OMB Control Number: 0694-0120

Expiration Date: June 30, 2022

Section 232 Investigation into Imports of Neodymium-Iron-Boron (NdFeB) Permanent Magnets



SCOPE OF ASSESSMENT

The U.S. Department of Commerce, Bureau of Industry and Security (BIS), Office of Technology Evaluation (OTE), is conducting a survey of the U.S. Neodymium-Iron-Boron (NdFeB) Permanent Magnet industry. The survey results will be used to support an ongoing investigation on the effect of imports of NdFeB Permanent Magnets on the U.S. national security initiated under Section 232 of the Trade Expansion Act of 1962, as amended.

The principal goal of this survey is to assist the U.S. Department of Commerce in determining whether NdFeB Permanent Magnet imports are being imported into the United States in such quantities or under such circumstances as to threaten to impair the national security. Information collected will include: organization and facility information, production, feedstock and resale purchases, sales, employment, capital expenditures, research and development, intellectual property, national defense & critical infrastructure, and competition/challenges. The resulting data will provide the U.S. Department of Commerce detailed NdFeB Permanent Magnet industry information that is otherwise not publicly available and needed to effectively conduct this Section 232 investigation.

RESPONSE TO THIS SURVEY IS REQUIRED BY LAW

A response to this survey is required by law (50 U.S.C. Sec. 4555). Failure to respond can result in a maximum fine of \$10,000, imprisonment of up to one year, or both. Information furnished herewith is deemed confidential and will not be published or disclosed except in accordance with Section 705 of the Defense Production Act of 1950, as amended (50 U.S.C. Sec. 4555). Section 705 prohibits the publication or disclosure of this information unless the President determines that its withholding is contrary to the national defense. Information will not be shared with any non-government entity, other than in aggregate form. The information will be protected pursuant to the appropriate exemptions from disclosure under the Freedom of Information Act (FOIA), should it be the subject of a FOIA request.

Notwithstanding any other provision of law, no person is required to respond to nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a currently valid OMB Control Number.

BURDEN ESTIMATE AND REQUEST FOR COMMENT

Public reporting burden for this collection of information is estimated to average 12 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information to BIS Information Collection Officer, Room 6883, Bureau of Industry and Security, U.S. Department of Commerce, Washington, D.C. 20230, and to the Office of Management and Budget, Paperwork Reduction Project (OMB Control No. 0694-0120), Washington, D.C. 20503.

BUSINESS CONFIDENTIAL - Per Section 705(d) of the Defense Production Act

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	General Instructions
	Your organization is required to complete this survey of the U.S. NdFeB Permanent Magnet industry, which can be downloaded from the BIS website: https://www.bis.doc.gov/ndfeb-232
A.	If you are unable to download the survey document, at your request, BIS survey support staff will e-mail the Excel survey template directly to you.
	For your convenience, a PDF version of the survey and required drop-down content is available on the BIS website to aid internal data collection. DO NOT SUBMIT the PDF version of the survey as your response to BIS. Should this occur, your organization will be required to resubmit the survey in the requested Excel format.
	Respond to every question. Surveys that are not fully completed will be returned for completion. Use the comment boxes to provide any information to supplement responses provided in the survey form. Make sure to record a complete answer in the space provided, even if the space does not appear to expand to fit all of the information.
В.	DO NOT CUT AND PASTE RESPONSES WITHIN THIS SURVEY OR PASTE IN RESPONSES FROM OUTSIDE THE SURVEY. Survey inputs should be completed by typing in responses or by using a drop-down menu. The use of cut and paste can corrupt the survey template. If your survey response is corrupted as a result of cut and paste response, your survey will be rejected and your organization must immediately resubmit the survey.
C.	Do not disclose any U.S. Government (USG) classified information in this survey form.
D.	Upon completion of the survey, final review, and certification, transmit the survey document via e-mail to: MdFeB232@bis.doc.gov
	Questions related to the survey should be directed to BIS survey support staff at NdFeB232@bis.doc.gov
E.	E-mail is the preferred method of contact.
	You may speak with a member of the BIS survey support staff by calling (202) 482-0194.
	For questions related to the overall scope of this Section 232 Investigation, contact MdFeB232@bis.doc.gov or:
	Jason D. Bolton Program Manager, Industrial Studies
F.	BIS/Export Administration/Office of Technology Evaluation
	1401 Constitution Avenue, NW, Room 1093 Washington, DC 20230
	DO NOT submit completed surveys to Mr. Bolton's postal or personal e-mail address. All surveys must be submitted electronically to: NdFeB232@bis.doc.gov
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Previous Page	<u>Next Page</u> Definitions
Term	Definition
Authorizing Official	An executive officer of the organization or business unit or another individual who has the authority to execute this survey on behalf of the organization.
Bonded NdFeB Magnet	A magnet comprised of NdFeB powder bound by a matrix of polymer produced via compression, injection or calendaring.
Capital Expenditures	Investments made by an organization in buildings, equipment, property, and systems where the expense is depreciated. This does not include expenditures for consumable materials, other operating expenses, and salaries associated with normal business operations.
Critical Infrastructure	Sectors whose assets, systems, and networks, whether physical or virtual, are considered so vital to the United States that their incapacitation or destruction would have a debilitating effect on security, national economic security, national public health and safety, or any combination thereof.
Customer	Any organization (external or internal entity) for which your organization manufactures/processes any product comprised of NdFeB Permanent Magnets or related products.
Defense-related Sales/Activities	Any product or service that your organization produces that is ultimately used by the U.S. Government for defense purposes, whether by the armed services, the Department of Defense, or any other U.S. Government entity.
Development	The design, simulation, and testing of a prototype, including experimental software or hardware systems, to validate technological feasibility or concept of operation in order to reduce technological risk, or provide test systems prior to production approval.
Distributor	An independent selling agent who has a contract to sell the products of a manufacturer.
Dysprosium Oxide (Dy2O3)	The commonly produced form of dysprosium oxide.
Exports	Shipments to destinations outside the United States.
Facility	A building or the minimum complex of buildings or parts of buildings that conducts NdFeB Permanent Magnet or related products production, in which an organization operates to serve a particular function, producing revenue, and incurring costs for the company. A facility may produce an item of tangible or intangible property or may perform a service. It may encompass a floor or group of floors within a building, a single building, or a group of buildings or successive productions of the production of the product
Feedstock	A raw material used to supply a machine or industrial process. In the context of NdFeB Permanent Magnet production, feedstock refers to the raw materials utilized in both sintered and bonded NdFeB Permanent Magnet production.
Finisher	Finishing in the context of NdFeB Permanent Magnet production refers to the milling, cutting, and coating of
Full Time Equivalent (FTE)	magnet blocks or other related products. Employees who work for 40 hours in a normal work week. Convert part-time employees into "full time
Employees Global Headquarters	equivalents" by taking their work hours as a fraction of 40 hours. A location that serves as the organization's hub of worldwide operations with all global branches or divisions
Harmonized Tariff Schedule (HTS)	reporting to it. A 10-digit numbering system that classifies a good based on its name, use, and/or the material used in its construction. The number provides Customs and Border Protection (CBP) with a standardized method of tracking all merchandise imported into the United States and sets out the tariff rates and statistical categories.
Imports (Value)	Values reported should be landed, duty-paid values at the U.S. port of entry, including ocean freight and insurance costs, brokerage charges, and import duties (i.e., all charges except inland freight in the United States).
NdFeB Alloy	The NdFeB precursor materials from which sintered and or bonded NdFeB magnets are produced.
NdFeB Magnet	The final sintered or bonded magnet form (often coated to protect from corrosion), ready for use in a particular end product.
NdFeB Permanent Magnet Related Products	Any products directly or indirectly used in the production of NdFeB Permanent Magnets, including REE mining, carbonates, oxides, metals, and/or alloys.
NdFeB Powder	The NdFeB precursor material from which sintered and or bonded magnets may be produced.
NdPr Oxide (aka Didymium	Combined form of neodymium (75%) and praseodymium (25%) oxide commonly used by NdFeB manufacturers
Oxide) Neodymium Oxide (Nd2O3)	instead of neodymium and/or praseodymium oxide. The commonly produced form of neodymium oxide.
Non-U.S. Facility	A facility that is physically located outside of the United States.
	A company, firm, laboratory, or other entity that owns or controls one or more U.S. establishment or facility
Organization	capable of designing, manufacturing, or distributing NdFeB Permanent Magnets or related products.
Pilot Production	A new line of production established to determine whether new processes/products used to manufacture NdFeB Permanent Magnets or related products will be economically efficient and profitable.
Praseodymium Oxide (Pr6O11)	The commonly produced form of praseodymium oxide. The process of transforming inputs (raw materials, semi-finished goods, subassemblies, ideas, information,
Production	The process or danstorning inputs (raw materials, semi-inisting goods, subassembles, ideas, information, knowledge) into goods or services. The lanthanide series of chemical elements, plus scandium and yttrium. For the purposes of this collection, the
Rare Earth Elements (REE)	The lanthanide series of chemical elements, plus scandium and yttrium. For the purposes of this collection, the primary focus is REEs used in NdFeB permanent magnet manufacturing. Basic and applied research in the engineering sciences, as well as design and development of prototype
Research & Development	products and processes. Efforts that an organization conducts towards innovating, introducing and/or improving products and processes.
Sales	All reported and unreported sales of NdFeB permanent magnets or related products, including sales to end- users, producers, financial entities, intermediaries, traders, distributors, et al.
Single Source	An organization that is designated as the only accepted source for the supply of parts, components, materials, or services, even though other source with equivalent technical know-how and production capability may exist.
Sintered NdFeB Magnet	A fully dense magnet produced via the sintering process (i.e., pulverizing ingots in a magnetic field then hot treating in a sintering furnace).
Sole Source	An organization that is the only source for the supply of parts, components, or services. No alternative U.S. or non-U.S. based suppliers exist other than the current supplier.
Supplier	An entity from which your organization obtains inputs, which may be goods or services. A supplier may be another organization with which you have a contractual relationship, or it may be another facility owned by the same parent organization.
Terbium Oxide (Tb4O7)	The commonly produced form of terbium oxide.
Total Rare Earth Oxides (TREO)	The collective of all rare earth oxides combined.
United States	The "United States" or "U.S." includes the 50 states, Puerto Rico, the District of Columbia, Guam, the Trust
	Territories, and the U.S. Virgin Islands. BUSINESS CONFIDENTIAL - Per Section 705(d) of the Defense Production Act
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Pre	<u>vious Page</u>								<u>Next Page</u>
				1. Organization I	nformation				
	Provide the following information for	your organization.	Please select "Other" for "State/Pr	ovince" if located outside	of the U.S.				
	Organization Name								
	Street Address								
	City								
	State/Province								
A.	ZIP Code								
	Country of Global Headquarters								
	U.S. Point of Contact Name								
	U.S. Point of Contact Maile								
	U.S. Point of Contact Phone								
	Is this organization owned, in whole o	r in most buons No	and I.C. ambitus? Indicate Vac/Na. the	n idantifi, tha antitias hal	if ammliant	ala.			
	List entities with at least 5% ownershi			midentify the entitles be	ow, ii applicat	Jie.	1		
	Entity Name	Global	Headquarters Street Address	Global Headquarters C		Headquarters te/Province	Global Headquarters Country		Ownership %
В.									
υ.									
	Please provide your organization's CA	GE, DUNS, and or N	NAICS code(s) if applicable. Blank er	ntries will be considered a	s "Not Applica	ible".			
	Commercial and		Data Universal Numbering Cus	tom (DUNC)					
	Government Entity (CAGE)		Data Universal Numbering Sys	telli (DON3)			NAICS (6-digit) Code(s)		
C.	Code(s)		Code(s)						
	Find CAGE codes at:		Find DUNS numbers	at:			Find NAICS codes at:		
	https://cage.dla.mil/		https://www.dnb.com/e	duns-		ŀ	https://www.census.gov/naics/		
	Identify the activities in the NdFeB Per	manent Magnet si	upply chain that your organization o	currently performs. Pleas	do not inclu	de standby/idle. c	losed, or future facilities in this section.		
	,		Activity			1	Number of U.S. Facilities	Nun	nber of Non-U.S. Facilities
	Mining and Consentration of Days For	hh (DE) Minarala	Activity				Number of O.S. Facilities	INUII	iber of Nort-O.S. Facilities
	Mining and Concentration of Rare Ear								
	Processing of Rare Earth (RE) Minerals								
	Separation of Rare Earth (RE) Carbona	tes into Oxides							
	NdFeB Metal Production							1	
_	NdFeB Alloy Production								
D.	Sintered NdFeB Permanent Magnet Pr							1	
	Bonded NdFeB Permanent Magnet Pro								
	Importer/Reseller/Distributor of NdFe								
	Finishing/Fabrication of NdFeB Perma								
	Integration of NdFeB Permanent Mag								
	Recycling/Reclamation of Rare Earth E	. , ,							
	Recycling/Reclamation of NdFeB Perm		om Waste or Non-Traditional Feeds	tocks					
	End User of NdFeB Permanent Magne	ts							
	Other		(Spe	cify Here)				<u> </u>	
	Comments:								
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					,.,				

