Form 5500

Department of the Treasury
Internal Revenue Service

Department of Labor
Employee Benefits Security Administration

Pension Benefit Guaranty Corporation

Annual Return/Report of Employee Benefit Plan

This form is required to be filed for employee benefit plans under sections 104 and 4065 of the Employee Retirement Income Security Act of 1974 (ERISA) and sections 6057(b) and 6058(a) of the Internal Revenue Code (the Code).

▶ **Complete all entries in accordance with the instructions to the Form 5500.**

OMB Nos. 1210-0110
1210-0089

2018

This Form is Open to Public Inspection

Part I Annual Report Identification Information

For calendar plan year 2018 or fiscal plan year beginning 07/01/2018 and ending 06/30/2019

A This return/report is for:
- [ ] a multiemployer plan
- [ ] a multiple-employer plan (Filers checking this box must attach a list of participating employer information in accordance with the form instructions.)
- [X] a single-employer plan
- [ ] a DFE (specify) ____

B This return/report is:
- [ ] the first return/report
- [ ] the final return/report
- [ ] an amended return/report
- [ ] a short plan year return/report (less than 12 months)

C If the plan is a collectively-bargained plan, check here. . . . . ▶ [X]

D Check box if filing under:
- [X] Form 5558
- [ ] automatic extension
- [ ] the DFVC program
- [ ] special extension (enter description)

Part II Basic Plan Information—enter all requested information

1a Name of plan
JOHNSON MATTHEY, INC. AMENDED AND RESTATED HOURLY EMPLOYEES PENSION PLAN

1b Three-digit plan number (PN) ▶ 002

1c Effective date of plan 07/01/1950

2a Plan sponsor's name (employer, if for a single-employer plan)
Mailing address (include room, apt., suite no. and street, or P.O. Box)
City or town, state or province, country, and ZIP or foreign postal code (if foreign, see instructions)
JOHNSON MATTHEY, INC.

435 DEVON PARK DRIVE, SUITE 600
WAYNE, PA 19087-1998

2b Employer Identification Number (EIN) 23-0411710

2c Plan Sponsor's telephone number 610-971-3000

2d Business code (see instructions) 332900

Caution: A penalty for the late or incomplete filing of this return/report will be assessed unless reasonable cause is established.

Under penalties of perjury and other penalties set forth in the instructions, I declare that I have examined this return/report, including accompanying schedules, statements and attachments, as well as the electronic version of this return/report, and to the best of my knowledge and belief, it is true, correct, and complete.

SIGN HERE	Filed with authorized/valid electronic signature.	04/15/2020	TOM ADAIR
	Signature of plan administrator	Date	Enter name of individual signing as plan administrator
SIGN HERE	Filed with authorized/valid electronic signature.	04/15/2020	KARIL BLACK WOLLITZ
	Signature of employer/plan sponsor	Date	Enter name of individual signing as employer or plan sponsor
SIGN HERE			
	Signature of DFE	Date	Enter name of individual signing as DFE

3a Plan administrator's name and address [X] Same as Plan Sponsor

3b Administrator's EIN

3c Administrator's telephone number

4 If the name and/or EIN of the plan sponsor or the plan name has changed since the last return/report filed for this plan, enter the plan sponsor's name, EIN, the plan name and the plan number from the last return/report:
a Sponsor's name
c Plan Name

4b EIN

4d PN

5 Total number of participants at the beginning of the plan year	**5**	601
6 Number of participants as of the end of the plan year unless otherwise stated (welfare plans complete only lines **6a(1), 6a(2), 6b, 6c,** and **6d**).		
a(1) Total number of active participants at the beginning of the plan year	**6a(1)**	335
a(2) Total number of active participants at the end of the plan year	**6a(2)**	351
b Retired or separated participants receiving benefits	**6b**	120
c Other retired or separated participants entitled to future benefits	**6c**	99
d Subtotal. Add lines **6a(2)**, **6b**, and **6c**	**6d**	570
e Deceased participants whose beneficiaries are receiving or are entitled to receive benefits.	**6e**	47
f Total. Add lines **6d** and **6e**.	**6f**	617
g Number of participants with account balances as of the end of the plan year (only defined contribution plans complete this item)	**6g**	
h Number of participants who terminated employment during the plan year with accrued benefits that were less than 100% vested	**6h**	6
7 Enter the total number of employers obligated to contribute to the plan (only multiemployer plans complete this item)	**7**	

