ADVANCED PRESSURE TECHNOLOGY

Manufacturing Status Update 19

May 24, 2023

Note: This is update #19 which reports our recent capacity expansion activities, capacity constraints and updated lead times. If you have been following these updates over the past two years, please excuse the reiteration of many points. The update needs to be written to include information for those reading it for the very first time.

Multiple updates have been issued since March of 2020 regarding first COVID and then AP Tech's supply challenges.

Our incoming order booking rate is now less than sales (shipments) and the trend is expected to last at least six months. However, due to the large order backlog, our lead times will remain very high, at 52-56 weeks, as we reduce late shipments.

The supply chain is finally, slowly recovering but shortages still remain. Many raw materials through finished goods used in our products are still in short supply. We are still experiencing late shipments from our suppliers which result in product shipments later than promise dates.

AP Tech continues to operate two 10 hour shifts during the work week, in addition to a single shift on Saturday. We continue to add more clean room space and production staff. The completion of our first clean room expansion was reported at full capacity in update #16. Our second clean room expansion is nearly complete and will be operational very soon. From April 2021 our total capacity has increased by 150% and we expect our capacity will increase to 200% by the end of 2023. We will be adding another 60 employees in Q2 and Q3 of this year to support our new clean room.

As reported in status #17, with the above increases in personnel and clean room capacity, parts remain a bottleneck. AP Tech is still dealing with a wide variety, and an ever changing, list of shortages. Late deliveries range from raw material shortages (such as bar stock), to machined parts, to commodity items like shipping materials. In addition to shortages, material costs have also risen sharply during this period.

Regarding a noteworthy specific shortage, AP Tech has previously alerted our customers to an industry wide shortage of PCTFE. PCTFE is the standard seat material for AP Tech valves and regulators. AP Tech and other suppliers have a single source of the raw material supply. That source started allocating material to customers such as AP Tech and other industry suppliers. We have initiated several actions to address the shortage. As a result of our actions, we have enough PCTFE to meet our demand through calendar 2023, and we have active containment and corrective actions to increase supply. However, PCTFE is still a supply risk that we must monitor closely.

Russia and Ukraine are a source of key elements, such as nickel, to make base materials and stainless steel used to build our products. Although the Russia and Ukraine conflict is now in its second year, the impact

on material availability is limited so far. We are doing our best to mitigate potential shortages by securing more raw material.

Lead times are currently being quoted at 52-56 weeks for standard products. A blog is posted to explain what is meant by 'standard.' Larger volume orders and non-standard products (anything not defined by the catalog) will be quoted upon request. These lead times are subject to change at any time and are only guidelines which can vary for a variety of reasons. A confirmation copy of the order is sent after the order has been processed which states the actual delivery commitment that may differ from the date requested on the purchase order.

The unwelcome news on delivery is compounded by the fact that we are unable to expedite orders or commit to deliveries shorter than our standard lead times today. Manufacturing time has been, and is being, fully allocated for orders without a buffer (time reserved) to enable shorter deliveries. When asked for our best delivery, that is what is quoted, the first time that it is asked. Many ask us to try again for a better delivery but, unfortunately, we are unable to comply with such requests. The even worse news is that most orders are shipping later than commitment dates. Despite our best efforts to provide accurate lead times, unforeseen challenges are causing orders to ship late. Material shortages, manufacturing bottlenecks and past overbooking of capacity are causing increasingly late shipments. We are now shipping an average of 12 weeks later than the commitment date.

SMC, our parent company, is working closely with us on many fronts, including parts supply. As reported in update #18, we are pleased to announce our BCP[1] manufacturing facility at the SMC USA headquarters in Noblesville, IN is now manufacturing a limited number of AP Tech parts. The BCP factory's capacity and range of products will continue to expand throughout 2023 with the addition of UHP (ultra-high purity) parts in Q4 2023. The new Noblesville BCP cleanroom is very near completion, and we expect to ship first products to stock in December of 2023. Machine tools are being added in SMC Vietnam to provide more parts.

We have expanded our qualified suppliers and single source suppliers are now minimized. These steps are adding significantly to our capacity. Unfortunately, everything takes time to implement. We expect our late deliveries will increase by several weeks through this year before they begin to moderate. Based on current forecasts, we expect to achieve on time delivery in Q4 of 2024 and be able to provide 6 month lead times on standard products. Management of AP Tech and SMC appreciate the urgency of this product delivery crisis and are moving as quickly as possible to increase production.

Unfortunately, we are still confronted with a very unpredictable situation. This update provides our current status which is subject to change. More detailed monthly updates are available from AP Tech by request.

We continue to appreciate everyone's patience, cooperation and understanding throughout this prolonged, multi-crisis situation. We hope that everyone is staying safe and healthy.

[1]BCP is an acronym for Business Continuity Planning which concerns planning to maintain product supply when facing adversities such as natural disasters or a pandemic such as COVID. Separating manufacturing sites by geographic location rather than having all in one area is a BCP fundamental.