

Presentation of the Beryllium Science and Technology Association (BeST)

Technical Barriers to Trade in the Raw Materials Sector in the case of Beryllium

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Introduction

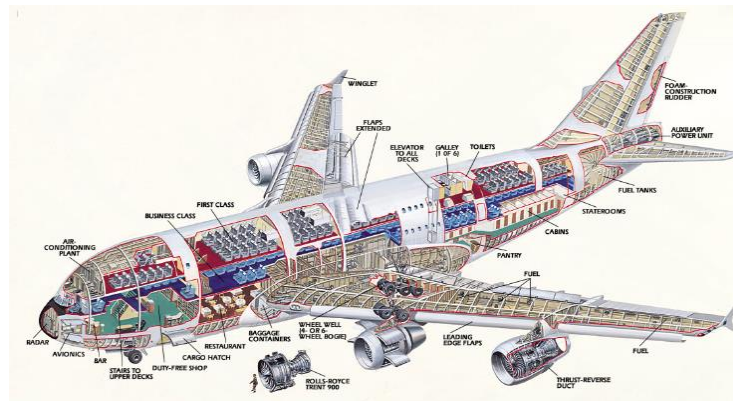
- What is Beryllium? A Naturally Occurring Element
- The importance of Beryllium to major EU-US industries
- Example 1: Automotive Electronics Applications
- Example 2: Medical X-Ray Windows & Electronic connectors
- Technical Barrier to Trade for Beryllium from US to EU
- What is needed



What is Beryllium? A Naturally Occurring Element



- A naturally occurring critical material
- It is very light and rigid with a density thirty percent lower than Aluminium and 3 times the stiffness of titanium.
- The alloy of copper with less than 2% Beryllium is as strong as steel
- A very good conductor of electricity and heat, non-magnetic and non-sparking.
- It resists deformation over time at elevated temperatures and thus is used to make extremely reliable conductive springs, such as connector terminals.