Previou	s Page												Next Page
						2a. Production							
Identify facility	all of your organization's production fac- over the next five years. If a given facility	lities with NdFeB Permanent Magner has more than one operation, list eac	t related operations including facilities the choperation at the facility and the given o	iat are on standby/idle and closed. If yo operation's capacity on separate lines. I	our organization does not currently operate any NdFeB Permanent Magnet relate Note, only list facilities that produce NdFeB Permanent Magnets or related prod	d production facilities, indicate "No" : ucts. Do not list any distribution, val	ind proceed to part B. Provide the LOCA se-add/finishing, or resale facilities On	ATION (U.S. and Non-U.S.) of the facility, ce completed, please proceed to Part B.	indicate all operations at each facility	using the drop down menus, and specif	y any changes that may impact that	٧	es
Т			Location		Facility Op	peration			Facility	Capacity		Out	look
	Facility Name	City	State/Province (Select "Other" if outside the U.S.)	Country	Operation Type	Facility Operating Status	Average Annual Operating Cost (Cost of Goods Sold + Operating Expenses) (\$ Thousands USD)	Total Facility Capacity (Metric Tons (MT))	Average Capacity Utilization Rate (Last Full Year of Operation)	Time to Reach 100% Capacity Utilization (in days)	Cost to Reach 100% Capacity Utilization (\$ Thousands USD)	Do you anticipate any significant changes in this particular operation in the next five years?	If yes or unknown, provide a brief explanation.
1					Mining and Concentration of Rare Earth (RE) Minerals	Operating						Yes	
-					Processing of Rare Earth (RE) Minerals into Carbonates	Standby/Idle						No	
3					Separation of Rare Earth (RE) Carbonates into Oxides	Closed						Unknown	
4					NdFeB Metal Production								
97					NdFeB Alloy Production								
6					Sintered NdFeB Permanent Magnet Production								
-					Bonded NdFeB Permanent Magnet Production								
8					Recycling/Reclamation of Rare Earth Elements (REE) from Waste or Non- Traditional Feedstocks								
A. 5					Recycling/Reclamation of NdFeB Permanent Magnets from Waste or Non- Traditional Feedstocks								
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1													
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1	5												
1	5												
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1	3												
1	9												
2		Comm											
· · · · · · · · · · · · · · · · · · ·				2022 2025	ng: What is the operation type for the facility, the initial expected capacity, the fi			(if anytherida) the antiquated total and					
on upg	ading equipment, purchasing land/capita	I/labor, etc. to reach full production).	If your organization does not plan to ope	erate or fund new production facilities	between 2022-2026, indicate "No" and proceed to the next section. Note, only li	st facilities that will produce NdFeB I	Permanent Magnets or related product	s. Do not list any distribution, value-ado	/finishing, or resale facilities Once co	impleted, please proceed to the next se	ction.	Y	es
			Location		Facility Op				Start	Factors			
	Facility Name	City	State/Province (Select "Other" if outside the U.S.)	Country	Operation Type	Initial Non-Pilot Expected Facility Capacity (Metric Tons (MT))	Full Non-Pilot Expected Facility Capacity (Metric Tons (MT))	Expected Start Date	Primary Challenge to Start (If applicable)	Estimated Total Cost to Reach Full Production (\$ Thousands USD)	Previously Allocated Funds to Reach Full Production (\$ Thousands USD)	Ехр	lain
2					Mining and Concentration of Rare Earth (RE) Minerals				NdFeB Price				
2					Processing of Rare Earth (RE) Minerals into Carbonates				High Investment Costs				
3					Separation of Rare Earth (RE) Carbonates into Oxides				Lack of Skilled Labor				
4					NdFeB Metal Production				Lack of or Declining Domestic Demand				
5					NdFeB Alloy Production				High Operating Costs				
6					Sintered NdFeB Permanent Magnet Production				COVID-19 Pandemic				
7					Bonded NdFeB Permanent Magnet Production Recycling/Reclamation of Rare Earth Elements (REE) from Waste or Non-				Other				
8					Recycling/Reclamation of Rare Earth Elements (REE) from Waste or Non- Traditional Feedstocks Recycling/Reclamation of NdFeB Permanent Magnets from Waste or Non-								
В.			1		Recycling/Reclamation of NdFeB Permanent Magnets from Waste or Non- Traditional Feedstocks								
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eviou	: Page				2b. Distribution and Finishing	Facilities					Next Pag
cilities	, indicate "No" and proceed to part B. P.	ovide the LOCATION (U.S. and Non-U.	anent Magnet related operations includ .S.) of the facility, indicate all operations my production facilities Once completed	at each facility using the drop down m	nd closed. If your organization is an end-user of NdFeB Permanent Magnets, please indicate enus, and specify any changes that may impact that facility over the next five years. If a giver	"No" and proceed to the next section. If	your organization does not currently o list each operation at the facility and the	perate any NdFeB Permanent Magnet i e given operation's capacity on separate	elated distribution or finishing lines. Note, only list facilities that	,	'es
_			Location		Facility Operat	ion		Facility	Capacity	Out	tlook
	Facility Name	City	State/Province (Select "Other" if outside the U.S.)	Country	Operation Type	Facility Operating Status	Average Annual Operating Cost (Cost of Goods Sold + Operating Expenses) (\$ Thousands USD)	Total Facility Capacity (Metric Tons (MT))	Average Capacity Utilization Rate (Last Full Year of Operation)	Do you anticipate any significant changes in this particular operation in the next five years?	If yes or unknown, provide a brief explanation.
1					Importer/Reseller/Distributor of NdFeB Permanent Magnets	Operating				Yes	
2					Finishing/Fabrication of NdFeB Permanent Magnets (e.g. Milling, Cutting, and Coating)	Standby/Idle				No	
3					Integration of NdFeB Permanent Magnets into Assemblies/Systems	Closed				Unknown	
4											
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19											
20											
		Comm	ents:								
your	rganization plans to operate and or fund	new NdFeB Permanent Magnet or re	lated product distribution and finishing f	acilities in 2022-2026, please answer t	the following: What is the operation type for the facility, the initial expected non-pilot capaci th NdFeB Permanent Magnets or related products. Do not list any production facilities Onc	ty, the final expected non-pilot capacity	, the expected start date, and the prima	ary challenge to start (if applicable). If y	our organization does not plan to	,	'es
Jerute	OF TOTAL NEW GIGHT GUIDAL DELWI	en zozz-zozo, mucate no and proc	Location	actives that will distribute and or min.	Facility Operat		A JECTOR.	Start	Factors		
	Facility Name	City	State/Province (Select "Other" if outside the U.S.)	Country	Operation Type	Initial Non-Pilot Expected Facility Capacity (Metric Tons (MT))	Full Non-Pilot Expected Facility Capacity (Metric Tons (MT))	Expected Start Date	Primary Challenge to Start (If applicable)	Exp	olain
1					Importer/Reseller/Distributor of NdFeB Permanent Magnets				NdFeB Price		
2					Finishing/Fabrication of NdFeB Permanent Magnets (e.g. Milling, Cutting, and Coating)				High Investment Costs		
3					Integration of NdFeB Permanent Magnets into Assemblies/Systems				Lack of Skilled Labor		
4									Lack of or Declining Domestic Demand		
5									High Operating Costs		<u> </u>
6									COVID-19 Pandemic		
7									Other		
8											
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185 - 1825. U.S. Production

