

1 Niobium

Niobium is a ductile transition metal highly resistant to corrosion and heat with superconducting properties below the critical temperature of -264°C . The pure metal and its alloys are used in MRI machines, particle accelerators, superconducting magnets, construction, gas pipelines, aerospace/automotive industry and in electronics.

1.1 Market

Global market size (2023) is 2.3B USD, projected to increase to 4.8B USD in 2032 due to growth across almost all sectors where it is used.

1.2 Occurrence

Niobium occurs in mineral deposits of Columbite and Tantalite. When the minerals occur together, the rock is colloquially referenced as “coltan.” It also occurs in pegmatites and alkaline intrusions and are associated with carbonatite formations.

1.3 Production

The four largest producers of Niobium (year 2023) are Brazil (75Mt), Canada (7Mt), DRC (.54Mt) and Russia (.44Mt) [1]. The primary Brazilian producer is the privately-held company CBMM. The primary Canadian producer is Niobec mine, owned by privately-owned Magris Resources. From a strategic point, the lack of significant domestic American production of this critical metal may be shortly addressed by publicly-traded Niocorp Developments Inc. (NB). Given the Trump administration’s pro-mining support (drill baby drill) it is likely substantial re-rating of NB will occur in the short to medium term.

References

[1] <https://www.statista.com/statistics/1026173/niobium-mine-production-worldwide-country/>