8a If the plan provides pension benefits, enter the applicable pension feature codes from the List of Plan Characteristics Codes in the instructions:

1B

b If the plan provides welfare benefits, enter the applicable welfare feature codes from the List of Plan Characteristics Codes in the instructions:

9a Plan funding arrangement (check all that apply)		**9b** Plan benefit arrangement (check all that apply)	
(1)	[ ] Insurance	**(1)**	[ ] Insurance
(2)	[ ] Code section 412(e)(3) insurance contracts	**(2)**	[ ] Code section 412(e)(3) insurance contracts
(3)	[X] Trust	**(3)**	[X] Trust
(4)	[ ] General assets of the sponsor	**(4)**	[ ] General assets of the sponsor

10 Check all applicable boxes in 10a and 10b to indicate which schedules are attached, and, where indicated, enter the number attached. (See instructions)

a Pension Schedules

(1) [X] **R** (Retirement Plan Information)

(2) [ ] **MB** (Multiemployer Defined Benefit Plan and Certain Money Purchase Plan Actuarial Information) - signed by the plan actuary

(3) [X] **SB** (Single-Employer Defined Benefit Plan Actuarial Information) - signed by the plan actuary

b General Schedules

(1) [X] **H** (Financial Information)

(2) [ ] **I** (Financial Information – Small Plan)

(3) [ ] 0 **A** (Insurance Information)

(4) [X] **C** (Service Provider Information)

(5) [X] **D** (DFE/Participating Plan Information)

(6) [ ] **G** (Financial Transaction Schedules)

Part III Form M-1 Compliance Information (to be completed by welfare benefit plans)

11a If the plan provides welfare benefits, was the plan subject to the Form M-1 filing requirements during the plan year? (See instructions and 29 CFR 2520.101-2.) ..... ☐ Yes ☐ No

If "Yes" is checked, complete lines 11b and 11c.

11b Is the plan currently in compliance with the Form M-1 filing requirements? (See instructions and 29 CFR 2520.101-2.) ..... ☐ Yes ☐ No

11c Enter the Receipt Confirmation Code for the 2018 Form M-1 annual report. If the plan was not required to file the 2018 Form M-1 annual report, enter the Receipt Confirmation Code for the most recent Form M-1 that was required to be filed under the Form M-1 filing requirements. (Failure to enter a valid Receipt Confirmation Code will subject the Form 5500 filing to rejection as incomplete.)

Receipt Confirmation Code_____

SCHEDULE SB (Form 5500)

Department of the Treasury
Internal Revenue Service

Department of Labor
Employee Benefits Security Administration

Pension Benefit Guaranty Corporation

Single-Employer Defined Benefit Plan Actuarial Information

This schedule is required to be filed under section 104 of the Employee Retirement Income Security Act of 1974 (ERISA) and section 6059 of the Internal Revenue Code (the Code).

▶ **File as an attachment to Form 5500 or 5500-SF.**

OMB No. 1210-0110

2018

This Form is Open to Public Inspection

For calendar plan year 2018 or fiscal plan year beginning 07/01/2018 and ending 06/30/2019

▶ **Round off amounts to nearest dollar.**

▶ **Caution:** A penalty of $1,000 will be assessed for late filing of this report unless reasonable cause is established.

A Name of plan
JOHNSON MATTHEY, INC. AMENDED AND RESTATED HOURLY EMPLOYEES PENSION PLAN

B Three-digit plan number (PN) ▶ 002

C Plan sponsor's name as shown on line 2a of Form 5500 or 5500-SF
JOHNSON MATTHEY, INC.

