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NATIONAL SECURITY AND
INTERNATIONAL AFFAIRS DIVISION

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RELEASED

AUGUST 30, 1983



LM122470

The Honorable John Murtha, Chairman
Congressional Steel Caucus
House of Representatives

Subject: Defense Department Waivers of Domestic
Specialty Metals Preference and Other
Requested Information (GAO/NSIAD-83-37)

Dear Mr. Chairman:

This report responds to Chairman Gaydos' May 13, 1982, letter as modified by subsequent discussions with your office. It provides information on Defense Department (1) waivers of domestic procurement restrictions for purchases of specialty metals, (2) procurements restricted to domestic and Canadian sources for reasons of national security or industrial mobilization, and (3) projected steel requirements for fiscal year 1983. Your office also asked us to review information supplied by the Corps of Engineers on its foreign source awards for steel and steel-related products. This report addresses both requests and will conclude our series of responses to Chairman Gaydos' request.

DEFENSE WAIVERS OF SPECIALTY
METALS PROVISION

The 1973 Department of Defense Appropriation Act contained the first prohibitions on Defense purchases of foreign specialty metals. (See p. 4 for definition of specialty metals.) Section 724 of the Act directed Defense to satisfy its specialty metals requirements from stocks produced in the United States. The military departments, however, were permitted to waive the provision under certain circumstances, most notably when U.S. produced specialty metals were not available when needed.

The specialty metals provision remained essentially intact until small purchases of specialty metals (amounts not exceeding \$10,000) were excluded from coverage in the 1977 Department of Defense Appropriation Act.

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The Congress added two additional exclusions in late 1977. Section 823 of the 1978 Department of Defense Appropriation Act authorized the procurement of foreign specialty metals when deemed necessary to (1) comply with defense offset agreements with foreign governments or (2) further the standardization and interoperability of NATO equipment requirements. The change, in effect, removed much of the protection afforded the U.S. specialty metals industry. It gave Defense the flexibility of purchasing specialty metals from more than 10 countries, most of which belong to NATO. Some of these countries are also major producers of specialty metals.

The NATO and offset agreements exclusions remained a part of appropriation legislation until they were dropped in the 1982 Act (December 29, 1981). The change essentially prohibited Defense from purchasing foreign specialty metals with fiscal year 1982 funds unless the Secretary of a military department determined that a satisfactory quality and sufficient quantity of U.S.-produced specialty metals was not available. On August 18, 1982, the Congress amended the 1982 Act to reinstate the NATO and offset agreements exclusions.

For fiscal year 1983, Defense is operating under a continuing resolution which permits procurement of foreign specialty metals used in the production or manufacture of weapons or weapons systems made outside the United States, if such procurement is necessary to comply with agreements with foreign governments.

On July 5, 1983, the President provided 4 years of relief to the domestic specialty steel industry in the form of increased tariffs on imports of flat-rolled products and global quotas on stainless steel rod, bar, and alloy steels. This action was taken in response to a domestic specialty steel industry complaint and an investigation by the International Trade Commission, pursuant to Section 201 of the Trade Act of 1974, which determined that certain stainless and alloy tool steel imports are injuring U.S. producers.

The President's action is expected to have very little effect on Defense purchases of foreign specialty metals because the vast majority of specialty metal imported by Defense or its contractors is contained in manufactured products which are not covered in the relief determination.

Appropriation Act restrictions on purchases of specialty metals have been incorporated in Defense Acquisition Regulations.

These Regulations currently provide¹ that no supplies consisting in whole or in part of specialty metals, including stainless steel flatware, shall be acquired which have not been melted in steel manufacturing facilities located within the United States or its possessions. The restriction, however, does not apply to:

- (a) acquisitions outside the United States in support of combat operations;
- (b) acquisitions by vessels in foreign waters;
- (c) emergency acquisitions by establishments located outside the United States for their personnel;
- (d) specifically listed supplies;
- (e) small purchases, involving \$10,000 or less;
- (f) supplies purchased specifically for commissary resale;
- (g) specialty metals or any item incorporating specialty metals, for which the Secretary concerned or his authorized designee has determined that a satisfactory quality and sufficient quantity melted in the United States or its possessions cannot be acquired as and when needed at U.S. market prices;
- (h) specialty metals below the prime contract level for programs other than those for aircraft, missile and space systems, ships, tank-automotive, weapons, and ammunition; and
- (i) specialty metals purchased to comply with agreements with foreign governments requiring the United States to purchase supplies from foreign sources to offset sales made by the U.S. Government or U.S. firms under approved programs serving defense requirements or in furtherance of an agreement with a qualifying country.

