

IPERIONX VALIDATES GENX™ CONTINUOUS TITANIUM PRODUCTION

- **Advancing titanium beyond batch production:** GenX™ has validated continuous HAMR™ processing, advancing beyond the batch model used in conventional Kroll titanium production. Major operating gains support the potential for lower unit costs, higher titanium throughput, and a modular capital-efficient expansion pathway
- **Verified oxygen results:** All valid product samples met the relevant oxygen benchmark: ASTM Grade 5 for angular powder and the more stringent Grade 23 specification for spherical titanium powder
- **Six times throughput volume:** Total throughput for the GenX™ furnace was six times the volume of the batch HAMR™ system, on a like-for-like run time basis
- **Lower energy intensity:** Power consumption reduced by more than 75% versus batch HAMR™ processing
- **Substantially lower measured input use:** More than 45% less magnesium and over 60% less hydrogen required per kilogram of titanium powder, relative to batch HAMR™
- **Further efficiency potential:** Operational data highlights potential for far lower capex intensity (installed capital per ton of capacity) and the potential for significantly lower labor unit costs
- **Next stage in Q4 2026:** IperionX will continue to optimize the current GenX™ furnace; integrate the continuous furnace into a full titanium powder production line; and advance technoeconomic and engineering work for the first industrial-scale GenX™ production line

IperionX Limited (NASDAQ: IPX, ASX: IPX) (IperionX) is pleased to announce that GenX™, its next-generation continuous HAMR™ titanium production platform, has been successfully validated through the first four production campaigns, completed on the commercial-scale GenX™ system at IperionX's Virginia R&D facility.

GenX™ validation opens a pathway to a step change in titanium production economics. Moving beyond the batch model used in conventional Kroll titanium production, continuous processing offers the potential for higher throughput, significantly lower unit costs, improved equipment utilization and reduced processing time.

Successful testing demonstrates low-oxygen titanium powder production

The GenX™ system processed more than 500 kg of titanium powder across four separate continuous runs totaling 41 hours, at an average rate of approximately 12 kg per hour. Product from each run was collected separately, with samples randomly selected from different locations for oxygen analysis.

Measure	Angular powder	Spherical powder
Starting oxygen	0.250% - 0.323%	0.215%
Product oxygen range	0.104% - 0.144%	0.072% - 0.084%
Average product oxygen	0.126%	0.078%
Relevant oxygen specification	Grade 5: 0.200% / Grade 23: 0.130%	
Runs and combined duration	2 runs / 18 hours	2 runs / 23 hours
Analyzed samples	7	8

Seven of the eight angular powder samples collected met the Grade 5 oxygen limit applicable to Ti-6Al-4V plate and bar under ASTM B265 and B348. Four of the eight also met the more stringent Grade 23 oxygen limit. One sample collected during an interrupted furnace run did not complete the HAMR™ cycle and was excluded from the validation assessment. IperionX anticipates that minor process refinements will enable angular powder to meet the Grade 23

Virginia

1092 Confroy Drive
South Boston, VA 24592

Tennessee

279 West Main Street
Camden, TN 38320

Utah

1782 W 2300 S
West Valley City, UT 84119

oxygen limit. All spherical titanium powder samples met the Grade 23 oxygen limit and therefore also satisfied the Grade 5 oxygen specifications.

GenX™ continuous processing – potential to materially shift the titanium cost curve

The patented HAMR™ process is IperionX’s hydrogen-enabled, low-temperature process for low-oxygen titanium powder, currently in operation on a batch basis in Virginia. GenX™ applies that process continuously, eliminating the repeated furnace heat-up, cool-down, loading and unloading time inherent in batch cycles. Measured GenX™ data has firmly established the potential to materially reduce the cost base for HAMR™ titanium production.

Operating measure	Measured GenX result	Comparison basis (batch HAMR) ¹
Magnesium consumption	>45% lower	Per kg
Hydrogen consumption	>60% lower	Per kg
Power consumption	>75% lower	Per kg
Processing time	6 times throughput	Like-for-like run time

1. Actual operating data based upon current batch HAMR operations

All comparisons are measured results against the batch HAMR™ reference; power use was measured directly on the GenX™ system. Magnesium is HAMR’s largest reagent cost, and lower use also reduces the by-product requiring downstream leaching and handling, which will be evaluated and quantified in further production campaigns.