18 J. U.S. Production as your organization produced, is currently producing, and or plans to produce NdFeB Permanent Magnets or elated products in the United States? If "No", please proceed to the next section. Do not include facilities that solely distribute, import, export, and or finish NdFeB Permanent Magnets. Only include facilities that produce NdFeB Permanent Magnets and or related products. Mining and Concentration of Rare Earth (RE) Minerals Select "No" if category is not relevant to your operations Unit of Measurement Economic Viability (2021 Only)

Average Cost per Unit to Produce (\$ USD)

| Capacity Utilization Needed to Remain Profitable 2017 2020 2021 2022 2023 2025 2026 (\$ USD) Total Rare Earth Oxides (TREO) Total Production (U.S. Facilities) nts (REE) con (Specify Here)
(Specify Here)
Total: Comments: amation of Rare Earth Elements (REE) from Waste Material/Non-Traditional Feedstocks Select "No" if category is not relevant to your operations (Specify Here if Other) aste Material/Feedstock Actual Production from Economic Viability (2021 Only)
verage Cost per Unit to Estimated Production from Waste Material/Feedstoc Capacity Utilization Needed to Remain Profitable 2021 Recycle (\$ USD) Primary Waste Material/Feedstock Utilized Total REE Production (U.S. Facilities) (Specify Here) (% of Rare Earth Elements (REE) of ontained in Waste Material/Feeds (% of Rare Earth Elements (REE) contained in Waste Material/ eedstock) 6 Other Rare Earth Element (REE)
7 Other Rare Earth Element (REE) (Specify Here)
(Specify Here)
Total: 0% 0% 0% Processing of Rare Earth (RE) Minerals into Carbonates Select "No" if category is not relevant to your operations
Unit of Measurement (Specify Here if Other) Average Cost per Unit to Capacity Utilization Needed to Actual P nated Product 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 Remain Profitable (\$ USD) Total Production (U.S. Facilities) Total Production (U.S. Facil

Neodymium Carbonate

Dysprosium Carbonate

Neodymium-Praseodymium Carbonate
Praseodymium Carbonate

Terbium Carbonate 7 Other REE Carbonates (Specify Here) Separation of Rare Earth (RE) Carbonates into Oxid Select "No" if category is not relevant to your operations Unit of Measurement Economic Viability (2021 Only)
verage Cost per Unit to 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 Total Production (U.S. Facilities)

1 Neodymium Oxide

2 Dysprosium Oxide

3 Neodymium-Praseodymium Oxide

4 Praseodymium Oxide

5 Terbium Oxide

6 Cerium Oxide

7 Other REE Oxides (Specify Here) Comments: Select "No" if category is not relevant to your operations (Specify Here if Other) Economic Viability (2021 Only)
Average Cost per Unit to Estimated Production (\$ USD) Total Production (U.S. Facilities) Total Proc

Neodymium Metal

Dysprosium Metal

Neodymium-Praseodyr

Praseodymium Metal

Terbium Metal

Cerium Metal

Other REE Metals (Specify Here) NdFeB Alloy Production Select "No" if category is not relevant to your operations (Specify Here if Other) Economic Viability (2021 Only)

Average Cost per Unit to
Capacity Utilization Needed to 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 Remain Profitable (\$ USD) Total Production (U.S. Facilities) Total Production (U.S. Facilities)

1 NdFe8 Alloy Containing Dysprosium

2 NdFe8 Alloy Containing Praesodymium

3 NdFe8 Alloy Containing Ferbium

4 NdFe8 Alloy Containing Terbium

5 NdFe8 Alloy Containing other RES

6 NdFe8 Alloy Containing other NEEs

6 NdFe8 Alloy Containing other Non-REES

(Specify Here) NdFeB Permanent Magnet Production ielect "No" if category is not relevant to your operation: Unit of Measurement Economic Viability (2021 Only)

Average Cost per Unit to Produce/Recycle

Capacity Utilizatio Capacity Utilization Needed to Remain Profitable 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 (\$ USD) Total Production (U.S. Facilities)

1 Sintered NdFeB Permanent Magnets
2 Bonded NdFeB Permanent Magnets
3 Other Magnets (Specify Here) Comments: Comments: BUSINESS CONFIDENTIAL - Per Section 705(d) of the Defense Production Act

335. Non-U.S. Production
te if your organization produced (or plans to produce) NdFeB Permanent Magnets or related products between 2017-2021 (and 2022-2026 expected) outside the United States. If your organization only distributed and or finished the following products, indicate "No" and p as your organization produced, is currently producing, and or plans to produce NdFeB Permanent Magnets or elated products **outside the United States**? If "No", please proceed to the next section. Do not include facilities that solely distribute, import, export, and or finish NdFeB Permanent Magnets. Only include facilities that produce NdFeB Permanent Magnets and or related products. Mining and Concentration of Rare Earth (RE) Minerals Select "No" if category is not relevant to your operations Unit of Measurement Economic Viability (2021 Only)

Average Cost per Unit to Produce (\$ USD)

Economic Viability (2021 Only)