¹Defense Acquisition Regulations refer readers to the current Department of Defense Appropriations Act as a check on the current applicability of specialty metals restrictions.

Item (g) is the only exception that requires formal approval of the Secretary concerned or his designee. All other exceptions are automatic. The Secretaries of the Air Force and the Army have delegated authority to approve all "non-availability" waivers (item g) to the various heads of contracting activities. The Secretary of the Navy has followed suit for contracts that do not exceed \$1 million; contracts above this threshold, however, require approval of the Deputy Chief of Naval Material (Contracts and Business Management).

Defense Acquisition Regulations require that a domestic specialty metals preference clause be included in all contracts for articles containing such metals which exceed \$10,000. Contracts which are a part of major programs (aircraft, missile and space systems, ships, tank-automotive, weapons, and ammunition) must include the following clause.

PREFERENCE FOR DOMESTIC SPECIALTY METALS (MAJOR PROGRAMS)

(a) The Contractor agrees that any specialty metals (as hereinafter defined) incorporated in articles delivered under this contract will be melted in the United States, its possessions, or Puerto Rico; Provided, That this clause shall have no effect to the extent that (i) the Secretary or his designee has determined that a satisfactory quality and sufficient quantity of such articles cannot be acquired as and when needed at U.S. market prices; (ii) the acquisition is for a qualifying country end product; or (iii) the acquisition is necessary to comply with agreements with foreign governments requiring the United States to purchase supplies from foreign sources for the purposes of offsetting sales made by the U.S. Government or U.S. firms under approved programs serving defense requirements.

(b) For the purposes of this clause, the term "specialty metals" means:

- (i) steels, where the maximum alloy content exceeds one or more of the following limits: manganese, 1.65 percent; silicon, 0.60 percent; or copper, 0.60 percent or which contains more than 0.25 percent of any of the following elements: aluminum, chromium, cobalt, columbium, molybdenum, nickel, titanium, tungsten, or vanadium;

- (ii) metal alloys consisting of nickel, iron-nickel and cobalt base alloys containing a total of other alloying metals (except iron) in excess of ten percent;
- (iii) titanium and titanium alloys;
or
- (iv) zirconium and zirconium base alloys.

(c) The Contractor agrees to include this clause, including this paragraph (c), in every subcontract or purchase order issued hereunder unless he knows that the item being purchased contains no specialty metals.

A similar clause, without paragraph (c), is required in all other contracts for articles containing specialty metals.

Appendix I identifies all waivers of the specialty metals restriction approved for reasons of "non-availability" by the Army, Navy, and Air Force and the Defense Logistics Agency since October 1, 1978. Information on the extent to which other exceptions to the specialty metals provision were used was not available because these exceptions are automatic and the Departments do not have systems to accumulate information on them.

FOREIGN SOURCE PROCUREMENT REPORTED
BY THE CORPS OF ENGINEERS

In September 1982, the Corps of Engineers reported to the Steel Caucus that its foreign source procurement (prime contract awards) for steel and steel-related products totaled \$8,383,102 from October 1, 1977, through September 22, 1982. Your office asked us to review the Corps data and determine whether its method of developing the information was reasonable.

We contacted Corps officials responsible for providing the information to determine (1) their sources of data and (2) alternative sources of information that were available but not used.

We found that the Corps identified foreign prime contract awards by examining approved waivers of Buy American restrictions. Under Defense Acquisition Regulations, waivers of Buy American restrictions may be approved for Defense construction contracts when (1) items are not available in the United States in sufficient quantities or satisfactory quality or (2) domestic

construction material would unreasonably increase cost or be impracticable. Waivers are approved at different management levels depending on the estimated cost of the materials being purchased. Approval by the Secretary of the Department concerned is required, however, when the cost of materials exceeds \$100,000.

The Corps used waivers granted for steel and steel-related purchases² from October 1, 1977, through September 22, 1982, to respond to the Steel Caucus request for information. We found that the approach was reasonable, considering that the only other method of obtaining the data would have required a costly and time consuming contract-by-contract review. The Corps could not use the Defense Procurement Management Reporting System to identify foreign prime contract awards for steel and steel-related products because the System's source documents do not separately identify such procurements.

