging**, via its unique combination of properties, which provide an absolute barrier protecting the goods, contributes to the efficient fabrication, storage, distribution, retailing and usage of many products. The ecological performance of aluminium packaging should be put in the right perspective. In a world with a rapidly growing population living mainly in cities, less packaging doesn't necessarily mean less food wastage. On the other hand resource efficiency can also be met by increasing the recycling and recovery performances of used aluminium packaging.

The aluminium industry - essential to meet EU 2020 targets

In March 2010, the European Commission launched its growth strategy for the coming decade. In particular, the EU aims to encourage a growth which is smart (i.e. fostering knowledge, innovation, education and digital society), sustainable (i.e. making our production more resource efficient while boosting our competitiveness) and inclusive (i.e. raising participation in the labour market, the acquisition of skills and the fight against poverty). EAA and its members are fully committed to facilitate - in the relevant fields of activity – the achievement of these objectives. To do so, our industry needs to remain competitive and be submitted to the same rules than its competitors. Even in the digital age and in the era of knowledge and services, manufacturing industries remain an essential foundation of the economy. Apart from providing a substantial part of Europe's employment and economic output, manufacturing industries are also fundamental to the provision of the infrastructure and equipment through which knowledge is developed and transferred, services are invented and provided. Industry supplies the essential hardware on which the whole software of the digital economy operates.

EAA Sustainability Mission Statement

The European Aluminium Association and its member companies are committed to pursuing the principles of Sustainable Development, i.e. "meeting the needs of the present, without compromising the ability of future generations to meet their own needs".

This means remaining a competitive and growing industry, while:

- Meeting the needs of modern society and creating value by offering aluminium products with unique properties, including recyclability;
- Reducing the environmental impact of our production processes and that of our products through their life cycle;
- Demonstrating our social responsibility towards employees, customers, suppliers, local communities and society as a whole;
- Achieving continuous progress through the sharing of best practices and regular indicator-based reporting;
- Encouraging member companies to work along the lines of international environmental and social conventions, such as the UN Global Compact.

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