The journey of nickel

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Nickel has been found in metallic artefacts dating back more than 2,000 years. It was first identified and isolated as an element by the Swedish chemist, Axel Cronstedt, in 1751. In the 19th century, it came to prominence in plating and in alloys such as “nickel silver” (German silver) in which it is alloyed with copper and zinc. This alloy was named for its colour and does not contain any silver! 15th century miners in Germany found a brown-red ore which they believed to contain copper. They called it Kupfernickel or Devils’ Copper because they couldn’t recover copper from it.

Coins in the USA first used nickel alloyed with copper in 1857. The “nickel” was not made from pure nickel but in 1881, pure nickel was used for coins in Switzerland.

Stainless steels were discovered early in the 20th century and nickel was found to have a very beneficial role in many of the common grades, which continues to this day. Alloys based on nickel were found to have excellent corrosion resistance and could withstand high temperatures, which made them suitable for chemical plants and also allowed the practical realisation of the jet engine. As a result of these developments, nickel has enjoyed a very strong growth of demand over the past century. This continues today because of the essential role nickel plays in many technologies.

While the concentration of nickel in the earth’s crust is 80 parts per million, the earth’s core consists mainly of a nickel-iron alloy.

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