



April 9, 2015

Senator Chris Coons
127A Russell Senate Office Building
Washington, DC 20510

Senator Lindsey Graham
290 Russell Senate Office Building
Washington, DC 20515

Dear Senator Coons and Senator Graham,

We wanted to take this opportunity to express our support for S. 771, the Manufacturing Universities Act of 2015.

If America is to remain a global economic leader, we must continue to invest in the scientific and engineering enterprise that generates new technologies, industries and jobs. However, since 2005, the National Academy of Science has demonstrated through a series of its 'Rising Above the Gathering Storm' reports that the United States is falling behind in critical measures of technology, education, innovation, and highly skilled workforce development. Exacerbating an already troubling statistic, the decline in U.S. employment in manufacturing has accelerated over the last decade, as manufacturers moved overseas and shed millions of jobs since 2000. These jobs represent the entire range of manufacturing activities, from simple assembly to highly complex advanced manufacturing. In fact, the net U.S. trade deficit in Advanced Technology Products (ATP) increased by almost \$50 billion from 2009 to 2011 alone to \$100 billion. This deficit followed a positive trade balance in ATP prior to 2002.

These declines are particularly troubling for America's long-term economic prosperity. The jobs produced by manufacturing activities are generally high-paid, and represent an entry point into the middle class for a significant portion of the workforce. Additionally, the manufacturing jobs of the future are likely to involve advanced technology products.

America's manufacturing sector holds significant promise for expansion and job creation. U.S. manufacturers produce over 20 percent of all global manufacturing products, account for 12 percent of U.S. GDP and employ about 11 percent of the private sector workforce. The impact of manufacturing extends to other sectors of the economy, with manufacturers contributing more on a dollar for dollar basis than any other sector of the economy, thanks to the multiplier effect of manufacturing on the shipping, power, financial, and a host of other highly skilled service sector industries. Estimates are that for every \$1 in manufacturing value added, \$1.48 in additional value is created in other sectors.

ASME has long advocated for the need to improve the educational system to better prepare engineering students with the skills for the future workforce. ASME's Vision 2030 project offered recommendations along these lines such as:

- Offer more authentic practice-based engineering experiences;
- Develop students' professional skills to a higher standard;
- Create a curriculum that inspires innovation and creativity; and
- Create curricular flexibility and efficiency with core requirements and specialization options.

Many of these recommendations can be found in the Manufacturing Universities Act of 2014. This legislation would authorize the National Institute of Standards and Technology to establish a program to designate up to 25 institutions of higher education as U.S. manufacturing universities. These schools would receive funds in order to revamp engineering programs to focus on manufacturing engineering and curricula specifically related to targeted industries. Designated schools would be able to create programs to better focus their engineering programs on manufacturing, building new partnerships with manufacturing firms, growing training opportunities, and fostering manufacturing entrepreneurship.

ASME applauds the goals of this legislation. Please let us know what we can do to help continue to move this initiative forward.

Sincerely,

A handwritten signature in black ink, appearing to read "William J. Wepfer". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

William J. Wepfer, Ph.D.
Senior Vice President