Capacity Utilization Needed to Remain Profitable Estimate 2017 2020 2021 2022 2023 2025 2026 (\$ USD) Total Rare Earth Oxides (TREO) Total Production (Non-U.S. Facilities) nts (REE) con 1 Neodymium
2 Dysprosium
3 Praseodymium
4 Terbium
5 Cerium
6 Other Rare Earth Element (REE)
7 Other Rare Earth Element (REE) (Specify Here) (Specify Here) Comments: amation of Rare Earth Elements (REE) from Waste Material/Non-Traditional Feedstocks Select "No" if category is not relevant to your operations (Specify Here if Other) aste Material/Feedstock Actual Production from Economic Viability (2021 Only)
verage Cost per Unit to Estimated Production from Waste Material/Feedstoc Capacity Utilization Needed to Remain Profitable 2021 Recycle (\$ USD) Primary Waste Material/Feedstock Utilized Total REE Production (Non-U.S. Facilities) (Specify Here) (% of Rare Earth Elements (REE) ontained in Waste Material/Feeds (% of Rare Earth Elements (REE) contained in Waste Material/ eedstock) 6 Other Rare Earth Element (REE)
7 Other Rare Earth Element (REE) (Specify Here)
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Total: 0% 0% 0% Processing of Rare Earth (RE) Minerals into Carbonates elect "No" if category is not relevant to your operations
Unit of Measurement (Specify Here if Other) Economic Viability (2021 Only)

Average Cost per Unit to Capacity Utilization Needed to Actual P mated Product 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 Remain Profitable (\$ USD) Total Production (Non-U.S. Facilities) Total Production (Non-U.S. Fa

Neodymium Carbonate

Dysprosium Carbonate

Neodymium-Praseodymium Carbonate
Praseodymium Carbonate
Terbium Carbonate 7 Other REE Carbonates (Specify Here) Separation of Rare Earth (RE) Carbonates into Oxid Select "No" if category is not relevant to your operations Unit of Measurement Economic Viability (2021 Only)
verage Cost per Unit to 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 Total Production (Non-U.S. Facilities)

1 Neodymium Oxide

2 Dysprosium Oxide

3 Neodymium-Praseodymium Oxide

4 Praseodymium Oxide

5 Terbium Oxide

6 Cerium Oxide

7 Other REE Oxides

(S (Specify Here) Comments: Select "No" if category is not relevant to your operations (Specify Here if Other) Economic Viability (2021 Only)
verage Cost per Unit to Estimated Production (\$ USD) Total Production (Non-U.S. Facilities) 1 Neodymium Metal (Specify Here) NdFeB Alloy Production Select "No" if category is not relevant to your operations (Specify Here if Other) Economic Viability (2021 Only)

Average Cost per Unit to
Capacity Utilization Needed to 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 Remain Profitable (\$ USD) Total Production (Non-U.S. Facilities)

1 NdFe8 Alloy Containing Dysprosium

2 NdFe8 Alloy Containing Praeedymium

3 NdFe8 Alloy Containing Ferbium

4 NdFe8 Alloy Containing Terbium

5 NdFe8 Alloy Containing other RES

6 NdFe8 Alloy Containing other NEEs

6 NdFe8 Alloy Containing other Non-REES

(Specify Here) Total Production (Non-U.S. Facilities) NdFeB Permanent Magnet Production ielect "No" if category is not relevant to your operation: Unit of Measurement Economic Viability (2021 Only)

Average Cost per Unit to Produce/Recycle

Capacity Utilizatio Capacity Utilization Needed to Remain Profitable 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 (\$ USD) Total Production (Non-U.S. Facilities)

Sintered NdFeB Permanent Magnets

Bonded NdFeB Permanent Magnets

Other Magnets (Specify Here) Comments: Comments: BUSINESS CONFIDENTIAL - Per Section 705(d) of the Defense Production Act

c

Did your organization purchase feedstocks, than fifteen suppliers, rank them by value of												4a. Sc	urcing/Feedstock Purch	3163																	Next Page
	es/materials which were used to produce NdFeB Pern of purchases over the 2017-2016 period (greatest to i which do not include value-add activities).	sanent Magnets or related pro sast). For 2022-2026, limit	oducts between 2017-2021 your responses to signed a	(and 2022-2026 expected	ed)? If yes, answer the fol dums of understanding (lowing questions below MOUs). Do not include:	for each of your or speculative/desire	rganization's supplie ed feedstock purcha	ers. If no, please p	proceed to the nex	at section. If your organization rchases which were intended	has more for resale or furthe	Yes																		
processing (see section 4b) (i.e. purchases v	which do not include value-add activities).																														
												Processing of (Purchases of To	tare Earth (RE) Minerals tal Rare Earth Oxides an	into Carbonates d Waste Material)																	
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Previous Page									4b. f	idfe8 Permanent M	lagnet Purchases															_	Next Pa
Did your organ twenty supplie 4a in this secti	ers, rank them by value of purchase	nt Magnets or Ndf+B Permanent Magnet Blocks bet is over the 2017-2026 period (greatest to least). For	ween 2017-2021 (and 2022-2026 expected)? If yes, and 2022-2026, limit your responses to signed contracts a	swer the following questions belo and memorandums of understans	w for each of your organization ding (MOUs). Do not include sp	's suppliers. If no, please proceed to the eculative/desired purchases/lote, do n	next section. If your organization ot include any feedstock purchas	has more than is listed in section																			
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Unit of Mi	leasurement		_		1	1		2017	2017		ere if Other) 2018	2019	2019	2020	2020	2021	2021	2022	2022	2023	2023	2024	2024	2025	2025	2026	2026
		Country of Purchase			10-Digit HTSUS Code		Total:																				
	Supplier Name	(Location of Product)	Type of Magnet Purchased	Single/Sale Source?	(If Known)	Operation Type	Top Factor Influencing Purchase	Volume	Value (\$ Thousands USD)	Volume	Value (\$ Thousands USD)	Volume	Value (\$ Thousands USD)	Volume	Value (\$ Thousands USD)	Volume	Value (\$ Thousands USD)	Volume	Value (\$ Thousands USD)	Volume	Value (\$ Thousands USD)	Volume	Value (\$ Thousands USD)	Volume	Value (\$ Thousands USD)	Volume	Value (\$ Thousands t
1			Sintered NdFeB Permanent Magnets	Single Source		Importer/Reseller/Distributor of NdFeB Permanent Magnets	Financial Consideration																			<u> </u>	
2			Bonded NdFeB Permanent Magnets	Sole Source		Finishing/Fabrication of NdFeB Permanent Magnets (e.g. Milling, Cutting, and Coating)	Technical Specification																				
3			Other	Neither		Integration of NdFeB Permanent Magnets into Assemblies/Systems	Relationship																				
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5							Other																	_	_	-	
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								bi.	JSINESS CONFIDENT	AL - Per Section 705	(d) of the Defense P	reduction Act															

