ysis and high degree of cleanliness required. Specialty steel producers are the only companies with the equipment and metallurgical experience necessary to

this production.

This same engine may also contain torque rings or turbine or compressor discs made of high-temperature high-strength materials such as Waspalloy and moly ascoloy by small specialty companies which produce no carbon steel. Injury to their business cannot be offset by additional production in standard grades. This engine powers an aircraft containing structural members, linkage systems, gears, and actuating devices made of hot work tool steel of high cleanliness, strength, ductility and reliability. Its generator needs Vanadium permendur, a 49 percent cobalt, 2 percent vanadium alloy which requires close attention and skill in production because of extreme brittleness during its semifinished stages.

The airplane may carry reconnaissance photographic equipment having stainless steel parts. Its missile guidance systems contain servo-synchro motor transmitters made by a specialty steel company. Its radar system needs a klystron microwave tube with a vacuum envelope of iron so pure that it must be refined in a consumable electrode vacuum melt furnace at a specialty steel facility.

Meanwhile the infantryman in the Vietnam jungle carries an M-16 rifle with a stainless steel bolt. The rifle shoots bullets drawn from a special alloy-clad metal produced by a specialty steel maker. The soldier may be saved a dangerous wound by a stainless steel innersole in his combat boots. If injured he will be evacuated by a helicopter with a rotor shaft made of tool steel to a hospital where he will be sewed up by a needle of stainless steel wire.

From the antispike innersole to the delicate missile guidance system, our modern arsenal depends on tool and stainless steel to perform a myriad of special functions under extreme conditions.

## IV. THE NEED FOR RELIEF OF THE SPECIALTY STEEL INDUSTRY

The ability of the specialty steel industry to continue the basic research and development which makes these products possible is now being hampered by the continuous rise in imports. This research and development activity is financed by the profits earned on routine sales of staple specialty steel products. These activities are carried on with the expectation that new products mean new growth and new methods mean new economies. As imports cut away the growth potential of the United States market, our enthusiasm for continued expansion of this vital research and development function is also eroded.

As part of the domestic steel industry, the tool and stainless steel producers ask this Committee to hear and heed the expressions of the American Iron and Steel Institute. As makers of distinct and specialized products, however, we

urge you to have in mind our separate identity within the industry.

## APPENDIX

Allegheny Ludlum Steel Corporation, 2000 Oliver Building, Pittsburgh, Pennsylvania 15222.

Armco Steel Corporation, Armco Division, Middletown, Ohio 45042.

Bethlehem Steel Corporation, Bethlehem, Pennsylvania 18016.

Braeburn Alloy Steel Division, Continental Copper & Steel Industries, Inc., Braeburn, Pennsylvania 15016.

The Carpenter Steel Company, Post Office Box 662, Reading, Pennsylvania 19601.

Crucible Steel Company, Four Gateway Center, Pittsburgh, Pennsylvania 15230.

Eastern Stainless Steel Corporation, Post Office Box 1975, Baltimore, Maryland 21203.

Jessop Steel Company, Washington, Pennsylvania 15301.

Jones & Laughlin Steel Corporation, Three Gateway Center, Pittsburgh, Pennsylvania 15230.

Joslyn Stainless Steels, 155 North Wacker Drive, Chicago, Illinois 60606.

Latrobe Steel Company, Latrobe, Pennsylvania 15650.

McLouth Steel Corporation, 300 S. Livernois Avenue, Detroit, Michigan 48217. Republic Steel Corporation, Massillon, Ohio.

Simonds Steel Division, Wallace-Murray Corporation, Ohio Street, Lockport, New York 14094.

The Universal-Cyclops Specialty Steel Division, Cyclops Building, 650 Washington Road, Pittsburgh, Pennsylvania 15228.