FOREIGN CONTENT INCLUDED IN DOMESTIC
CORPS OF ENGINEERS PROJECTS

In our January 1983 report to Chairman Gaydos, we identified those Corps of Engineers procurement offices that had reported over \$1 million in foreign purchases for any of the fiscal years 1979-82 (GAO/ID-83-22). The foreign purchases reported by these procurement offices for the year or years in which their individual foreign purchases exceeded \$1 million totaled over \$28.6 million. Your office asked us to supplement this information by identifying what had been purchased from foreign sources.

We asked each procurement office involved to provide us with the details of its foreign purchases. The offices developed the information by reviewing all relevant contracts and/or contacting the prime contractor(s). The amount of foreign procurement identified totaled \$20.1 million. This is about \$8.5 million less than we reported based on information contained in Individual Procurement Action Reports (DD Form 350).

Procurement officials told us that the amount of foreign content included on the Individual Procurement Reports at the time of award is really a best estimate figure, which can vary widely from actual purchases. Errors and post-award adjustments also affect the accuracy of the information included on the DD Form 350. For example, one DD Form 350 identified foreign content as 40 percent of contract value, or about \$3.2 million. The contract was for a Grumman Gulfstream II aircraft which, we were told, had little, if any, discernible foreign content.

²Purchases exceeding \$10,000.

Appendix II contains details of foreign purchases made by the identified procurement offices.

DEFENSE PROCUREMENT RESTRICTED
TO U.S. AND CANADIAN SOURCES

The objective of the Government's industrial mobilization planning is to ensure that production requirements for essential military supplies and services will be met during a national emergency. This planning does not require that military items and commodities be purchased from domestic producers in peacetime unless the Secretary of Defense specifically determines that it is in the interest of national defense. The need to create or maintain the required domestic capability to produce critical supplies is the criterion used in determining whether to limit procurement to items manufactured in the United States and Canada.

In line with this criterion, the Secretary has identified items which must be purchased from producers in the United States and Canada.³ Appendix III contains a complete list of the items.

DEFENSE DEPARTMENT
STEEL REQUIREMENTS

For calendar year 1983, Defense has identified a need for about 1.1 million short tons of steel for military items, including contractor requirements. These requirements represent almost 1.5 percent of domestic steel production for 1982 and consist of 793,219 tons of carbon steel, 308,141 tons of alloy steel, and 53,781 tons of stainless steel. Appendix IV shows a detailed breakdown of the 1983 steel requirements by program and type of steel.

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We did not obtain official agency comments on this report. However, a draft of this letter was reviewed by Defense Department officials concerned with each of the subjects addressed and their comments were considered in preparing the final letter. Our review was made in accordance with generally accepted Government auditing standards.

³Requirements above a predetermined sustaining level may be obtained from other sources.

B-208826

As arranged with your office, we plan no further distribution of this report until 30 days from the date it is issued. At that time, we will send copies to interested parties and make copies available to others upon request.

Sincerely yours,

A handwritten signature in cursive script that reads "Frank C. Conahan". The signature is written in dark ink and is positioned above the typed name and title.