D Employer Identification Number (EIN)
23-0411710

E Type of plan: [X] Single [ ] Multiple-A [ ] Multiple-B

F Prior year plan size: [ ] 100 or fewer [ ] 101-500 [X] More than 500

Part I Basic Information

1 Enter the valuation date: Month 07 Day 01 Year 2018

2 Assets:

a Market value	**2a**	48716137
b Actuarial value	**2b**	48716137

3 Funding target/participant count breakdown

	(1) Number of participants	(2) Vested Funding Target	(3) Total Funding Target
a For retired participants and beneficiaries receiving payment	164	13148885	13148885
b For terminated vested participants	102	4405058	4405058
c For active participants	335	20890041	22921904
d Total	601	38443984	40475847

4 If the plan is in at-risk status, check the box and complete lines (a) and (b) [ ]

a Funding target disregarding prescribed at-risk assumptions	**4a**	
b Funding target reflecting at-risk assumptions, but disregarding transition rule for plans that have been in at-risk status for fewer than five consecutive years and disregarding loading factor	**4b**	
5 Effective interest rate	**5**	5.77 %
6 Target normal cost	**6**	1446893

Statement by Enrolled Actuary

To the best of my knowledge, the information supplied in this schedule and accompanying schedules, statements and attachments, if any, is complete and accurate. Each prescribed assumption was applied in accordance with applicable law and regulations. In my opinion, each other assumption is reasonable (taking into account the experience of the plan and reasonable expectations) and such other assumptions, in combination, offer my best estimate of anticipated experience under the plan.

SIGN HERE

	03/12/2020
Signature of actuary	Date
VANESSA SOSKIND, ASA, EA, MAAA	17-06307
Type or print name of actuary	Most recent enrollment number
MERCER	813-207-6306
Firm name	Telephone number (including area code)
3031 N ROCKY POINT DRIVE WEST SUITE 700 TAMPA, FL 33607	
Address of the firm	

If the actuary has not fully reflected any regulation or ruling promulgated under the statute in completing this schedule, check the box and see instructions [ ]

Part II Beginning of Year Carryover and Prefunding Balances

		(a) Carryover balance	(b) Prefunding balance
7	Balance at beginning of prior year after applicable adjustments (line 13 from prior year)	8035272	0
8	Portion elected for use to offset prior year's funding requirement (line 35 from prior year)	0	0
9	Amount remaining (line 7 minus line 8)	8035272	0
10	Interest on line 9 using prior year's actual return of -1.48 %	-118922	0
11	Prior year's excess contributions to be added to prefunding balance:		
	a Present value of excess contributions (line 38a from prior year)		4294010
	b(1) Interest on the excess, if any, of line 38a over line 38b from prior year Schedule SB, using prior year's effective interest rate of 5.95%		255494
	b(2) Interest on line 38b from prior year Schedule SB, using prior year's actual return		
	c Total available at beginning of current plan year to add to prefunding balance		4549504
	d Portion of (c) to be added to prefunding balance		0
12	Other reductions in balances due to elections or deemed elections	0	0
13	Balance at beginning of current year (line 9 + line 10 + line 11d – line 12)	7916350	0

Part III Funding Percentages

14	Funding target attainment percentage	14	100.80%
15	Adjusted funding target attainment percentage	15	120.35%
16	Prior year's funding percentage for purposes of determining whether carryover/prefunding balances may be used to reduce current year's funding requirement	16	128.71%
17	If the current value of the assets of the plan is less than 70 percent of the funding target, enter such percentage.	17	%

Part IV Contributions and Liquidity Shortfalls

18 Contributions made to the plan for the plan year by employer(s) and employees:

(a) Date (MM-DD-YYYY)	(b) Amount paid by employer(s)	(c) Amount paid by employees	(a) Date (MM-DD-YYYY)	(b) Amount paid by employer(s)	(c) Amount paid by employees
07/08/2018	145000	0			
08/13/2018	145000	0			
09/10/2018	145000	0			
10/15/2018	145000	0			
11/13/2018	145000	0			
			Totals ► 18(b)	725000	18(c) 0

19	Discounted employer contributions – see instructions for small plan with a valuation date after the beginning of the year:		
	a Contributions allocated toward unpaid minimum required contributions from prior years	19a	0
	b Contributions made to avoid restrictions adjusted to valuation date	19b	0
	c Contributions allocated toward minimum required contribution for current year adjusted to valuation date	19c	716995