Previous Page Did your organization sell NdFell Permanent Magnets	ets or related products in general, as a finisher, and or end-user between 2 It your responses to digned contacts and memorandums of understandin	017-2021 (and 2022-2026 expected)? If yes, answer	r the following questions below for each of your. More, do not include intra-company trans	our organization's customers. If no, please proceed to	o the next section. If your organia	ration has more than fifteen co	ustomers, rank them by value of s	5.50ks ales over the 2017-	Yes			200	rks 225 7018, 10 U.S.C. 2533c:											Next Page
2006 period (greatest to least). For 2022-2026, Smit y Select "No" if category is not relevant to your operation of Management.	it your responses to signed contracts and memorandums of undentandin	g (MOUs). Do not include speculative/desired sale	ns . Note, do not include intra-company trans	dent or list any material that was internally consum	sed Ji.e. Only include sales to othe	er entities outside of your orga	nization). Total Rave Earth	Oxides (TREO) & Other	REE Waste Material/Feedstock	City Marca II Others		54.6	06 275 JULY 10 U.S.C. 7540C	State of water before	ter soyroscurseesur (U)	3/04/07/2014		100.000.000.00			-			
VII ST STREET,				TREO Content	(% of REE contained in TREO)		Total: Other	2017	2017 2018	city Hero if Other) 2018	2029	2019	2020 202	2021	3021	2022	2022	2023	2023 2	26 2024	3025	3025	2006	3036
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A 1 2 2	Automotive - Tradion Automotive - Speakers Automotive - Speakers Automotive - Motors & Geoders Automotive - Other		Financial Consideration Technical Specification Relationship																		\equiv			
4 5 6			Delivery Other																		=	=	=	=
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54 55	OHA Gas Other Unknown																				1			
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0. 4.		Praseodymium Metal Terbium Metal		Automotive - Other Consumer Appliances			Delivery Other														_	=		
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10 11 12		Other RSS Metals Waste Material Other		Industrial - Pumps & Compressors Industrial - Other Power Tools OI & Gas																	1	₽	=	
12 14 15				OI & Gas Other Unknown																	1==	1		
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Customer Name	Country of Salle	Type of RSS Alloy	Other Specify (If Applicable)	Direct End Use (If Knowe)	10-Digit HTSUS Code (if Known)	Percent of Cerium Content (Enter OK if Unknown or No Applicable)	Top Factor Influencing Sale	Volume	Value S Thousands USO) Volum	Value (\$ Thousands USD	Volume	Value (\$ Thousands USD)	Valume (5 Thousan	k USD) Volume	Value (\$ Thousands USD)	Volume	Value (\$ Thousands USO)	Valume (\$	Value Val Thousands USD) Val	Value (5 Thousands I	Volume Volume	Value (\$ Thousands USO)	Volume (Value (\$ Thousands USO)
2		NdFell Alloy Containing Dysprosium NdFell Alloy Containing Praseodymium		Automotive - Traction Automotive - Speakers			Financial Consideration Technical Specification														+	-	+	
3 4		NdFeB Alloy Containing Terbium NdFeB Alloy Containing Cerium		Automotive - Motors & Sensors Automotive - Other			Relationship Delivery Other														#=			
6	+	NdFell Alloy Containing other RSEs NdFell Alloy Containing other Non-RSEs		Consumer Appliances Consumer Electronics			Other	\vdash									 	-+			+-	+	+	
2 3 9		NS-sk Fowder Ferroboron 1001 Steel		Wind Power Generators Aerospace & Defense																	=			=
30 33 32		Waste Misterial Other	-	Industrial - Pumps & Compressors Industrial - Other Power Tools OI & Gas Other																	=	=	=	
34 35				Ol & Gas Other Unknown				\blacksquare													ᆂ	ᆂ	ᆂ▋	
Select "No" if category is not relevant to your operation	Comments:							NdFeB Permanen	rt Magnets		1													_
Customer Name	Country of Sale Type of Magnet	Magnet Grade	Direct End Use (if Known)	DFARS 225 7018, 10 U.S.C. 2523c Compliant?	10-Digit HTSUS Code (if Known)	Percent of Cerium Content (Enter 0% if Unknown or No Applicable)	Total:						2020 202										30%	20%
1	Sintered NdFeli Permanent Mannets	N20 109	(If Known) Automotive - Traction	Yes	(if known)	Applicable)	Top Factor Influencing Sale Financial Consideration	Volume (Value Volum S Thousands USD) Volum	Value (\$ Thousands USD)	Volume	Value (§ Thousands USD)	Volume Value (5 Thousan	s USD) Volume	Value (§ Thousands USD)	Volume	Value (\$ Thousands USO)	Volume (5	Value Vol Thousands USD)	whe (5 Thousands I	250) Volume	Value (\$ Thousands USO)	Volume	Value (\$ Thousands USO)
2 2 4	Bonded NdFeli Permanent Magnets Other	NSO+ N20M-N29M NSOM+	Automotive - Speakers Automotive - Motors & Sensors Automotive - Other	No Unknown			Technical Specification Relationship Delivery														#			=
F. 5 6 7		N20H-N29H N50H+ N20SH-N29SH	Consumer Appliances Consumer Electronics Word Preser Consensions				Other				Ė										=	=	=	
9 9 90		NS2SH+ N20UH-N29UH NSGUH-H	Aerospace & Defense Medical Industrial - Pumps & Compressors Industrial - Other																		#	ŧ	╪	
12 11 37		NSSSH NSSAH NSSAH-NSSAH NSSAH-N	Industrial - Other Power Tools Oil & Gas Other																		⇇	=	=	
35	Comments:	Unknown	Unknown	I			Sami Emphasia di an	andusts fortifica	Feit Permanent Magnets (2022-	WK ANA														
Select "No" if category is not relevant to your operation	rions							Name of the last																
Direct End Use	Primary Customer Name	Primary Finished or Semi-	Finished Product Sold	Type of Magnet Contained Within	Percent of Value Attributed to Magnet(s) Contained Within	Percent of (Enter 0% if Union	f Cerium Content nown or Not Applicable)	so-dept HTS (If Kno	RUS Code Top Re	ctor influencing Sale	Magnet Substit (If yes, proces	outer, Available? ed to the right	Substitute Magnet Type (Specify Below)	Ad	Nantages	Disade	vantages pen	If a sufficient and n manent magnets w the	reliable domestic source of were available, would you s a listed substitute?	idfeli ili utilize		Explain		
1 Automotive - Traction 2 Automotive - Marce - 1				Sintered NdFell Permanent Magnets Bonded NdFell Permanent Magnets Ceber					Tect	cial Consideration nical Specification Substitutable	y y			Setter Set	Performance ter Quality	Reduced F Worse Move C	Darformance.		Yes					
4 Automotive - Mozors & Sensors 4 Automotive - Other 5 Consumer Appliances 6 E Consumer Electronive				other						Relationship Delivery Other	Not Ap Unk	ym.iDil 10WN		Am	ple Supply re Sourcing	More E Limbs Sole-Sourced/ Praximity I	Ayertowe d Supply Insecure Supply to Customer				=	=		=
7 Wind Power Generators 2 Aurospace & Defense 9 Medical														Proximit	Other	Or Co	ther							
30 industrial - Pumps & Compressors 11 industrial - Other 12 Power Tools																								=
Industrial Tuesday Industrial Tuesda																								=
Will your commission's demand for MdGaB necessaria	ent magnets increase over the next ten years? If yes, indicate if all of this o	ternand can be satisfied by current and or anticipate	ed capacity or if substitutes are necessary. If n	no, please proceed to the next section.																				
	Comments:																							
Will your organization's demand for NdFell permanen Comments:	Comments:																							

rev	rious Page										Next Page
					ployment						
	ord the total number of full time equivalent (FTE) empl							sted in sections 2a	and 2b. Estimates a	re acceptable.Note	, if your
orga	nization was instructed to respond "No" to both 2a a	nd 2b, please inpu	t "End-User" in the comr		ne page and procee	d to the next secti					
	-			Past			Current			ected	
A.		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
	FTE Employees & Contractors									<u> </u>	
lec	ord the number of workers by occupation employed at	the locations listed			eptable.						
	Occupation		Number o	of Employees							
	Manufacturing Engineers, Scientists, R&D										
	Production Line Operations										
В.	Testing and Quality Control										
	Information Technology/Computing										
	Sales, Administrative, and Management	/C : C . I									
	Other	(Specify Here)		0							
		Total:		•							
	Issue		Timeframe	Primary Occupation Affected				Explain			
	Attracting Workers to Location		Ongoing, Expected to Continue	Manufacturing Engineers, Scientists, R&D							
	Employee Turnover		Past Only (Resolved)	Production Line Operations							
C.	Finding Experienced Workers		Expected In Future	Testing and Quality Control							
	Finding Qualified Workers		No or Not Applicable	Information Technology/Computing							
	Finding U.S. Citizens			Sales, Administrative, and Management							
	Significant Portion of Workforce Retiring			Other							
	Other	(Specify Here)		None							
	Other	(Specify Here)									
	Describe any significant changes in the recruitment, hiring and/or retention of human capital										
	If you plan to shut down a facility, do you reasonably anticipate being able to hire or rehire workers?			Explain:							
	Comments:										
			DUCINIC	C CONFIDENTIAL Box Soction	- 70F/d) of the De	fanca Duaduction	A c+				