Continuous GenX™ operation is expected to improve equipment utilization, eliminate ancillary process steps and support expansion through replicated and scaled-up production lines. Operational data highlights the potential for far lower installed capital per ton of annual capacity, and IperionX estimates significant potential labor cost savings.

Engineering the next stage

During Q4 2026, IperionX will continue to run and optimize the GenX™ furnace, integrate the current furnace into a full powder production line; and conduct technoeconomic and engineering evaluation for the first industrial-scale GenX™ production line. GenX™ remains a high capacity, low cost development platform but is not required to achieve low cost production for the existing 200 tpa production ramp or planned expansions in Virginia. Similar industrial scale furnace types in service are achieving throughputs measured in 1000s of tons per annum per unit.

GenX™ also complements continuous HSPT™ development, supporting a pathway from continuous titanium powder production to finished titanium components. U.S. Army Task Order 2, awarded on August 31, 2026 under IperionX’s US\$99 million SBIR Phase III contract, funds a continuous HSPT™ development furnace and industrial-scale continuous HSPT™ and dehydrogenation capacity in Virginia.

IperionX CEO Taso Arima said:

“Achieving continuous primary titanium production has long been the ultimate aspiration for the titanium industry. IperionX’s GenX™ process is a continuous titanium production platform that is more efficient to operate and easier to scale. These first results exceeded our expectations: more than 500 kilograms of recycled titanium powder processed across four separate runs, with every sample meeting its relevant oxygen specification.

Substantially lower magnesium, hydrogen and power consumption at steady state, together with processing throughput increasing by six times, give us a strong basis for industrial development. Our next step is the engineering and economic evaluation of the first industrial-scale GenX™ production line. We aim to establish a scalable platform for expansion that lowers production costs and brings titanium within reach of a broader range of applications.”

This announcement has been authorized for release by the CEO and Managing Director.

For further information and enquiries please contact:

info@iperionx.com
+1 980 237 8900

About IperionX

IperionX is a leading American titanium metal and critical materials company – using patented metal technologies to produce high performance titanium alloys, from titanium minerals or scrap titanium, at lower energy, cost and carbon emissions.

Our Titan critical minerals project is the largest JORC-compliant mineral resource of titanium, rare earth and zircon mineral sands in the United States.

IperionX's titanium metal and critical minerals are essential for advanced U.S. industries including space, aerospace, defense, consumer electronics, hydrogen, automotive and additive manufacturing.

Forward Looking Statements

Information included in this release constitutes forward-looking statements. Often, but not always, forward looking statements can generally be identified by the use of forward-looking words such as "may", "will", "expect", "intend", "plan", "estimate", "anticipate", "continue", and "guidance", or other similar words and may include, without limitation, statements regarding plans, strategies and objectives of management, anticipated production or construction commencement dates and expected costs or production outputs.

Forward looking statements inherently involve known and unknown risks, uncertainties and other factors that may cause the Company's actual results, performance, and achievements to differ materially from any future results, performance, or achievements. Relevant factors may include, but are not limited to, changes in commodity prices, foreign exchange fluctuations and general economic conditions, increased costs and demand for production inputs, the speculative nature of exploration and project development, including the risks of obtaining necessary licenses and permits and diminishing quantities or grades of reserves, the Company's ability to comply with the relevant contractual terms to access the technologies, commercially scale its closed-loop titanium production processes, or protect its intellectual property rights, political and social risks, changes to the regulatory framework within which the Company operates or may in the future operate, environmental conditions including extreme weather conditions, recruitment and retention of personnel, industrial relations issues and litigation.

Forward looking statements are based on the Company and its management's good faith assumptions relating to the financial, market, regulatory and other relevant environments that will exist and affect the Company's business and operations in the future. The Company does not give any assurance that the assumptions on which forward looking statements are based will prove to be correct, or that the Company's business or operations will not be affected in any material manner by these or other factors not foreseen or foreseeable by the Company or management or beyond the Company's control.

Although the Company attempts and has attempted to identify factors that would cause actual actions, events or results to differ materially from those disclosed in forward looking statements, there may be other factors that could cause actual results, performance, achievements, or events not to be as anticipated, estimated or intended, and many events are beyond the reasonable control of the Company. Accordingly, readers are cautioned not to place undue reliance on forward looking statements. Forward looking statements in these materials speak only at the date of issue. Subject to any continuing obligations under applicable law or any relevant stock exchange listing rules, in providing this information the Company does not undertake any obligation to publicly update or revise any of the forward-looking statements or to advise of any change in events, conditions or circumstances on which any such statement is based.