The importance of Beryllium to major EU-US industries

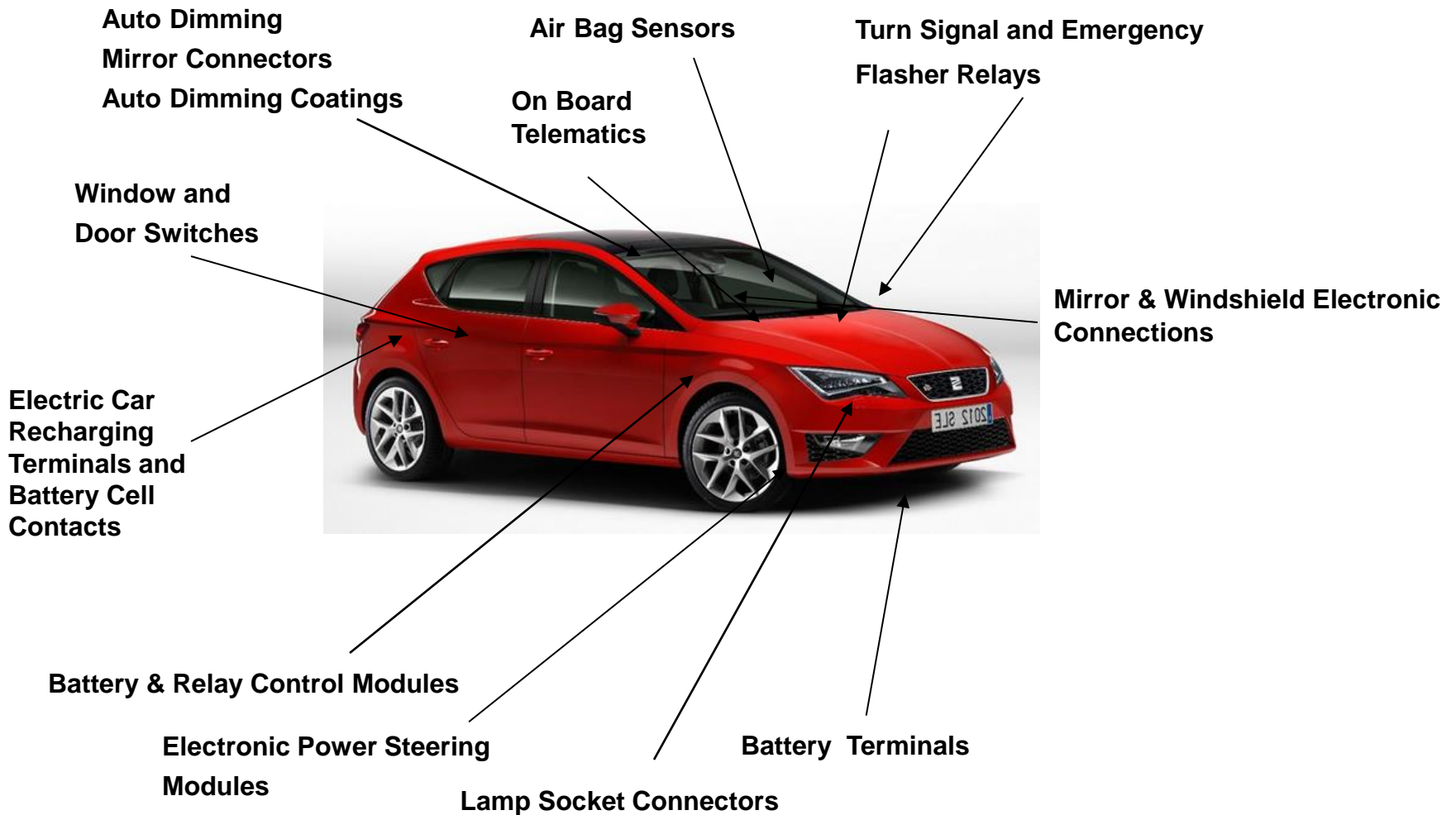
- Used in a variety of highly-innovative industry sectors such as the automotive, aerospace, consumer electronics electrical engineering and medical equipment sectors.
- Europe does not have its own supply of beryllium. There is no beryllium mining in Europe. Approximately 75% of Europe’s beryllium supply comes from the U.S.
- Criticality: when the risks for supply shortage and their impacts on the economy are high compared with most of the other raw materials
- Beryllium on EU CRM List 2014
- Beryllium both “strategic” and “critical” to the US Department of Defense

Beryllium enables:

- Miniaturisation
- Energy Savings
- Reduced raw material utilisation
- Life-saving technology
- Reliability



Example 1: Automotive Electronics Applications



Example 2: Medical X-Ray Windows & Electronic connectors

Uses the property of X-Ray transparency of Be

- Medical
 - CT Scan X-Ray Tube
 - Mammography & Biopsy
 - Pharmaceutical
- Industrial & Analytical
- High Energy Research
 - Particle Physics
 - Nuclear



Uses the reliability of CuBe in electronic connectors

- Medical equipment connector terminals



An X-Ray window made of Beryllium thin foil fastened to a stainless steel rim, incorporated into a CT Scanner.

Technical Barrier to Trade for Beryllium from US to EU

- In case of Beryllium no free market
- A US beryllium company filed a TBT Inquiry with Germany/EU
- Both commercial and defense critical systems depend on an unfettered supply of beryllium containing materials.
- This can be disturbed if one or the other party has regulations with a different impact on the respective industry
- No fair level playing field for manufacturers of the substance
- Impact of REACH regulation restricting beryllium-containing materials in either Germany or the EU: creation of a significant and insurmountable barrier to trade between the U.S. and Europe.
- BeST has the support from major German industry associations

What is needed:

- The EU and US need to secure their number one position as technology leader in the world by incorporating critical materials in TTIP.
- A common approach incorporating a secured supply of beryllium while maintaining high environmental standards
- Outcome of TTIP could be a common RMOA for raw materials

Thank you for your attention !



Beryllium Science & Technology Association

Please visit our website:

www.beryllium.eu