		FeB Permanent Magnet product related ca flar expenditures and type of Capits for the		Estimates are ac ord \$ in Thousan		surveyingut of \$12			Yes	If no, procee	_ w she ne
_1	Total CapEx	and Vehicles	2017 2018 \$0 \$0	Past 2019 \$0	2020	2021 50		Current 2022 \$0	2023 50	2024 \$0	2025 \$0
2 3 4	IT, Computers, Software Land, Buildings, and Lea Other	sehold Improvements (Specify Here)									
Prov proje	Other ide your organization's Cap ects that your organization	(Specify Here) Ex funding sources for 2021 only. Estimate is currently conducting (or plans to conduct	s are acceptable. U.S. and Non-U.S. Indust by 2026).	try refers to joint	ventures or other p	artnerships with your organizatio	(does not include	bonds, IPOs, or other fo	unding sources). In addition	n, please prov	vide any reli
Inter	Source of Fu nal/Self-Funded Related (Including CMI & A	nding									
Othe	Related r USG-Related r/Local Government		CapEx Project(s) Explain:								
Non- Non- Other	U.S. Industry U.S. Government E (Specify Here										
From	n 2017-2021, did your orga		CapEx related to NdFeB Permanent Magn	et related produc	ts?						
For 2	s, identify the reasons for t 1022-2026, does your organ s, identify the reasons for t	nization anticipate any major change(s) to C	apEx related to NdFeE Permanent Magne	et related product	12						
_		nese change(s): nt Magnets and or related products, are the ates in).	ore significant CapEx costs associated with	n production? If y	es, please answer t	ne following below. If no, please p	roceed to the next	section. (Note, only pro	rvide CapEx for the step(s)	of the proces	
	Equipment	Equipment Producer Name	Equipment Producer Country		Average lead time to acquire (in		Primary Resolution	Criticality	Average cost to acquire (\$ Thousands USD)		Comments
Г	Equipment	Equipment intolucer name	Equipment Producer Country	Source Single Source	days)	()f Applicable) Cyber Security Incident	(If Applicable) Designed Input	4 - Little to no impact on production	(\$ Thousands USD)		Commercs
				Sole Source		Disease/Quarantine	Developed Captive Capability	3 - Partial impact on production			
				Neither		Equipment Outage	Identified Another Supplier	2 - Significant impact on production			
						Financial Constraint	Stockpiling	1 - Critical to production (cannot produce without)			
H						Labor Disruption Regulatory/Environmental	Substituted Input Waited Until				
L						Regulatory/Environmental Restrictions Other	Disruption Passed Other None				
			Recycling/Reclamation o	d Rare Earth Elem	nents (REE) from W	aste Material/Non-Traditional Fe	edstocks				
	Equipment	Equipment Producer Name	Equipment Producer Country	Single/Sole Source	Average lead time to acquire (in days)	Difficulties to Acquire (If Applicable)	Primary Resolution (If Applicable)	Criticality	Average cost to acquire (\$ Thousands USD)		Comments
L				Single Source		Cyber Security Incident	Designed Input	4 - Little to no impact on production			
				Sole Source		Disease/Quarantine	Developed Captive Capability Identified Another Supplier	3 - Partial impact on production 2 - Significant impact		-	
H				Neither		Equipment Outage Financial Constraint	Another Supplier Stockpiling	2 - Significant impact on production 1 - Critical to production (cannot			
E						Labor Disruption	Substituted Input	produce without)			
						Regulatory/Environmental Restrictions	Waited Until Disruption Passed Other				
E						Other None	Other None				
	Equipment	Equipment Producer Name	Equipment Producer Country	Processing of Ram Single/Sole Source	Average lead time to acquire (in days)	is into Carbonates Difficulties to Acquire (If Applicable)	Primary Resolution	Criticality	Average cost to acquire (\$ Thousands USD)		Comments
Ī				Single Source	days)	Cyber Security Incident	()f Applicable) Designed Input	4 - Little to no impact on production			
				Sole Source		Disease/Quarantine	Developed Captive Capability	3 - Partial impact on production			
				Neither		Equipment Outage	identified Another Supplier	2 - Significant impact on production			
						Financial Constraint Labor Disruption	Stockpiling Substituted input	1 - Critical to production (cannot produce without)			
l						Regulatory/Environmental Restrictions	Waited Until Disruption Passed				
F						Other None	Other None			Ħ	
				Separation of Ra	re Earth (RE) Carbo	nates Into Oxides	Primary		Average must be acquire		
_	Equipment	Equipment Producer Name	Equipment Producer Country	Single/Sole Source	Average lead time to acquire (in days)	Officulties to Acquire (If Applicable) Cyber Security Incident	Primary Resolution (If Applicable)	Criticality 4 - Little to no impact	Average cost to acquire (\$ Thousands USD)		Comments
				Single Source		Disease/Quarantine	Designed Input Developed Captive Capability	on production 3 - Partial impact on production			
				Neither		Equipment Outage	Identified Another Supplier	2 - Significant impact on production			
Ī						Financial Constraint	Stockpiling	1 - Critical to production (cannot produce without)			
F						Labor Disruption Regulatory/Environmental	Substituted Input Waited Until				
L						Regulatory/Environmental Restrictions Other None	Waited Until Disruption Passed Other None				
				Ne	Feli Metal Product	ion					
	Equipment	Equipment Producer Name	Equipment Producer Country	Single/Sole Source	FeB Metal Product Average lead time to acquire (in days)	Difficulties to Acquire (If Applicable)	Primary Resolution (If Applicable)	Criticality	Average cost to acquire (\$ Thousands USD)		Comments
				Single Source		Cyber Security Incident	Designed Input	4 - Little to no impact on production			
H				Sole Source Neither		Disease/Quarantine Equipment Outage	Developed Captive Capability identified Another Supplier	3 - Partial impact on production 2 - Significant impact on production			
				NAME OF THE PARTY		Financial Constraint	Another Supplier Stockpiling	on production 1 - Critical to production (cannot			
L						Labor Disruption	Substituted Input	produce without)			
L				<u>L</u>		Regulatory/Environmental Restrictions Other	Waited Until Disruption Passed Other			<u> </u>	
Ė						None	None				Ξ
	Equipment	Equipment Producer Name	Equipment Producer Country	Single/Sole Source	FeB Alloy Product Average lead time to acquire (in days)	Officulties to Acquire (If Applicable)	Primary Resolution (If Applicable)	Criticality	Average cost to acquire (\$ Thousands USO)		Comments
				Single Source		Cyber Security Incident	Designed Input	4 - Little to no impact on production			
L				Sole Source		Disease/Quarantine	Developed Captive Capability	3 - Partial impact on production			
L				Neither		Equipment Outage	Identified Another Supplier	2 - Significant impact on production 1 - Critical to production (cannot		<u> </u>	
H						Financial Constraint Labor Disruption	Stockpiling Substituted input	production (cannot produce without)		-	
I						Regulatory/Environmental Restrictions	Waited Until Disruption Passed				_
				ŧΞ		Other None	Other None			E	
	Equipment	Equipment Producer Name	Equipment Producer Country	NdFeB Pe Single/Sole Source	rmanent Magnet F Average lead time to acquire (in	Difficulties to Acquire (If Applicable)	Primary Resolution (If Applicable)	Criticality	Average cost to acquire (\$ Thousands USD)		Comments
Ē				Single Source Sole Source	days)	Cyber Security Incident Disease/Quarantine Equipment Outsire	(If Applicable) Designed Input Developed (dentified	4 - Little to no impact 3 - Partial impact on	(7	F	
I				Alleren		Equipment Outage Financial Constraint	Stockpiling	2 - Significant impact 1 - Critical to production (cannot produce without)			_
F						Labor Disruption Regulatory/Environmental Restrictions	Substituted Input Waited Until			\vdash	
F						Restrictions Other None	Other None			E	_
			Recycling/Reclamation	n of NdFeB Perm.	anent Magnets fro Average lead time	n Waste or Non-Traditional Feed	Primary Resolution				Ξ
	Equipment	Equipment Producer Name	Equipment Producer Country	Single/Sole Source	Average lead time to acquire (in days)	Difficulties to Acquire (If Applicable)	()f Applicable)	Criticality	Average cost to acquire (\$ Thousands USD)		Comments
L				Single Source		Cyber Security Incident	Designed Input Developed	4 - Little to no impact on production 3 - Partial impact on		<u> </u>	
				Sole Source		Disease/Quarantine	Developed Captive Capability Identified	3 - Partial impact on production 2 - Significant impact		-	
L				Neither		Equipment Outage Financial Constraint	identified Another Supplier Stockpiling	2 - Significant impact on production 1 - Critical to production (cannot		-	
						Labor Disruption	Substituted Input	produce without)			
			·	. —		Regulatory/Environmental Restrictions	Waited Until Disruption Passed			1 _	
										-	
						Other None	Other None				

