

GEOMETRIC DIMENSIONING AND TOLERANCING TRAINING GIVES MUSHIELD COMPANY A COMPETITIVE EDGE

ABOUT MUSHIELD COMPANY. David Grilli and Bob Joy ran the magnetic shielding division for the Gloucester, Massachusetts company BOMCO. Then in 1989 they purchased BOMCO's magnetic shielding division and formed MuShield Company. MuShield moved to Goffstown, New Hampshire and eventually they turned the 5 person business into a successful 20-plus person magnetic shielding solutions and precision metal forming shop.

MuShield saw incredible growth and outgrew their Goffstown facility. So in 2004, MuShield purchased a 19,000 square foot building in Londonderry, New Hampshire. This enabled MuShield to invest in larger machines. Then in 2019 they added 12,000 square feet and purchased a new furnace. MuShield now has 40 employees.

MuShield was the first in the magnetic shielding industry to be ISO 9001 certified. Not only are they ISO 9001:2015 certified but also AS9100D certified as well as ITAR registered. The primary markets they serve are commercial, aerospace, defense, medical and scientific communities.

THE CHALLENGE. "We were looking to increase our business," said Ed Nordengren, Operation Manager for MuShield. "That led to us getting more inquiries from the aerospace and defense industries." Those inquiries meant MuShield was being sent more complex, detailed drawings where Geometric Dimensioning and Tolerancing (GD&T), a system for defining and communicating engineering tolerances, was used. GD&T, is a symbolic language used on engineering drawings and models to define the allowable deviation of feature geometry. Adding GD&T training for MuShield staff and increasing this capability would allow MuShield the opportunity to garner more work in the aerospace and defense industries.

MEP CENTER'S ROLE. Fred Wachter, MuShield's Quality Manager, was very familiar with NH MEP, part of the MEP National Network™, and the kinds of training the Center provides manufacturers in New Hampshire. MuShield leadership reached out to NH MEP, who developed a two-day in-house GD&T training program for six of MuShield's employees. The training program was based on ASME Y14.5-2009 contrasting ASME Y14.5M-1994. It included an introduction to geometric dimensioning and tolerancing, and how to inspect to GD&T requirements. First staff learned the many core principles of GD&T and then moved onto the advanced concepts. "This gave our employees a comprehensive understanding of GD&T and how to apply it to their work," said Nordengren.

"The convenience of the in house training offered by NH MEP allowed us to train more people at one time, kept our people available to the shop at a moment's notice and was very cost effective. The training itself helped us to gain a higher level of understanding of the design intent of each drawing as defined by the GD&T call outs. This allows us to not only have better dialogue with our customers during the engineering review stages of the job but also gives us the ability to offer the most efficient manufacturing and measuring processes possible."

-Ed Nordengren, Operations Manager

RESULTS



\$2,500,000 in increased or retained sales



\$2,500,000 in new investment



\$850,000 in new products



\$40,000 in cost savings



4 created or retained jobs

CONTACT US



172 Pembroke Road
Concord, NH 03301



(603)226-3200



www.nhmemp.org