20 Quarterly contributions and liquidity shortfalls:

a Did the plan have a "funding shortfall" for the prior year? ☐ Yes ☒ No

b If line 20a is "Yes," were required quarterly installments for the current year made in a timely manner? ☐ Yes ☐ No

c If line 20a is "Yes," see instructions and complete the following table as applicable:

Liquidity shortfall as of end of quarter of this plan year

(1) 1st	(2) 2nd	(3) 3rd	(4) 4th

Part V Assumptions Used to Determine Funding Target and Target Normal Cost

21 Discount rate:

a Segment rates:

1st segment:	2nd segment:	3rd segment:	
3.92%	5.52%	6.29%	☐ N/A, full yield curve used

b Applicable month (enter code)	**21b**	0
22 Weighted average retirement age	**22**	65

23 Mortality table(s) (see instructions)

Prior regulation: ☐ Prescribed - combined ☒ Prescribed - separate ☐ Substitute

Current regulation: ☐ Prescribed - combined ☐ Prescribed - separate ☐ Substitute

Part VI Miscellaneous Items

24 Has a change been made in the non-prescribed actuarial assumptions for the current plan year? If "Yes," see instructions regarding required attachment. ☒ Yes ☐ No

25 Has a method change been made for the current plan year? If "Yes," see instructions regarding required attachment. ☐ Yes ☒ No

26 Is the plan required to provide a Schedule of Active Participants? If "Yes," see instructions regarding required attachment. ☒ Yes ☐ No

27 If the plan is subject to alternative funding rules, enter applicable code and see instructions regarding attachment	**27**	

Part VII Reconciliation of Unpaid Minimum Required Contributions For Prior Years

28 Unpaid minimum required contributions for all prior years	**28**	0
29 Discounted employer contributions allocated toward unpaid minimum required contributions from prior years (line 19a)	**29**	0
30 Remaining amount of unpaid minimum required contributions (line 28 minus line 29)	**30**	0

Part VIII Minimum Required Contribution For Current Year

31 Target normal cost and excess assets (see instructions):

a Target normal cost (line 6)	**31a**	1446893
b Excess assets, if applicable, but not greater than line 31a	**31b**	323940

32 Amortization installments:	Outstanding Balance	Installment
a Net shortfall amortization installment	0	0
b Waiver amortization installment	0	0

33 If a waiver has been approved for this plan year, enter the date of the ruling letter granting the approval (Month _____ Day _____ Year _____) and the waived amount	**33**	
34 Total funding requirement before reflecting carryover/prefunding balances (lines 31a - 31b + 32a + 32b - 33)	**34**	1122953

	Carryover balance	Prefunding balance	Total balance
35 Balances elected for use to offset funding requirement	405958	0	405958

36 Additional cash requirement (line 34 minus line 35)	**36**	716995
37 Contributions allocated toward minimum required contribution for current year adjusted to valuation date (line 19c)	**37**	716995
38 Present value of excess contributions for current year (see instructions)		
a Total (excess, if any, of line 37 over line 36)	**38a**	0
b Portion included in line 38a attributable to use of prefunding and funding standard carryover balances	**38b**	0
39 Unpaid minimum required contribution for current year (excess, if any, of line 36 over line 37)	**39**	0
40 Unpaid minimum required contributions for all years	**40**	0

Part IX Pension Funding Relief Under Pension Relief Act of 2010 (See Instructions)

41 If an election was made to use PRA 2010 funding relief for this plan:

a Schedule elected ☐ 2 plus 7 years ☐ 15 years

b Eligible plan year(s) for which the election in line 41a was made ☐ 2008 ☐ 2009 ☐ 2010 ☐ 2011

SCHEDULE C (Form 5500)	Service Provider Information	OMB No. 1210-0110
Department of the Treasury Internal Revenue Service Department of Labor Employee Benefits Security Administration Pension Benefit Guaranty Corporation	This schedule is required to be filed under section 104 of the Employee Retirement Income Security Act of 1974 (ERISA). ▶ **File as an attachment to Form 5500.**	**2018** **This Form is Open to Public Inspection.**