Frank C. Conahan
Director

DEPARTMENT OF DEFENSE SPECIALTY METALS WAIVERS
APPROVED FOR REASONS OF NON-AVAILABILITY
SINCE OCTOBER 1978

<u>Department of the Air Force</u>	<u>Waiver approval date</u>	<u>Vendor</u>
Diesel engines	09-27-82	Detroit Diesel Allison-GM
Diesel engines	08-20-82	Lister Diesels, Inc., England
V-504C engines	09-15-82	Cummins Engine Co.
Fuel pumps	08-20-82	Cummins Engine Co.
Fuel pumps	07-27-82	Cummins Engine Co.
Titanium alloy IMI-839	09-06-79	Imperial Metal Industries
Turbofan engines CFM 56-2B-1	08-26-82	General Electric-SNECMA, France
TF41 engine components and parts	08-23-79	Detroit Diesel Allison- Rolls Royce
TF41 engine components and parts	10-30-78	Detroit Diesel Allison- Rolls Royce
J-85 engine-wire mesh screen/filter	12-03-82	Aircraft Porous Media, Germany, Japan
J-85 engine-wire mesh screen/filter	11-23-81	Aircraft Porous Media, Germany, Japan
<u>Department of the Army</u>		
XTG-411-2A transmissions	03-23-83	Hoover Universal Co. Torrington Co.
XTG-411-2A transmissions	09-29-82	Hoover Universal Co. Torrington Co.
VTA-903 T, diesel engines	01-27-82	Cummins Engine Co.
Diesel engines	01-15-83	Detroit Diesel Allison-GM
Diesel engines	01-17-83	Detroit Diesel Allison-GM
Diesel transmissions	09-14-82	Detroit Diesel Allison-GM
Small unit support vehicle- engine and transmission	12-28-82	A.B. Haegglund and Soener
Armored personnel carriers- M113A2	11-19-82	FMC Corp.
Trail bike motorcycle	03-19-82	Hayes Manufacturing Co.
M2-M3 Infantry fighting vehicles- auxiliary sights	12-23-82	FMC Corp.
12V71T diesel engine	04-05-82	Detroit Diesel Allison-GM
Advanced diesel turbocompound system engine	05-03-82	Cummins Engine Co.
GAMA goat vehicles-center and drive differentials	06-07-82	GKN Axles Ltd., England
8V92TA engines	04-05-82	Detroit Diesel Allison-GM
CLBT 750 transmissions	03-12-82	Detroit Diesel Allison-GM
Boring machine, bridge type	09-07-82	Rudel Machinery Co.,- SIP, Switzerland

	<u>Waiver approval date</u>	<u>Vendor</u>
Boring machine, bridge type	10-05-81	Rudel Machinery Co., SIP, Switzerland
155MM, M199 cannon muzzle brake castings	02-03-82	Steel Company of Australia, Australia
Breech block forgings	06-27-79	Department of Produc- tivity, Australia
M240C machine guns	08-13-79	Fabrique National, Belgium
<u>Department of the Navy</u>		
AV-8B-Pegasus 11(F402) aircraft engines	01-24-83	Rolls Royce, England
AV-8B-Pegasus 11(F402) aircraft engines	02-17-82	Rolls Royce, England
AV-8B aircraft parts and materials	01-24-83	Rolls Royce, England
AV-8B aircraft parts and materials	03-11-82	Rolls Royce, England
TAV-8B aircraft conversion	03-07-83	British Aerospace, England
TAV-8A/B/C aircraft engine change kits	01-24-83	Rolls Royce, England
AV-8A aircraft equipment and components	05-26-82	British Aerospace, England
C-9B aircraft equipment and components	05-11-79	McDonnell Douglas
C-9B aircraft equipment and components	08-21-81	McDonnell Douglas
NAXI-100 air compressors	10-15-82	Sweden
NAXI-100 air compressors	07-02-82	Sweden, Japan
Harpoon missile parts and materials	02-01-83	Lucus Aerospace, England
Harpoon missile parts and materials	03-11-82	Lucus Aerospace, England
A-7P aircraft headsup display and hydraulic filter elements	01-31-83	Elliott Brothers, England Aircraft Porous Media, Germany, Japan
Guided missile launching systems ball, roller and needle bearings	07-28-82	Sweden
Helicopter landing systems, LAMPS MKIII	05-19-82	Canadian Commercial Corp., Canada
Ejection seat escape systems	06-25-82	Martin Baker Aircraft Co., England

Defense Logistics Agency

(No specialty metals waivers
approved)

Note - Defense Department waivers did not disclose contract value of specialty
metals and their sources.

FOREIGN CONTENT IDENTIFIED FOR 11 DOMESTIC
CORPS OF ENGINEERS (CIVIL WORKS) CONTRACTS
(Oct. 1, 1978 through Sept. 30, 1982)

