ENGINEERING IN TOTAL ALIGNMENT

How we helped a global medical technology manufacturer get their teams to work as one
THE CLIENT

A leading organization in the manufacture and maintenance of electromechanical equipment for healthcare providers—including ICU ventilators, anesthesia equipment, and respiratory equipment—approached ASME L&D to help them realign their engineering teams.

Recurring inconsistencies between their central research & development plant in the US and their partner R&D organizations in India and China were causing parts to arrive that were out of spec. This would be cause for concern in any industry, but within the healthcare sector, the consequences of imprecise mechanical engineering can be life-threatening.

A vendor supplying a part that has been designed and manufactured in China has to be certain that it will be 100% consistent with the corresponding part made in the US. But the way engineers train, and where they work, means there can be many different approaches to and interpretations of a design, creating inconsistencies that are extremely hard to reconcile. This creates confusion that results in tolerance stack-ups not working, parts not fitting, production drifting, and customers complaining.

Fundamentally, no one is doing their job wrong, but everyone is doing it slightly differently to each other all the way through the process. This was our client’s problem, and it was starting to cause significant levels of concern and inevitable finger-pointing. To get everyone confidently back on track, they needed us to get all their people on the same page.

“WE TALKED WITH ALL OUR SITES TO HELP THEM UNDERSTAND THEY EACH HAD THEIR 20% OF DRIFT, RATHER THAN ‘ALL THOSE PEOPLE AREN’T DOING IT LIKE ME’.”

Mechanical Engineering Manager
THE COURSE

Our Geometric Dimensioning & Tolerancing (GD&T) combo course delivers the foundational design language engineers need. It ensures consistency throughout the design, manufacture, and inspection process so everyone knows what they’re delivering and the client can be certain of what they’re getting.

In addition to the educational objectives of this course, we had two additional asks from the client to accommodate for. They didn’t want their teams in the US, India and China to train in isolation, as this could lead to more inconsistent approaches. They also required a swift, comprehensive training solution that would have as little impact on their production schedules as possible.

We devised a course that ran four days a week for two weeks, and worked closely with the client to schedule the best time of day to allow for their entire global team to participate and train together simultaneously.

By running the course online, we were able to deliver a consistent learning experience to a class of 20+ engineering professionals—including band engineers, architects, and principal engineers—around the world in real time. This also allowed them to ask and hear each other’s questions, and all benefit from the guidance that was shared.

The content of the course was a mix of straightforward ‘chalk talk’ lectures alongside collaborative exercises that made use of the client’s own design drawings as our working examples. This allowed us to put the theory on its feet in an immediate and meaningful way for these engineers, giving them tangible real-world demonstrations of how to put GD&T to work.

"ASME L&D SHOWED TREMENDOUS FLEXIBILITY TO MAKE IT WORK FOR OUR ORGANIZATION AND HELP US ESTABLISH A GLOBAL BASELINE. WITHOUT THAT, WE WOULDN’T HAVE ACHIEVED OUR GOAL."

Mechanical Engineering Manager
THE OUTCOME

After the course, we received feedback that we had successfully established a shared design language and the client is extremely satisfied with the consistency they now see between their three R&D plants. Their drawing review processes are now far more effective in helping them to maintain the high standards that the healthcare sector demands.

We knew from the outset there would be very few engineers on this course who were seeing GD&T for the first time. Our task, therefore, was not to try and introduce any of the material as new, but to cover the subject so comprehensively we would eliminate the blind spots people didn’t know they had, and bring everyone to the same shared level of understanding. This ‘reskilling’ component of the course also meant we had to make sure the content was highly engaging throughout.

The client told us there were two standout elements of their experience with ASME L&D. Firstly, they were impressed by the high level of expertise our instructors brought to the course, and secondly, they valued our flexibility in creating a training schedule that was fully inclusive of their global needs.

We know our client didn’t contact us because we were the first option they found online. Instead, their thorough research showed them that different interpretations of standards exist even among training providers—so they had to choose wisely. They recognized that no other training organization follows and applies mechanical engineering codes more rigorously than ASME. That’s why our Learning & Development services were the best choice to help them recenter their teams and regain control of their global output.

“THE TRAINING ABSOLUTELY MET OUR OBJECTIVES.”
Mechanical Engineering Manager
If you’d like to know what ASME L&D can do to level up your organization’s engineering teams, or if you have a specific course you’d like to talk to us about, get in touch:

LearningSolutions@asme.org