

**HISTORY AUDIO-DATEI**

## Aluminum

... mehr in der **PRINTAUSGABE:**

**FEATURE Englische Artikel mit Vokabelhilfe**

**TECHNOLOGY Fachwissen auf Englisch**

**LANGUAGE Vokabel- und Grammatikübungen**

**WELTWEIT Interkulturelle Kommunikation**

**RUBRIKEN Neues aus Technik und Business**

... mehr unter [www.engine-magazin.de](http://www.engine-magazin.de)

# Aluminum

**Aluminium oder Aluminum ist eine Frage des britischen oder amerikanischen Englischen. Die Frage nach der Herkunft des einst wertvollen Leichtmetalls klärt unser kurzer Artikel.**

Have you ever wondered why the English say aluminium instead of aluminum? When Sir Humphry Davy identified the stuff in 1809 he called it alumium after its *kinship* to *potash alum*. That word soon became aluminum. Then, to get a Latin-sounding word, the English put in an extra letter I. They've called it aluminium ever since.

Pure aluminum *doesn't occur* in nature. It's chemically bound to other elements. Aluminum oxide, or bauxite, is the commonest source. It's very hard to separate aluminum from oxygen. Not until 1845 did a German chemist isolate a *pinpoint* sample of aluminum.

In 1854 a French chemist, Henri Deville, invented a commercial process for *extracting* aluminum from bauxite. But his aluminum was still very expensive – practically a new *precious* metal. Napoleon III *commissioned* a breastplate, spoons for banquets, and a baby rattle – all made of aluminum.

But that was about to change: young Julia Hall entered Oberlin College in 1880. Two years later her kid brother Charles joined her. They learned about aluminum and about electricity. Charles read Deville's frustrating *remark* that "every *clay* bank is a mine of aluminum and the metal is costly as silver." On his 21st birthday in 1884, the newspaper carried an article about the 100-ounce aluminum pyramid that would form the tip of the Washington Monument. It went on display at Tiffany's before it was installed.

So Charles went to work with Julia's help. Maybe electrolysis would do what chemical separation hadn't. To do electrolysis at high temperatures, he hit on the idea of *dissolving* aluminum oxide in *melted cryolite* instead of water. Then he ran an electric *current* through it.

The process worked on February 23, 1886. He put a battery current through the hot mixture, and it *precipitated* bits of aluminum the size of *marbles*. Two years later Hall joined with a group to form the Pittsburgh Aluminum Company.

While Charles and Julia Hall were in their workshop, a French *inventor* – Paul Heroult – was *developing* the same process in France. But the most important problem facing the new

industry wasn't the resulting patent conflict. It was the lack of any existing market for tons of cheap aluminum.

Finally, in 1893, aluminum *teakettles* appeared on the market, and the game was afoot. Gradually this cheap, lightweight metal found uses everywhere. In 1907 Charles Hall's company changed its name to The Aluminum Company of America – Alcoa, for short.

Charles died a multimillionaire when he was only 51. He left a small *chest* behind at the Alcoa company. In it, on a *felt* base, are *scattered* a handful of aluminum *pellets*, produced in 1886 by the Halls' first success. And Alcoa rightly calls those worthless little fragments its crown jewels. ■

*Prof. Dr. John Lienhard, University of Houston*

Dieser Text ist Teil der Radioserie „Engines of Our Ingenuity“ und wird hier mit freundlicher Genehmigung des Autors und der Radiostation KUHF wiedergegeben. Den Originaltext und weitere 2000 Kurzberichte über die Geschichte der Technik finden Sie unter [www.uh.edu/engines](http://www.uh.edu/engines)

<i>chest</i>	Kiste, Kasten
<i>clay</i>	Lehm, Ton
<i>commission, to</i>	in Auftrag geben
<i>cryolite</i>	Kryolith
<i>current</i>	Strom
<i>develop, to</i>	entwickeln, erarbeiten
<i>dissolve, to</i>	aflösen
<i>extract, to</i>	gewinnen, entnehmen
<i>felt</i>	Filz
<i>inventor</i>	Erfinder
<i>kinship</i>	Verwandtschaft
<i>marble</i>	Murmel
<i>melt, to</i>	schmelzen
<i>occur, to</i>	vorkommen, auftreten
<i>pellet</i>	Kügelchen
<i>pinpoint</i>	stecknadelspitzengroßes
<i>potash alum</i>	Kalialaun
<i>precious</i>	wertvoll
<i>precipitate, to</i>	abscheiden, ausfällen
<i>remark</i>	Bemerkung
<i>scatter, to</i>	verstreuen
<i>teakettle</i>	Teekessel

\*see list

relation ... Kalialaun

box

\*see list ... sprinkled

little balls

isn't found

very small

obtaining

valuable

ordered

comment

\*see list

dispersing

liquified \*see list

flow

\*see list

small glass balls

designer

working out