<u>District and contract number</u>	<u>Product or service</u>	<u>Contract awardee and dollar value</u>	<u>Foreign</u>	
			<u>Content-Source</u>	<u>Value</u>
<u>Baltimore, Md.</u> DACW31-81-C-0026	Grunman Aircraft	Gulfstream American Corp., Ga. - \$7,950,000	None recorded in contract	\$ -0-
<u>New Orleans, La.</u> DACW29-81-C-0097	Rumping units	Axel Johnson-Engineering Corp., Ga. - \$2,615,025	Engines (without controls)- Japan Rump-Sweden	1,145,382 40,000
<u>Philadelphia, Pa.</u> DACW61-79-C-0159	Self-propelled, sea going, hopper dredge	Sun Shipbuilding and Drydocking Co., Pa. \$65,000,000	Dredging equipment-Holland	10,218,436
DACW61-81-C-0188	Technical services for dredging	Dredge Technology Corp., NY - \$106,000	None	-0-
<u>Savannah, Ga.</u> DACW21-80-C-0098	Hydraulic-turbine driven generator	Canadian General Electric Co., Canada \$3,830,411	All end products - Canada	3,064,329
DACW21-81-C-0007	Generators and appurtenances (78,947KVA)	Siemens-Allis, Inc., Wis. - \$10,656,000	Air coolers - Canada. Shafts - Japan	53,280 745,120
<u>Seattle, Wa.</u> DACW67-79-C-0021	Generators and appurtenances (110KVA)	Westinghouse Electric, Corp., Ore.- \$10,000,957	Main shaft steel- Japan Stator Steel - Spain	355,000 355,000
<u>Portland, Ore.</u> DACW57-77-C-0020	Hydraulic turbine (105,000hp)	Allis-Chalmers Corp., Pa. - \$29,227,466	Cast steel runner blades - Japan Cast steel runner crossheads - Japan Forged steel turbine shafts - Japan Cast steel runner hubs and rocker arms - Germany	1,175,585 141,300 837,671 870,275
DACW57-78-C-0070	Generators and appurtenances (70,000KVA)	General Electric Co., Ore., - \$26,000,889	Fabricated pole (machine steel castings) - Japan	500,000

APPENDIX II

<u>District and contract number</u>	<u>Product or service</u>	<u>Contract awarded and dollar value</u>	<u>Foreign</u>	
			<u>Content-Source</u>	<u>Value</u>
<u>Portland, Ore.</u> DACW57-79-C-0066	Power trans- formers and accessories	General Electric Co., Ore. - \$2,221,190	None	\$ -0-
DACW57-77-C-0050	Hydraulic tur- bines (20,700 hp)	Sulzer Brothers, Inc., Switzerland and Escher Wyss, Switzerland - \$2,544,697	Hydraulic tur- bines and Engineering services	463,935 178,284
Total				<u>\$20,143,597</u>

Source—Information provided by District Procurement Offices, Corps of Engineers.

DEFENSE ITEMS RESTRICTED TO THE
UNITED STATES AND CANADIAN SOURCES

Section I - Items Procured Pursuant to DAR 3-216

Army

L.A.P., Manufacturing and testing of projectiles (5.56 through 8 inch), mines, dispensers, rockets, pyrotechnic devices, grenades, demolition charges, small arms ammunition and components	76mm - Body
Maintenance of idle portions of 22 GOCO facilities	81mm - M375A1
5.56mm/7.62mm - Cartridges - all types	90mm - M71A1 HEAT, M313, M431A1 HEAT, M560 APERS
50 Caliber Cartridge - all types	105mm - M416, M468, M489 TP-T, M456A1 HEAT-T and Spike Assembly, M735 APFSDS-T and Core, M737 TPDS-T, XM774 and Core, XM833 APFSDS, M993 HEP-T
20mm Cartridge - all types	106mm - M344A1 HEAT, M346A1 HEP-T
25mm Cartridge - M791, M792, M793, XM794	152mm - M411A1
30mm Cartridge - AAH - all types (ADEN-DEFA), GAU 8/A - all types	155mm - M107 HE, M483A1 HE, M549 HE, RAP, RAP Warhead Bonding Assy, Motor Body Assy, M692 ADAM, M712 Copperhead, M718/M741 RAAM, M731 ADAM
60mm Cartridge - M720 HE (LWCMS)	165mm - M123, M623
81mm Cartridge - M301A3 - ALLUM, M374A3 - HE	4.2" - M329A2 HE M335A2 ILLUM
105mm Cartridge - M456A1/A2 HEAT-T, M724 DSTP-T, M735 APFSD-T, XM774 APFSD-T	5"/54 - MK64-1 MPTS
120mm Cartridge - XM 829 APFSD-T, XM830 HEAT-MP-T	8" - M106 HE, M509E1 HE, M650 HE, RAP, M650 Warhead Sect. Aft., M650 Motor Body Assy
4.2" Cartridge - M329A2 HE	Proj. Body - MK61-0
20mm Weapons System (Family) VADS M163A1/M167A1	105mm How 101A1
Projectiles	155mm How M198
20mm - all types except M51A1B1 and HEI XM246	155mm Sp How (Family) - M109, M109A2, M109R
57mm - M360A1/A2 HE/TP	8" Sp How (Family) - M110, M110A2, M107, M578 Recovery Vehicle
60mm - M720	

