

Testimony of Dr. Jack W. Shilling
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before the
U.S.-China Commission
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Members of the U.S.-China Commission:

I am Jack W. Shilling, Chairman of SSINA, the Specialty Steel Industry of North America and Executive Vice President, Corporate Development and Chief Technical Officer, of Allegheny Technologies Incorporated.

Thank you for inviting me to appear before you today on behalf of the Specialty Steel Industry of North America, a trade group comprised of sixteen companies engaged in the manufacture and distribution of specialty metals. The “specialty” nature of these materials refers to their unique chemistry and high tech processing requirements. These materials include stainless steels, superalloys and other nickel alloys, titanium and titanium alloys, zirconium, and niobium alloys among others. The focus of our businesses is not conventional “steel”.

Use of our products is important to a wide variety of industrial markets. Furthermore, our products are crucial to national defense.

Specialty metals are vitally important to virtually every U.S. military platform. Simply put, weapons systems can neither be built nor operated without these materials. Whether it is missiles, jet aircraft, submarines, helicopters, Humvees or munitions, American-made specialty metals are crucial components of U.S. military strength, whether we are at peace or at war.

These specialty metal products are very high tech in nature and are in a continuing state of technology development. They are not “off the shelf items.” It is their superior performance, often under severe operating conditions, that enable U.S. defense systems to function at high levels of performance and to do so reliably.

Because of the critical nature and advanced technology in these materials, and because so many of them have been invented and developed by the domestic specialty metals industry, many of these materials are proprietary and “sole-sourced,” meaning that they are supplied by only one manufacturer in the world, and those manufacturers are in the United States. In other cases, alternate sources of supply exist in foreign countries where dependable suppliers may come and go based on how their governments react to the n-current U.S. military policies.

U.S. military capabilities are directly dependent upon the availability of crucial specialty metals. Without them, the U.S. military would not have the ability to fight a war. Without them, the U.S. military and homeland security forces would be unable to defend our borders and protect our citizens from terrorism.

Attached to my testimony is a paper we originally issued July, 2004 and updated in February of this year. This paper describes our view of the importance of the U.S. specialty metals industry to the national defense, the challenges facing this industry and the U.S. industrial economy, and suggests public policies to support the long-term survival of the industry.

We are preparing a report describing the materials we supply for national defense requirements. In summary, our report will state the following:

- Members of SSINA produce leading edge and high technology specialty metals critical to the national defense and are world class from both a performance and cost standpoint.
- Leading edge defense applications represent less than 10% of overall sales of these specialty metals companies, yet these defense-related products are processed over the same equipment and developed by the same engineers that support other

businesses of these companies. The overall financial health of SSINA member companies is of utmost importance to the defense related industrial base of the country. The profits from these other business segments of the specialty metals companies support and sustain the manufacture and development of specialty metal products for critical U.S. defense applications.

- The United States could lose its specialty metals industry, over time, if the industry decreases domestic investment in manufacturing capability and technology and instead chooses to move these activities offshore to improve the profitability of its core businesses, facilitated by disincentives to invest here vs. overseas. Although our industry may be profitable currently and is acknowledged to be the global leader in technology and low cost manufacturing in many areas, the playing field is becoming increasingly tilted in favor of moving production and technology offshore. The negative implications for U.S. national defense are obvious.
- In order to help assure the long term survival of our industry, actions must be taken to encourage ongoing investment in U.S. specialty metals manufacturing and in the development of technology consistent with a non-protectionist, fair trade, level playing field agenda. These actions must address the following issues: enforcement and strengthening of U.S. trade laws; support of the Berry amendment, specialty metals provision; currently non-competitive energy, regulatory, tax, and post retirement benefit costs; and education.
- The Defense Industrial Base Capabilities studies produced by DOD fail to examine much of the U.S. industrial base.
- The reports submitted by the Department of Defense to Congress do not comply with the statutory requirement that DOD provide Congress with an annual report on the U.S. “industrial base” and its capability to support national defense requirements, particularly with regard to the role of specialty metals.

China’s Threat

Turning now to China, the Commission has posed three questions. Let me attempt to address each one in the time remaining.

Has the industry’s relationship with DOD changed? Quite simply, it has changed dramatically in two primary ways:

First of all, the DOD, particularly the Industrial Policy and Acquisition Directorates, no longer seem to evaluate, understand and appreciate the critical role that specialty metals play in national defense. Many of the reports issued by DOD on the Defense Industrial Base fail to even mention the specialty metals sector, let alone reflect an understanding of its importance.

Secondly, previous understanding and appreciation of this issue has been replaced by what appears to be a short sighted, non-strategic search for lower costs, often obtained by sourcing more commodity oriented specialty metal products from foreign sources.

This has been reflected in lax enforcement or blanket waivers of the Specialty Metals provision of the Berry Amendment, which mandates the use of U.S.-melted specialty metals in defense procurement, particularly weapons systems and aerospace. Congress has highlighted this issue repeatedly over the past two years.