Prev	ious Page				0.0		ment/Intellectual Pr						Next Page
	Has your organization conduc				nd development (R&	&D) from 2017-202	1 (and or expects to	for 2022-2026)?		Yes	If no, proceed to p	art D below.	
	Record your organization's R8	kD dollar expenditures a	and type of R&D e	expenditure for the									
1					Record	\$ in Thousands, e.g Past	g. \$12,000.00 = surv	ey input of \$12	Current		Fut	ture	
В.				2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
В.	1 Total R&D Expenditure 2 Basic Research	es		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	3 Applied Research												
	4 Product/Process Deve	lopment											
	From 2017-2021, did your org		ny major change(s	s) in R&D expenditu	ures related to NdFe	B Permanent Magr	net related products	?					
	For 2022-2026, does your org	anization anticipate any	major change(s)	to R&D expenditur	res related to NdFeB	Permanent Magne	et related products?						
	If Yes, identify the reasons for	these change(s):											
C.	Provide your organization's Rapprovide any relevant R&D pro	jects that your organiza					oint ventures or othe	er partnerships with	h your organization	(does not include b	onds, IPOs, or other	funding sources). I	n addition, please
	Source of Fu Internal/Self-Funded DDE-Related (Including CMI & DDD-Related Other USG-Related State/Local Government U.S. Industry Non-U.S. Industry Non-U.S. Government Other (Specify Hen	e)		R&D Proje	ect(s) Explain:								
		Total: 0%								1			
D.	Did your organization own or acquisition refers to when the			For licensees, date							If no, proceed to the	ne next section.	
	critical (can not produce with	out) to the production	of NdFeB Perman										
		ial number of the IP you	of NdFeB Perman	ilizes, the organizati					quisition dates).				
	critical (can not produce with	out) to the production	of NdFeB Perman		ion which owns the		Cost of Acquisition	on (\$ Thousands	quisition dates).		Comments		
	critical (can not produce with Record the following: The seri	ial number of the IP you	of NdFeB Perman	ilizes, the organizati	ion which owns the	IP, and the date of		on (\$ Thousands	quisition dates).				
	critical (can not produce with Record the following: The seri	ial number of the IP you	of NdFeB Perman	ilizes, the organizati	ion which owns the	IP, and the date of	Cost of Acquisition	on (\$ Thousands	quisition dates).				
	critical (can not produce with Record the following: The seri	ial number of the IP you	of NdFeB Perman	ilizes, the organizati	ion which owns the	IP, and the date of	Cost of Acquisition	on (\$ Thousands	quisition dates).				
	critical (can not produce with Record the following: The seri	ial number of the IP you	of NdFeB Perman	ilizes, the organizati	ion which owns the	IP, and the date of	Cost of Acquisition	on (\$ Thousands	quisition dates).				
	critical (can not produce with Record the following: The seri	ial number of the IP you	of NdFeB Perman	ilizes, the organizati	ion which owns the	IP, and the date of	Cost of Acquisition	on (\$ Thousands	quisition dates).				
	critical (can not produce with Record the following: The seri	ial number of the IP you	of NdFeB Perman	ilizes, the organizati	ion which owns the	IP, and the date of	Cost of Acquisition	on (\$ Thousands	quisition dates).				
	critical (can not produce with Record the following: The seri	ial number of the IP you	of NdFeB Perman	ilizes, the organizati	ion which owns the	IP, and the date of	Cost of Acquisition	on (\$ Thousands	quisition dates).				
	critical (can not produce with Record the following: The seri	ial number of the IP you	of NdFeB Perman	ilizes, the organizati	ion which owns the	IP, and the date of	Cost of Acquisition	on (\$ Thousands	quisition dates).				
	critical (can not produce with Record the following: The seri	ial number of the IP you	of NdFeB Perman	ilizes, the organizati	ion which owns the	IP, and the date of	Cost of Acquisition	on (\$ Thousands	quisition dates).				
	critical (can not produce with Record the following: The seri	ial number of the IP you	of NdFeB Perman	ilizes, the organizati	ion which owns the	IP, and the date of	Cost of Acquisition	on (\$ Thousands	quisition dates).				
	critical (can not produce with Record the following: The seri	ial number of the IP you	of NdFeB Perman	ilizes, the organizati	ion which owns the	IP, and the date of	Cost of Acquisition	on (\$ Thousands	quisition dates).				
	critical (can not produce with Record the following: The seri	ial number of the IP you	of NdFeB Perman	ilizes, the organizati	ion which owns the	IP, and the date of	Cost of Acquisition	on (\$ Thousands	quisition dates).				
	critical (can not produce with Record the following: The seri	ial number of the IP you	of NdFeB Perman	ilizes, the organizati	ion which owns the	IP, and the date of	Cost of Acquisition	on (\$ Thousands	quisition dates).				
	critical (can not produce with Record the following: The seri	ial number of the IP you	of NdFeB Perman	ilizes, the organizati	ion which owns the	IP, and the date of	Cost of Acquisition	on (\$ Thousands	quisition dates).				
	critical (can not produce with Record the following: The seri	ial number of the IP you	of NdFeB Perman	ilizes, the organizati	ion which owns the	IP, and the date of	Cost of Acquisition	on (\$ Thousands	quisition dates).				
	critical (can not produce with Record the following: The seri	ial number of the IP you	of NdFeB Perman	ilizes, the organizati	ion which owns the	IP, and the date of	Cost of Acquisition	on (\$ Thousands	quisition dates).				
	critical (can not produce with Record the following: The seri	ial number of the IP you	of NdFeB Perman	ilizes, the organizati	ion which owns the	IP, and the date of	Cost of Acquisition	on (\$ Thousands	quisition dates).				
	critical (can not produce with Record the following: The seri	ial number of the IP you	of NdFeB Perman	ilizes, the organizati	ion which owns the	IP, and the date of	Cost of Acquisition	on (\$ Thousands	quisition dates).				
	ritical (can not produce with Record the following: The seri	Name of IP Owner	of NdFeB Perman	ilizes, the organizati	Date of A	IP, and the date of cquisition	Cost of Acquisition	on (\$ Thousands	quisition dates).				
	critical (can not produce with Record the following: The seri	Name of IP Owner	of NdFeB Perman	ilizes, the organizati	Date of A	IP, and the date of cquisition	Cost of Acquisition	on (\$ Thousands	quisition dates).				
	ritical (can not produce with Record the following: The seri	Name of IP Owner	of NdFeB Perman	ilizes, the organizati	Date of A	IP, and the date of cquisition	Cost of Acquisition	on (\$ Thousands	quisition dates).				
	ritical (can not produce with Record the following: The seri	Name of IP Owner	of NdFeB Perman	ilizes, the organizati	Date of A	IP, and the date of cquisition	Cost of Acquisition	on (\$ Thousands	quisition dates).				

rre/	/ious Page				<u>Next Page</u>		
				9. National Defense/Critical Infrastructure			
A.	Since 2017, has your organization directly or indirectly	supplied NdFeB Permi	anent Magnets or related pro	ducts for incorporation into U.S. critical infrastructure sectors? If no, proceed to part C. If yes, proceed to part B.	Yes		
	For 2022-2026, does your organization plan to directly or indirectly supply NdFeB Permanent Magnets or related products for incorporation into U.S. critical infrastructure sectors? If no, proceed to part C. If yes, proceed to part B.						
	For 2017-2021, rank the top three critical infrastructure sectors your organization directly or indirectly supplies with NdFeB Permanent Magnets and or related products. Please do the same for 2022-2026. Once complete, proceed to Part C.						
	Definitions of each sector may be found at: https://ww						
	Critical Infrastructure Sector	(2017-2021)	(2022-2026)	4			
	Chemical Sector						
	Commercial Facilities Sector Communications Sector						
	Critical Manufacturing Sector						
	Dams Sector						
_	Defense Industrial Base Sector						
В.	Emergency Services Sector						
	Energy Sector						
	Financial Services Sector						
	Food and Agriculture Sector						
	Government and Facilities Sector						
	Healthcare and Public Health Sector						
	Information Technology Sector						
	Nuclear Reactors, Materials, and Waste Sector						
	Transportation Systems Sector						
	Waste and Wastewater Systems Sector						
	How have current market conditions involving the subj	ject product categories	s affected your ability to mee	t current U.S. Critical Infrastructure requirements? Please explain below. If not applicable, proceed to part D.	Yes		
C.							
	How have current market conditions involving the subj	ject product categories	s affected your ability to mee	t current U.S. Defense requirements? Please explain below. If not applicable, proceed to part E.	Yes		
D.							
٥.							
		-+:+h DEADC 22E 701	10 10 11 0 0 2522-21-4:+-	when you are reading the second this office to the second	l		
	is your organization ensuring that its sales are compilar	III WILII DFARS 225.701	16, 10 0.3.C. 2555C! Illuicate	when your organization began this effort (or plans to) and please explain below.	ı		
	Definition/Terms may be found at: https://www.federa	alregister gov/docume	ents/2019/04/30/2019-08485	defense-federal-acquisition-regulation-supplement-restriction-on-the-acquisition-of-certain-magnets/	l		
E.	bermadi, remisma, se isana at i <u>ntess, i www.caer</u>	an egisteri.gov/ docume	<u></u>	To the Court of th	l		
Comments:							
	BUSINESS CONFIDENTIAL - Per Section 705(d) of the Defense Production Act						