Fuzes - M1 Delay Plunger, M62A2, M114/M118 S & A Devices, M201A1, M213, M223, M228, M423/M427, M505A3, M567, M577/M582 MT(MPTS), M692/M731 Housing, Timing, and Fuzing Assy, M718/M741 Electronic Assembly, M724 ET(MPTS), M732 Fuze, Sub-Assy and Components, M734 Multi-Option (MPTS), M739 PD(MPTS), MK1-0 Base Assy, MK1-0 Sensing Unit, MK30-5, MK39-0 S & A Devices, MK40 Energizer, MK54 Mod 2 AD, MK339, MK339-1, MK342/MK349, MK379, MK395-1

Cartridge Case
 20mm - all types except M21A1
 76mm - Steel
 90mm - M114A1
 105mm - M14B4, M115B1, M148A1B1, M150B1
 106mm - M94B1
 152mm - M205
 165mm - M104
 3"/50 - MK9 MOD O
 5"/54 - MK9

Fin Assy
 60mm - M27
 81mm - M24

155mm and 8" ICM Grenades - M42E2, M46E1

Grenade Launcher - 40mm - M203

Grenades - M8, M14, M18

155mm Canister - M1, M2

Pallet - MK3-0, MK11 Adapter, MK12 Mod 1, MK13 Adapter, MK16 Adapter, MK79 Adapter, MK121-0 Adapter, MHU149

Container, Fiber - M251A1, M252A5

Container - BNU-238/E, CNU-238/E, CNU-319

Nitroguanidine

Black Powder (all classes)

Links, all

Box, Metal - M2A1, M19A1, M548

Primer - MK42-2, MK45-1, MK161-0 PERC

Propellant - IMR Type, HPC Type, WC Type

Bomb - MK81, MK82, MK83-4, MK84-4, MK84-6, MK118-0, MK118-0 Bomb Fin

Bomb Fin, Conicle - MK82, MK83, MK84 Bombs, Assy MK15-1

Dispenser - MK7-3 Cargo Sec., MK7-4 Nose Firing, MK7-4 Tail Cone, MK7-4 Fuze Cover

Casing, Burster - M158

Plug, Poly - MK12-3

2.75" Rocket - Motor LAP, Fin & Nozzle Assy, Motor Tube, Stabilizing Rod, Lockwire, Warhead WTU-1/B

35mm Rocket Practice - M73 Subcaliber

66mm Rocket - M54 Motor, M72A1 Launcher

Improved TOW Weapon System

Launcher, Motor - M114 (TOW)

Warhead Section - M207 (TOW)

Warhead Section - M224 (DRAGON)

Nose Crush Switch, MPTS, DRAGON Missile

Laser Rangefinder AN/VVG-2

Laser Rangefinder AN/GVS-5 and Airborne Laser Tracker AN/AAS-32

Ground Laser Designator (GLLD) - Copperhead
 Laser Target Designator (LTD)
 Marine Laser Target Designator (MULE)

APPENDIX III

Solid State Computer - M21	Cable Assy - M73, M74A
Second Generation Night Vision Equipment - All items	Lug, Susp - MK6
Night Vision Goggles AN/PVS-5A	Arming Assy - T/MK83
Target Acquisition and Detection (TADS) Pilot-Night Vision System (PNVS)	Flare, Infrared - MJU7B, MJU8, RR119
Stand-off Target Acquisition System (SOTAS)	Infrared (IR) Suppressors (OV-1, AH-1, UH-1, OH-58, UH-60, RU-21)
MX 9644/UV 25mm, Image Intensifier Tube Assembly	Infrared Countermeasures Set, AN/ALQ-144 (AH-1, UH-1, AH-64, UH-60)
MX 9916/UV Image Intensifier Tube Assembly	Ribbon Bridge
Thermal Imaging Equipment - All items	Back-Up Fly By Wire Control System (AH-64)
Heavy Expanded Mobility Tactical Truck (HEMITT)	Fault Detection/Location System (AH-64)
Tank, Combat, Full Track - M60A1/A3	Radar Jammer AN/ALQ-136(V)1, (AH-1, AH-64), Continuous Wave (CW) Jammer AN/ALQ-162 (SEMA)
Reticle Projector Unit - M60A3 Tank	Radar Warning Receiver - AN/APR-39(V)2
Stabilization System for M60 Tank	Quiet Radar - All items
Tank, Combat, Full Track - XM1	Radar Sets, AN/TPQ-36, AN/TPQ-37
Tank, Thermal Sight M-60A3 M-1	Radar Chronograph - M90
Remote Pilotless Vehicle (RPV) - YMCM105	Mast Mounted Sight-Army Helicopter Improvement Airgram (AHIP), Near Term Scout Helicopter (NTSH)
Infantry Fighting Vehicle (IFV) - M2	Patriot Air Defense Missile System
Cavalry Fighting Vehicle (CFV) - M3	Multiple Launch Rocket (MLRS)
Recovery Vehicle (M88A1)	Stinger, Air Defense System
Vehicles (M113 Family)	Viper Weapon System
Truck, 1/4, 2 1/2, 5 ton	Hawk Missile System
Ctg, Tank - MK5-0, MK11-0, MK14-3	Pershing Missile System (P-1A)
Charge, Demo Black - M118	Missile Detector System AN/ALQ-156
Aluminum Powder	

