



The US is in danger of losing its capability to produce titanium sponge, a key strategic material required for advanced weapons systems and the civilian commercial aerospace industry. Without a change to the current unsustainable economics afflicting this industry, the US could be left dependent on unreliable foreign sources for this critical national security material.

Our service members' lives depend on titanium components which are the building blocks of our military equipment. Titanium sponge is the critical element of titanium metal, the highest quality of which is used to make parts for aircraft structures and engines, munition systems, ground combat vehicles and ships.

- Titanium sponge, made from titanium ore, is the primary form of material utilized and without which production of titanium metal products is not possible.
- Titanium sponge is also used in a range of non-defense commercial applications including commercial aviation, power generation, and chemical processing.

The US government has identified titanium sponge as critical to national security.

- Titanium sponge was highlighted in DoD's May 2018 response to EO-13806 assessment of the Manufacturing and Defense Industrial Base and Supply Chain as a potential single point of failure.
- Due to its use in critical defense, civilian aerospace and energy industries, titanium ore was included also on the Department of Interior's List of Critical Materials compiled in response to EO-13817
- The Department of Defense supports Commerce's 232 investigation of titanium sponge imports.

TIMET (Titanium Metals Corp) is the last remaining active US producer of titanium sponge, which it makes at a single production facility originally built in the 1940s and reaching the end of its useful life.

- TIMET, a subsidiary of Precision Castparts Corp., has 1900 US employees and makes titanium sponge at a plant in Henderson, NV. It maintains other facilities in: Vallejo, CA; Morgantown, PA; Charlotte, NC; St. Louis, MO; and Toronto, OH.
- In a time of war, TIMET has domestic capacity to produce 100% of DoD's titanium sponge needs.
- Foreign competitors are located in Russia, China, Kazakhstan, Ukraine and Japan. Only the Japanese, Kazakhs, and Russians make quality product widely accepted in aerospace applications.
- Other US companies produce titanium products, but are 100% reliant on imported titanium sponge.

An investment greater than \$150 million is required to update TIMET's titanium sponge manufacturing facility and sustain domestic production, but that is not justifiable under the current economic imbalance.

- Low global capacity utilization in 2015-2017 resulted in significant import price declines.
- The investment is not economically justifiable based upon long-term prices being offered by foreign producers. Import penetration increased (43% from Japan) and import prices declined (25% from Japan) from 2013 through 2017.
- In 2017, Department of Commerce alleged dumping margins of 69.7%-95.2% for Japan and 42.2% for Kazakhstan and found evidence of unlawful subsidies from Kazakh government. At that time, TIMET was denied relief under the antidumping and countervailing duty laws because it internally consumes all of the sponge it produces in the manufacture of downstream titanium mill products that are sold in competition with titanium mill products made from foreign titanium sponge.

Without relief from low import prices, TIMET may be forced to close the last remaining domestic sponge plant. If this facility stops production, the US will become totally reliant for continued titanium sponge production on foreign sources – including those located near potential adversaries.

- Another domestic titanium sponge producer, ATI, closed their newly built \$500 million plant in Utah in late 2016 due to similar economic forces. Imports from Japan and Kazakhstan increased as a result.
- In the event of a major conflict, without TIMET production the US would be 100% reliant on titanium sponge supply from Japan and Kazakhstan, both in close proximity to Russia, China and North Korea.

TIMET has actively engaged the US government to identify ways to correct the existing economic imbalance and ensure adequate financial justification to update its manufacturing facility to maintain a domestic titanium sponge production capability.

- TIMET has met with leaders on Capitol Hill, the Defense Department, the White House, USTR and the Department of Commerce, including the Bureau of Industry and Security.
- In July 2017, TIMET filed an anti-dumping and countervailing duty petition but the International Trade Commission (ITC) terminated the case and denied TIMET relief because it internally consumes all of the sponge it produces in the manufacture of downstream titanium mill products that are sold in competition with titanium mill products made from foreign titanium sponge.

With no other viable alternative way forward, and given the obvious importance to US defense needs, at TIMET's request the Commerce Department initiated a Trade Expansion Act of 1962/Section 232 investigation of the effect of titanium sponge imports on national security.

- Commerce began its investigation on March 4th and has up to 270 days to send recommendations to the president, who then has 90 days to act on them.
- This is a text-book application of Section 232:
 - DoD identified titanium sponge as a potential single point of failure in its May 2018 response to EO-13806 assessment of the Manufacturing and Defense Industrial Base and Supply Chain.
 - Department of Interior included titanium ore on its List of Critical Materials compiled in response to EO-13817 due to its use in critical defense, civilian aerospace and energy industries.
 - TIMET operates the only facility in the US capable of manufacturing titanium sponge, without which it is not possible to make titanium components for aircraft structures and engines (rotating parts in a jet engine), munition systems, ground combat vehicles and ships.
 - Required modernization not financially justifiable due to cheap imports, unlawful foreign subsidies.
 - The current 15% tariff in place for sponge imports is not an effective deterrent due to ability of importers to draw-back considerable portion of the tariff paid.
 - In a major conflict, without TIMET production the US would be 100% reliant on titanium sponge supply from Japan and Kazakhstan, both in close proximity to Russia, China and North Korea.
- DoD supports the Commerce Department's 232 investigation of titanium sponge imports.

Restoring a balanced competitive environment in order to sustain domestic titanium sponge production is the right move for US national security.

- TIMET's 232 petition suggests a collaborative non-tariff solution with Japan to remedy the current economic imbalance in the defense and aerospace supply chain.
- A 30% increase in the average price of sponge would make an adequate correction to the current economic imbalance while having a negligible impact on the US defense and aerospace sectors.
 - Aerospace and defense sectors generate \$872 billion in revenue annually (source: AIA).
 - Titanium sponge imports in 2018 totaled \$221.8 million. A 30% price increase for titanium sponge would equate to \$67 million – an increase of 0.008%.
 - Because 3 of the 4 major global aerospace supply chain providers (TIMET, ATI & Arconic) are located in the US (exception being VSMPO in Russia), US defense & aerospace Original Equipment Manufacturers would not be disadvantaged by this approach.