See to requirement plant to report of any power program and in the control of the	i				10. Comp	etition/Challenges					
The state of the land contains and the state of the state		Does yo	our organization struggle to compete against								
Presentable in the property of the separate of											
Post Controlled Control Cont		Are any of the input conditions below hindering your organization's ability to compete on price?									
The control of the co		Input Condition		Percentage of total operating costs		If Yes, specify the		5 de			
Services beginners to the first programme to				(Estimates Acceptable)	price?	regulation/incentive below	Explain				
A post contrasplacement of the											
Section 1.	Α.	Export I	Licensing/Regulations								
The contract of the contract o		Labor			, and the second						
Security Control Contr			g Feedstock Material								
Set Tables With word of the Table State			ortation Costs								
Total By The right cannot got to a with proton of the self-tip control special response to grow and self-time very control		VAT Taxes, Tariffs, and other Trade Duties									
The finite for the policy of policy of the finite f		Other									
See your expensation covered precision on the control precision in section of the control of the		What si would r	ngle change (and to which portion of the No	dFeB Permanent Magnet supply chain)							
intend to professer in the functional processor of the current and the following processor barro. Control Person Opposition house in 15 April 2012 The common of the current and the current											
Antispose of Paris and Cognitation beave Projection P						firms/governments both inside and	d outside of the United States? D	Oo you Current Participation			
Comments: System organization looking to expected of spreading informationally in serveral configuration in the control of spreading information in the control of sp		iiiteiiu t				Anticinated/Past End Date					
System operated in locality to expend a speciation (solitary to expend a speciation)) (solitary to e			Country	Partner Organization Name	(If Applicable)	(If Applicable)		Explain			
System operated in locality to expend a speciation (solitary to expend a speciation)) (solitary to e							-				
System operated in locality to expend a speciation (solitary to expend a speciation)) (solitary to e											
System operated in locality to expend a speciation (solitary to expend a speciation)) (solitary to e	В.										
System operated in locality to expend a speciation (solitary to expend a speciation)) (solitary to e											
System operated in locality to expend a speciation (solitary to expend a speciation)) (solitary to e											
System operated in locality to expend a speciation (solitary to expend a speciation)) (solitary to e											
System operated in locality to expend a speciation (solitary to expend a speciation)) (solitary to e											
System operated in locality to expend a speciation (solitary to expend a speciation)) (solitary to e											
Property of Comments Property Property Challenge to increasing market share Explain			Comments:								
Signature acceptable Stock		ls your o	organization looking to expand its operation ses to only activities that your organization	ns domestically (or internationally) between a performs (i.e. do not provide responses on	2022-2026? If yes, answer the following questio the market as a whole or in general).	ns below. If no, please proceed to p	part D. Note, limit market share	Yes			
Decrease Environmental regulation/Immediation Foundation Found					2026 (If Applicable)			Explain			
Comments											
Unknown Financing/coefs availability Forger Competition Forger Competi											
Comments: Comm	C.										
Library analyticytoss						Foreign Competition					
Comments: Comments: Trace disjutes/sulfs											
Comments: Comments Trace Trace disputes/Larifs											
Comments:						Taxes					
dentify the primary challenger/issues affecting your competitive position in the overall [U.S. and non-U.S.] subject product markets. Rank the leading 5 most significant challenges (1 being the most important issue/impact, 2 being the next most important issue/impact, etc.). Explain your response. Challenge Superimences?					Trade disputes/tariffs						
Challenge/Issue Challenge Experienced? Rank Top 5 Explain 1 Aging equipment, facilities, or infrastructure Yes 2 Aging workforce No 3 Counterfor guests 4 Cyber security 4 Cyber security 5 Explain 1 Special Counterfor guests 5 Explain 1 Special Counterfor guests 6 Explain 1 Special Counterfor guests 7 Explain 8 Farancing regulators, femediation 9 Foreign competition 9 Foreign competition 10 Covernment acquisition process 11 Covernment packbushiny process 12 Covernment packbushiny burden 13 Healthcare 14 Industrial espionage - foreign 15 Industrial espionage - foreign 16 Industrial espionage - foreign 17 Intellectual property/patent infringement 18 Islabor saukbiller/y 19 Industrial espionage - foreign 19 Obsolicescene 10 Obsolicescene 11 Special Counterfor guests 12 Pominity to suspiliers 13 Islabor saukbiller/y 14 Industrial espionage - foreign 15 Industrial espionage - foreign 16 Industrial espionage - foreign 17 Intellectual property/patent infringement 18 Islabor saukbiller/y 19 Obsolicescene 10 Obsolicescene 11 Counterformous Infrasers 12 Pominity to suspiliers 13 Pominity to suspiliers 14 Counterformous Infrasers 15 Pominity to suspiliers 16 Industrial explanage - foreign 17 Intellectual property/patent infringement 18 Islabor saukbiller/y 19 Obsolicescene 20 Obsolicescene 21 Pominity to suspiliers 22 Pominity to suspiliers 23 Pominity to suspiliers 24 Counterformous Institution Institution 25 Obsolicescene 26 Tade disputes/partifis 27 Pominity to suspiliers 28 Tade disputes/partifis 29 Tade disputes/partifis 30 Other (spectly)			Comments:								
1 Aging equipment, facilities, or infrastructure		Identify	the primary challenges/issues affecting you	ur competitive position in the overall [U.S. an	d non-U.S.] subject product markets. Rank the I	eading 5 most significant challenge	s (1 being the most important is	sue/impact; 2 being the next most imp	ortant issue/impact, etc.). Explain your response.		
2 Aging workforce			Challenge/Issue		Challenge Experienced? Rank Top 5		Rank Top 5		Explain		
2 Aging workforce		1									
3 Counterfeit parts	2 Aging workforce		Aging workforce								
5 Domestic Competition		3 Counterfeit parts									
Environmental regulation/remediation			5 Domestic competition 6 Environmental regulations/remediation 7 Export controls/TAR & EAR								
8 Financing/credit availability		6									
9 Foreign competition 10 Government acquisition process 11 Government purchasing volatility 12 Government regulatory burden 13 Heatherien 14 Heatherien 15 Industrial espionage - Foreign 16 Injust availability 17 Intellectual property/patent infringement 18 Labor availability/costs 19 Natural disasters (including disease/quarantine) 20 Obsolescence 21 Proximot cost 22 Proximity to customers 23 Proximity to suspiliers 24 Qualifications/certifications 25 Qualifications/certifications 26 Rabo costs 27 Reduction in USG demand 28 Taxes 29 Taxed disputes/sariffs 30 Worker/skills retention 31 Other (specify) 32 Other (specify)								-			
10 Government acquisition process	9 F										
11 Government purchasing volatility											
12 Government regulatory burden											
Industrial espinage - foreign Industrial espinage - Foreign Industrial espinage - Foreign Industrial espinage - Foreign Intellectual property/patent infringement Intellectual property/patent intell		12	Government regulatory burden								
Industrial esponage - Foreign	n										
Injust availability Injust	υ.	14 Industrial espionage - domestic									
Intellectual property/patent infringement	16 Input availability 17 Intellectual property/pa 18 Labor availability/costs 19 Natural disasters (includ 20 Obsolescence 21 Pension costs		oustrial espionage - foreign uput availability								
Salar Sala			ntellectual property/patent infringement								
20 Obsolescence			Labor availability/costs								
Pension costs			Obsolescence	iunej							
Proximity to suppliers			Pension costs								
24 Qualifications/certifications 25 Quality of injusts 26 R&D costs 27 Reduction in USG demand 28 Taxes 29 Trade disputes/tariffs 30 Worker/skills retention 31 Qother (specify) 32 Other (specify)			Proximity to customers								
25 Quality of inputs		23	Proximity to suppliers Qualifications/certifications								
26 R&D costs 27 Reduction in USG demand 28 Taxes 29 Trade disputes/tariffs 30 Worker/skill retention 31 Other 32 Other 4 (specify)	25		Quality of inputs								
28 Taxes 29 Trade disputes/tariffs 30 Worker/skills retention 31 Other (specify) 32 Other (specify)		26	R&D costs					·			
29 Trade disputes/farifs											
30		29	Trade disputes/tariffs								
32 Other (specify)		30	Worker/skills retention			-					
Comments:		J.	Other	(Specify							
			Comments								

Previous Page				
11. Certification				
The undersigned certifies that the information herein supplied in response to this questionnaire is complete and correct to the best of his/her				
knowledge. It is a criminal offense to willfully make a false statement or representation to any department or agency of the United States				
Government as to any matter within its jurisdiction (18 U.S.C. 1001 (1984 & SUPP. 1197)).				
Once your organization has completed this survey, save a copy and submit it via email to NdFeB232@bis.doc.gov . Be sure to retain your survey for				
your records and to facilitate any necessary edi	ts or clarifications.			
Organization Name				
Organization's Internet Address				
Name of Authorizing Official				
Title of Authorizing Official				
E-mail Address				
Phone Number and Extension				
Date Certified				
In the box below, provide any additional comments or any other information you wish to include regarding this survey assessment.				
How many hours did it take to complete this survey?				
BUSINESS CONFIDENTIAL - Per Section 705(d) of the Defense Production Act				