Hellfire

Navigation Equipment (AN/ASN-86 and 128)

Shelters, Electrical Equipment - All items (Only two U.S. sources and all procurement is required to maintain these sources)

Special Aircraft Components

Precision machines, special lubricants, sensitive bearings, CN-811 and CN-1314 gyroscopes, ID-1315, 2103, 2109, 2105 indicators, P544 Motor Generator, PW-750 Motor Generator

Signal, Intelligence/Electronic Warfare (SIGINT/EW) Equipment

Fire Control Items and all components - M90 Radar Chronograph, M2 Arming Device, Graphical Firing Scales, Optical Bore Sights, Observation Telescopes, Binoculars, Computers Battery Commanders Periscopes, Watches and Clocks

Gas Mask - M17A1, M24, M25

Navy

Fuzes, Safe and Arm Devices, and Similar Items:

Safe and Arm Device - MK-13, MK-17, MK-33

Triggering Device - MK-13

Fuze - MK-330, MK-334, MK-404, MK-407, FMU-109

Missile and Missile Components:

AIM-7F Sparrow Missile - Guidance and Controls Section, MK-58 Rocket Motors, MK-71 Warhead Metal Parts

AIM-9L Sidewinder Missile - Guidance and Control Section, MK-36 Rocket Motors, DSU-15 Target Detector, AN/WDU-17 Warhead, MK-1 Wing and AN/BSU-32 Fins

Trident I (C-4) Missile System - Guidance and Control System, MK-5 Electronic Assemblies (EA), MK-5

Machine Guns - .50 Cal - M2, .50 Cal - M85, 7.62mm - M60

Cannons and Guntubes, Thick Wall - All items

Gunmounts - M178, M174, M140, M150A1, M105 - and Recoil Mechanisms - M-45, M2A5, M37, M6B2, 90-105mm Mod Kits

Gun Auto 20mm (Family) - M61A1, M168, M197

Fuel Air Explosive (FAE-II)

Family of Scatterable Mines
Ground Employed Mine System (GEMSS)
Modular Pack Mine System (MOPMS)
Mine dispensing systems, CBU-89 and CBU-78 (GATOR)

Dispenser and Bomb, ACFT - CBU-55 A/B, CBU-58 A/B, CBU-71 A/B

Surface Launched - Fuel Air Explosive (SLU-FAE)

Trident I (C-4) cont'd.
Inertial Measurement Unit Electronics (IMUE) and Monitor Component Assy (MCA), Backfit of Poseidon (C-3) SSBNS

Flares - MK-46 Flares, Infrared Decoy

Sonobuoys and Components - AN/SSQ-36, AN/SSQ-41B, AN/SSQ-53A, AN/SSQ-57A, AN/SSQ-62

Submarine Systems - Type 18 B/D Periscope System, TR 155K 33 Transducers

Military Sealift Cargo - Ocean Transportation and Services

CHAFF

Rapid Blooming on Board Chaff (Super ARBOC)

Air Force

MAC Commercial Airlift

GAU-8/A and 30mm Ammo

Medium Range Air to Surface Missile (MRASM)

Low Altitude Navigation and Targeting Infrared System for Night (LANTIRN)

Defense Logistics Agency

PASGT (KEVLAR) Helmet

Chemical Protective (BUTYL) Gloves

Meal, Ready-to-Eat (MRE)

Tetracycline (Treatment of Infections)

Section II Items Procured Pursuant to Referenced DAR Requirement

DAR 1-2207.2 - Jewel Bearings and Related Items

DAR 1-2207.3 - Miniature and Instrument Ball Bearings

DAR 1-2207.4 - Precision Components for Mechanical Time Devices

Section III Other Critical National Defense Items

Hydraulic Turbine - Army (Civil Works)

High Purity Silicon

Hydro-generators-Army (Civil Works)

Source: Defense Acquisition Regulations.

