The Use Phase in the Aluminum Mass Flow

Integration of the use phase
- Increasing economic growth and growing consumption
- Over-consumption of resources
- High emission of environmentally hazardous and insalubrious substance
- Significant user-related effects
- Varying of life-time of products or product-systems

Main targets of the project
- Identification of environmental impacts during the use phase
- Quantification of induced environmental impacts of the particular product use, startup, maintenance and repair
- Identification of most important physical properties of Al
- Consideration of the influence of the user behavior on the environmental impact
- Compilation case studies which point out various user-related effects
- Integration of environmental impacts within the process chain

Influence of the physical properties on the environmental impact

Identification of important physical properties of aluminium
- Products have different requirements and importance on physical properties
- Consideration of multi-functional material properties
- Describing and analysing the ecological effects of these properties with regard to the entire environmental impact during the use phase

Environmental impact of the use phase

Influence of the user behavior on the environmental impact

User independent rsp. product specific environmental impacts
- Fixed by chosen technology (user / constructor)
- Varies from old to ecological technology

Individual determined environmental impacts
- Depends on ecological knowledge, income, education
- Varies between not important and directly affecting risks

Social determined environmental impacts
- Depends on common values, standards, and political decisions
- Varies from local, regional and global surroundings

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