Over the last decade, the member companies of SSINA conduct significant R&D in support of their non-defense business, for example, commercial aerospace. This has had a beneficial effect on defense capability. But the ongoing ability to conduct such R&D, as mentioned earlier, is dependent on the financial health of the core businesses of the companies.

Some DOD sponsored R&D has been conducted as well, but it is our impression that funding for these activities has been and continues to be under significant budgetary pressure, exhibiting a lack of appreciation of the importance of our industry to national defense.

While this disregard for the importance and health of the specialty metals industry may not yet have materially damaged our industry's R&D to date, the handwriting is on the wall. As noted above, if the DOD does not stand up and support the specialty metals industry as being critical to national defense, and if the U.S. government does not create a climate that encourages investment in our industry, there is a very good chance that, over time, this industry could move

offshore, both from a manufacturing as well as R&D standpoint. That time is drawing nearer. Remember, defense applications account for less than 10% of revenues in these companies, thus the overall health of this industry is of critical importance to national defense. Our industry only seeks a level playing field on which to compete. It does not need protection. However, the field is not level currently, and to make matters worse, instead of standing up and supporting our industry, some representative of the DOD openly suggest that our industry is not important to the country's defense capabilities. Over the last 10 years, we have witnessed a frightening trend that could result in the gradual dissolution of the domestic specialty metals defense capability.

How has U.S.-China trade changed the specialty metals portion of the industrial base? So far, not much, thankfully.

China is currently incapable of making most if not all specialty metals required for leading edge defense applications. However, China is aggressively seeking western technology and offering up access to its market in return for technology. Many U.S. companies appear to be willing to accommodate the Chinese. These companies are not in the field of leading edge specialty metals fortunately, but that could change in the future. China's approach is a systematic, highly coordinated, strategic initiative in my opinion, which left unchallenged will eventually result in the transfer of significant technology and manufacturing capability to China. China's infrastructure in this area is being completely rebuilt with state of the art equipment, which will result in an increase in its global position in the specialty metals sector. However, to date, critical manufacturing process technology that would be necessary for most important defense applications has not been transferred to the Chinese to the best of my knowledge. On the other hand, in the commodity stainless steel arena, a combination of foreign investment, significant transfer of western process technology, and government subsidization have resulted in

a dramatic growth in capability. In a period of less than three years, China has become a major exporter of stainless steel flat-rolled products – a core commodity product at my company, ATI. China is now the number two offshore source of stainless flat-rolled products in the U.S. market, having increased its exports to the U.S. by over 500% over the past year.

It is clear that current DOD procurement policies may actually accelerate and encourage this process. In fact, the current foreign direct investment policies of western companies in areas other than specialty metals are facilitating the transfer of technology and manufacturing to China. If and when this happens in specialty metals, it will result in the gradual loss of U.S. defense capability, and we will have facilitated our own demise. Apart from trade-related issues, China's growth, per se, has clearly fueled the unparalleled run-up in prices of all raw materials, which has resulted in significant increases in the price of many specialty metals that use these raw materials.

How can these trends be reversed and problems averted? Dramatic, comprehensive and swift action is required in two areas:

1. First, the U.S. needs to create an industrial policy that encourages investment in U.S. manufacturing, particularly as it relates to specialty metals. Specific issues were mentioned previously and are detailed in our reports.
2. Secondly, the DOD must be held accountable to accurately report on the critical importance of specialty metals to national defense and purchase their requirements from U.S. manufacturers.

How have China's investment and acquisition strategies in specialty metals affected U.S. defense capability? Fortunately, not much to date, but again the handwriting is on the wall.

There is no doubt the Chinese government is aggressively pursuing this capability, but so far, they have been unsuccessful. There are numerous examples of such attempts that have been chronicled in the newspapers including efforts to lock up critical raw materials such as nickel

either through outright acquisition (Noranda/Falconbridge) or supply agreements (INCO) or acquire critical nuclear reactor technologies, including zirconium-related technologies by trading access to their markets for such technologies.

I have experienced some of these attempts first hand. ATI's technological expertise in the area of specialty metals is world renowned. In addition, ATI operates a joint venture in China focussed on the manufacture of precision rolled stainless steel strip for commercial applications, primarily in the electronics industry. As a result of these two factors, ATI has been approached on numerous occasions by a number of Chinese state owned enterprises asking us to partner with them in these high tech specialty materials. In all cases, the concept was access to the Chinese market in return for access to ATI critical proprietary technology.

In this context, it is important to understand that there is not a sharp line that separates critical defense related technologies from important processing technology related to the manufacture of these same specialty metals for non-defense applications. It has taken our industry decades to develop the basic processes required to make high quality specialty metals for demanding non-defense related applications, e.g. commercial aerospace. Therefore, there are numerous, basic technologies that while being U.S. export-compliant, are nonetheless critical to development of leading edge defense applications. Transferring basic technologies to China would greatly facilitate Chinese mastery of more leading edge technologies.

It is very important to understand that technology development travels with the manufacturing process. Our plants in the specialty metals industry are our laboratories. It is thus naïve to think that manufacturing of these materials could be transferred to China while technology development is kept here in the U.S.

Thank you for the opportunity to address the Commission. I will be happy to answer any questions you may have.