DEPARTMENT OF DEFENSE
CALENDAR YEAR 1983 STEEL REQUIREMENTS
 (note a)

Program	Aircraft	Missiles	Ships	Tank automotive	Weapons	Ammunition (short tons)	Electronics	Supplies and equipment	Construction and materials for DISC (note b)	Total
Carbon steel:										
Castings	-	3	-	20	63	1	2	-	20	108
Ingots, billets, etc.	379	196	15,218	2,448	50	5,947	3	11	183	24,435
Billets, shell bodies	-	20	-	-	1	45,484	-	-	119	45,624
Bars, cold finished	2,092	405	13,283	6,870	149	8,155	34	235	2,921	34,145
Bars, hot rolled	16	204	12,160	18,458	90	999	31	25	19,930	51,913
Bars, reinforcing	-	156	4	2,002	-	9	-	10	71,899	74,080
Bars, for shells	-	7	1,653	5,001	-	386	1	2	45,519	52,569
Structural shapes	-	4,354	6,842	7,370	30	33	9	-	42,566	61,204
Piling	-	136	2,314	-	-	4,174	-	3	11,176	17,803
Pipe and tubing	36	700	22,484	3,501	39	26,532	65	109	45,484	98,949
Plates	1,287	2,390	54,773	26,489	87	24,312	9	21	40,031	149,399
Sheet and strip	574	456	6,411	33,150	22	67,700	254	1,132	17,854	127,553
Sheet, galvanized	55	256	4,588	18	2	285	-	27	8,563	13,793
Tin, terne, black plate	-	-	7,961	587	-	3,583	-	11	4,041	16,183
Rails and accessories	-	190	-	-	-	3	-	9	4,811	5,073
Wheels and axles	-	-	112	-	-	-	-	4	1,399	1,515
Wire rods and products	166	102	10,399	1,628	8	456	43	27	6,029	18,857
Strips, cold rolled	-	-	-	-	-	-	-	-	16	16
Total	4,605	9,575	158,202	107,542	541	188,059	451	1,626	322,625	793,219
Alloy steel:										
Castings (exclude armor)	-	145	-	3,206	1,606	62	2	-	-	5,201
Ingots, billets, etc.	3,175	816	24,216	13,142	3,895	29,479	-	13	56	74,791
Castings, armor	-	6	4	6,704	180	-	-	-	1	6,895
Bars, cold finished	199	344	7,727	14,779	437	1,269	151	75	1,183	26,164
Bars, hot rolled	3,062	764	14,355	23,124	128	5,741	8	147	1,568	48,897
Structural shapes	19	356	2,582	1,169	11	34	3	13	1,069	5,257
Pipe and tubing	179	142	10,464	4,286	32	4,299	27	2	1,785	21,216
Plates	118	458	13,925	5,696	27	399	56	2,603	4,732	28,015
Sheet and strip	126	310	6,681	7,138	9	1,111	44	-	1,410	16,829
Plates rolled armor	-	60	21,946	18,920	-	2,515	-	2	447	43,890
Track accessories	-	60	-	6,026	-	-	-	-	-	6,086
Wheels and axles	-	-	-	11,834	-	-	-	3,649	-	15,483
Wire rods and products	-	18	1,519	957	2	6	2	-	444	2,948
Armor plate, 5/8 inch	-	-	-	30	-	-	-	-	-	30
Armor plate, 1/3 inch	-	-	-	6,618	-	-	-	-	-	6,618
Total	6,878	3,479	103,419	123,629	6,327	44,915	293	6,504	12,697	308,141
Stainless steel	12,014	2,509	7,723	630	874	19,671	826	606	8,930	53,781
Total	23,497	15,563	269,344	231,801	7,742	252,645	1,570	8,736	344,252	1,155,141

^aExcludes requirements for civilian type shelf items.

^bDefense Industrial Supply Center

Note: Numbers may not add exactly due to rounding.

Source: Materials requirements, steel and nickel alloys (DD Form 614)