USC CONSULTING GROUP™

Empowering. Performance.

Specialty metals producer shortens cycle time to reduce inventory.

Client:

An industry-leading, vertically integrated, global provider of advanced metallurgical products including tantalum, a substance found in everything from smartphones to jet engines.

Challenge:

Processing tantalum from mined ore to powder or ingots takes an exceptional degree of organizational awareness and focus. Not only is tantalum refining a multifaceted process in and of itself, but as it moves along the supply chain, it often travels halfway across the world until it ends up in the customer's hands. For our client, this means a globally decentralized inventory that it had to account for and leverage against other processing sites. As a result, the cycle time from extraction to final sale could take as long as 14 months, unduly expending significant amounts of resources over the entire timeline.

Addressing this challenge involved attacking the physical environment, process and methods, and Management Operating System (MOS) weaknesses that expanded cycle time and inventories well beyond optimum performance.

Process:

The client set a goal for a 20% reduction in cycle time and inventory, and we helped to guide them through the shift in processes, and enhance the primary "rules and tools" they used to manage the business operations.

Solution 1 - On-site Visual Aids

Like any single node along a supply chain, in-plant processing requires proactive management to ensure production schedules are met on time and at volume. However, tantalum processing in particular demands an even more granular attention to detail. Resources had to be closely monitored throughout the processing stages on-site and finished products had to be moved punctually to limit backlog.

To assist supervisors, operators, and other staff members, we recommended adding visualization tools and other Lean approaches including daily management practices for addressing inefficiencies that crop up along the way.

First, daily meetings with key operations personnel allowed the company to target troublesome areas headlong without letting them fall to the wayside and produce waste.

With everyone on the team involved, the company could view problems from all angles and troubleshoot from many different perspectives.

Next, Performance Boards were installed throughout the facility that tracked progress through visualization of flow versus optimum. Workers were able to see exactly what the day's tasks entailed, what processes were the most crucial and how many team members would need to be made available at different times of the day. Moreover, they could track the metrics for jobs as they were done in real time, comparing work in progress against ultimate objectives. Finally, at the end of every workday, they recorded all pertinent information regarding the day's processes and emailed the data to the entire staff. Knowing exactly where they left off helped them plan more effectively for upcoming shifts.

Solution 2 - Enterprise Operating Profile

Our client had more than 25 different pockets of inventory spread across three continents, thus the need for better organization of its segmented inventory.

Since they needed to scale down operations to accelerate cycle times and utilize resources efficiently, devising a strategy for collaborating with each of these processing plants through a single unified communication network became integral to the plan.

Because its inventory was so dispersed, they needed to reduce it evenly across all of its different international production channels. We helped them to develop an Enterprise Operating Profile (EOP), which helped break down each operational node and how the 20% reduction goal would impact each component of production. They also needed to share this new game plan with the rest of the company's partners all over the world, so we helped them to integrate the EOP with their Enterprise Resource Planning management software so regimented objectives could be translated between the two systems.

Syncing up both tools to operate toward a single, unified goal, enhanced visibility of the entire process, allowing decision-makers to chart out operations clearly and fully understand where hang-ups occurred and why.

Performance Results:

- 45,000 lb. reduction in inventory within the first five months.
- Projected to reach 20% goal at all locations within the first year.

Conclusion:

The changes that we made will allow the company to shorten its cycle turnaround times, save resources all over the globe, and understand their niche market's demand with greater aptitude.