

DRIVING GREEN INDUSTRIALISATION FOR A LOW CARBON ECONOMY



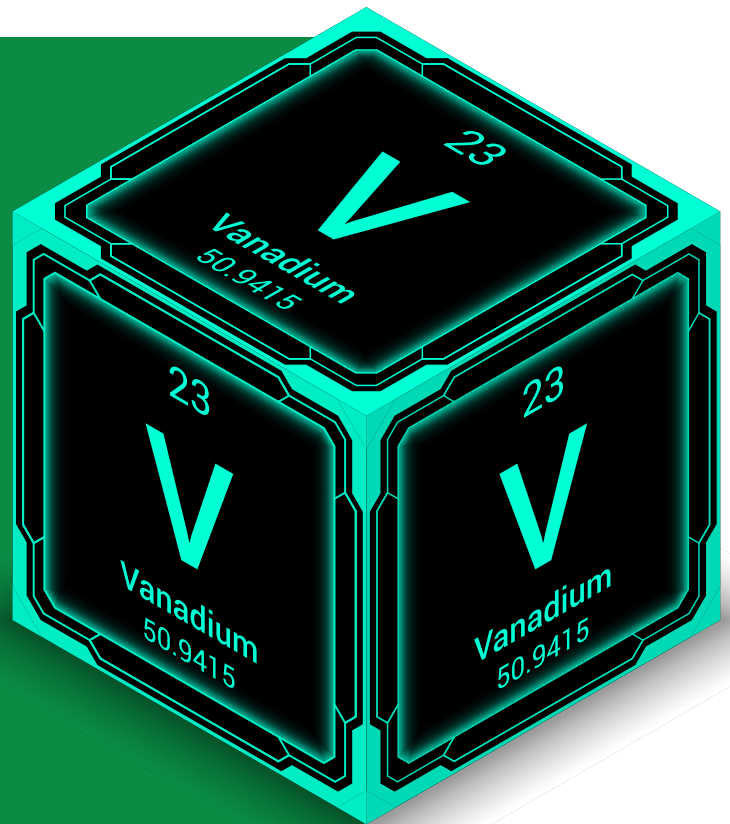
Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

VANADIUM is crucial for sustainable and resilient industrialisation – greening construction, transportation, and energy. This critical mineral helps mitigate the effects of climate change while maintaining the world's socio-economic gains and sustainable development growth trajectories. Vanadium can be used to improve resource efficiency in the construction sector and support the wider adoption of clean energy, environmentally-friendly technologies and efficient industrial processes.

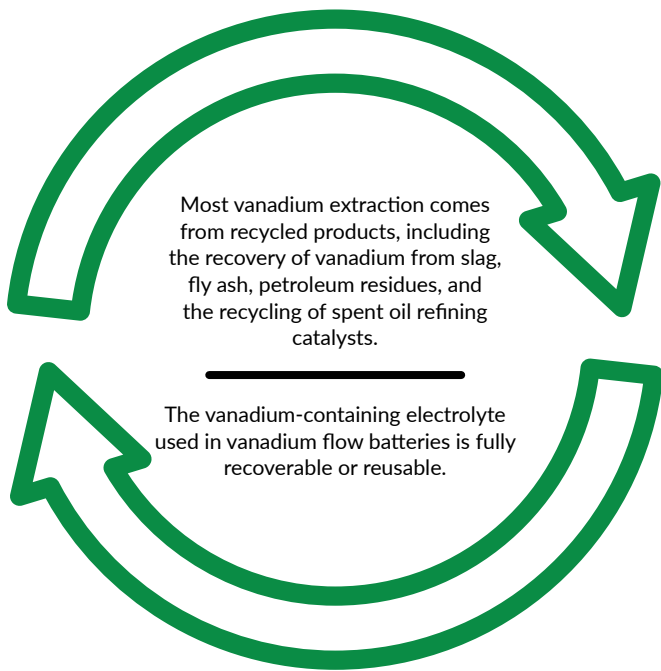
WHY THE WORLD NEEDS VANADIUM

VANADIUM AIDS IN:

- ✓ Developing low-carbon infrastructure
- ✓ Lowering carbon emissions in hard-to-abate heavy industries
- ✓ Storing renewable energy and balancing the intermittency of renewables
- ✓ Developing technologies that lower carbon emissions



VANADIUM IN THE CIRCULAR ECONOMY



VANADIUM CAN BE USED TO ACHIEVE **DEEP INDUSTRIAL DECARBONISATION** THROUGH ITS USE IN:



Construction Steel



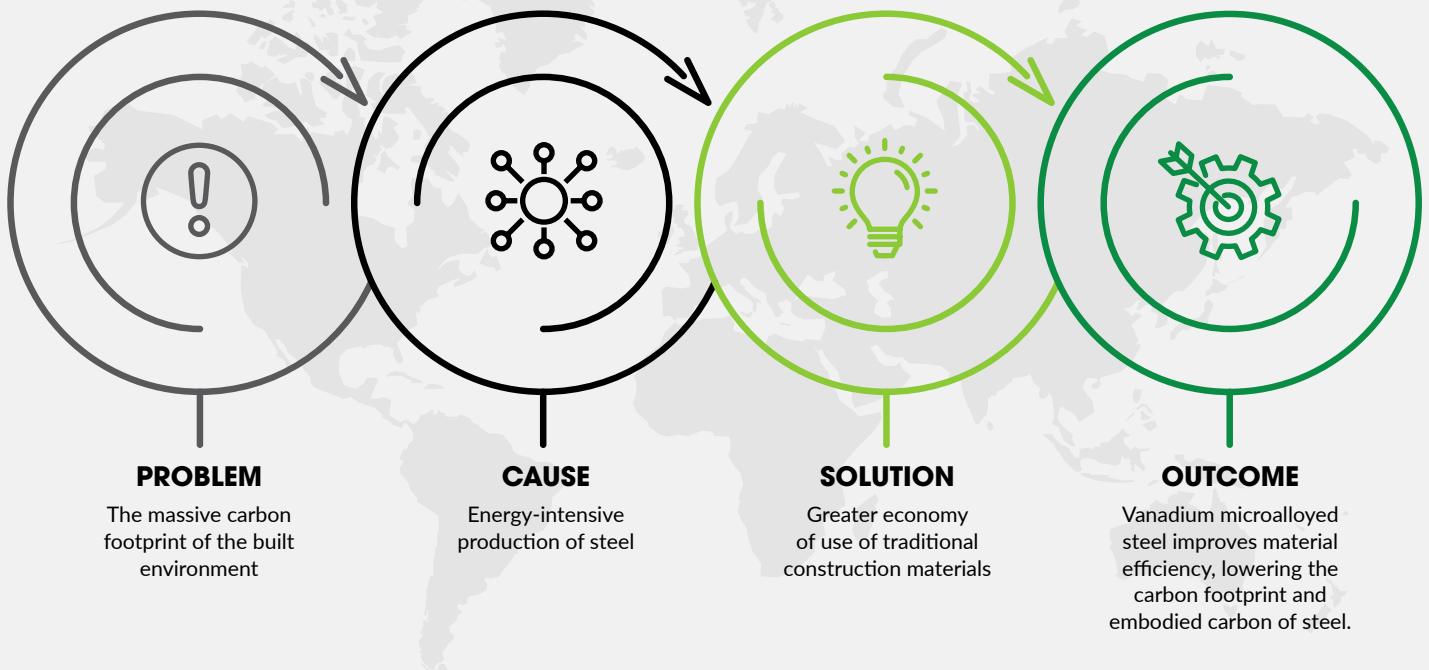
Automotive Steel



Vanadium Flow Batteries

MATERIAL EFFICIENCY

— SAVINGS IN
— CARBON EMISSIONS



THE CLEAN ENERGY IMPERATIVE

Global CO₂ emissions from energy combustion and industrial processes grew by **0.9% to 36.8 billion metric tons in 2022**.

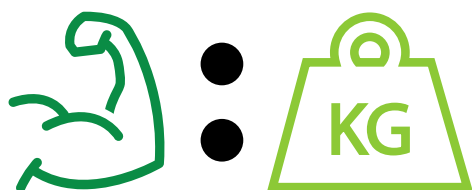
The increased deployment of clean energy technologies and reduced industrial production, **helped prevent additional emissions, resulting in lower-than-expected global emissions growth.**

APPROXIMATELY **185 MILLION METRIC TONS OF CO₂** ARE AVOIDED ANNUALLY FROM THE USE OF VANADIUM IN THE CONSTRUCTION AND ENERGY STORAGE SECTORS.

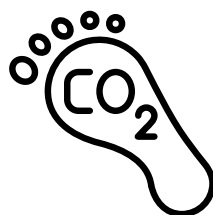


**Assessing the role of vanadium technologies in decarbonizing hard-to-abate sectors and enabling the energy transition, 2021*

SUSTAINABLE FUTURE MOBILITY WITH STEEL



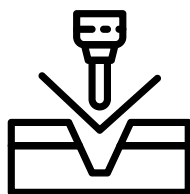
Vanadium microalloyed advanced high-strength steel used in the automotive sector offers a higher strength-to-weight ratio...



...with less of a carbon impact...



...and increased recycling than similar materials such as aluminium and carbon fiber composites.



The increased formability of this steel...



...also leads to energy savings...



...by reducing the amount heat required to mold and shape structural components.



#GREENVANADIUM

A greener today, tomorrow and forever with Vanadium



VANITEC

TRANSFORMING POSSIBILITIES

vanitec.org