For calendar plan year 2018 or fiscal plan year beginning 07/01/2018 and ending 06/30/2019

A Name of plan	**B** Three-digit plan number (PN) ▶
JOHNSON MATTHEY, INC. AMENDED AND RESTATED HOURLY EMPLOYEES PENSION PLAN	002
C Plan sponsor's name as shown on line 2a of Form 5500	**D** Employer Identification Number (EIN)
JOHNSON MATTHEY, INC.	23-0411710

Part I Service Provider Information (see instructions)

You must complete this Part, in accordance with the instructions, to report the information required for **each person** who received, directly or indirectly, $5,000 or more in total compensation (i.e., money or anything else of monetary value) in connection with services rendered to the plan or the person's position with the plan during the plan year. If a person received **only** eligible indirect compensation for which the plan received the required disclosures, you are required to answer line 1 but are not required to include that person when completing the remainder of this Part.

1 Information on Persons Receiving Only Eligible Indirect Compensation

a Check "Yes" or "No" to indicate whether you are excluding a person from the remainder of this Part because they received only eligible indirect compensation for which the plan received the required disclosures (see instructions for definitions and conditions). . . . . ☐ Yes ☒ No

b If you answered line 1a "Yes," enter the name and EIN or address of each person providing the required disclosures for the service providers who received only eligible indirect compensation. Complete as many entries as needed (see instructions).

(b) Enter name and EIN or address of person who provided you disclosures on eligible indirect compensation

(b) Enter name and EIN or address of person who provided you disclosures on eligible indirect compensation

(b) Enter name and EIN or address of person who provided you disclosures on eligible indirect compensation

(b) Enter name and EIN or address of person who provided you disclosures on eligible indirect compensation

(b) Enter name and EIN or address of person who provided you disclosures on eligible indirect compensation

(b) Enter name and EIN or address of person who provided you disclosures on eligible indirect compensation

(b) Enter name and EIN or address of person who provided you disclosures on eligible indirect compensation

(b) Enter name and EIN or address of person who provided you disclosures on eligible indirect compensation

(b) Enter name and EIN or address of person who provided you disclosures on eligible indirect compensation

(b) Enter name and EIN or address of person who provided you disclosures on eligible indirect compensation

(b) Enter name and EIN or address of person who provided you disclosures on eligible indirect compensation

(b) Enter name and EIN or address of person who provided you disclosures on eligible indirect compensation

2. Information on Other Service Providers Receiving Direct or Indirect Compensation. Except for those persons for whom you answered "Yes" to line 1a above, complete as many entries as needed to list each person receiving, directly or indirectly, $5,000 or more in total compensation (i.e., money or anything else of value) in connection with services rendered to the plan or their position with the plan during the plan year. (See instructions).

(a) Enter name and EIN or address (see instructions)

MERCER CONSULTING

13-2843441

(b) Service Code(s)	(c) Relationship to employer, employee organization, or person known to be a party-in-interest	(d) Enter direct compensation paid by the plan. If none, enter -0-.	(e) Did service provider receive indirect compensation? (sources other than plan or plan sponsor)	(f) Did indirect compensation include eligible indirect compensation, for which the plan received the required disclosures?	(g) Enter total indirect compensation received by service provider excluding eligible indirect compensation for which you answered "Yes" to element (f). If none, enter -0-.	(h) Did the service provider give you a formula instead of an amount or estimated amount?
11 13 15 17 38 50 64 70	NONE	142960	Yes [ ] No [X]	Yes [ ] No [ ]		Yes [ ] No [ ]

(a) Enter name and EIN or address (see instructions)

THE BANK OF NEW YORK MELLON

13-5160382

(b) Service Code(s)	(c) Relationship to employer, employee organization, or person known to be a party-in-interest	(d) Enter direct compensation paid by the plan. If none, enter -0-.	(e) Did service provider receive indirect compensation? (sources other than plan or plan sponsor)	(f) Did indirect compensation include eligible indirect compensation, for which the plan received the required disclosures?	(g) Enter total indirect compensation received by service provider excluding eligible indirect compensation for which you answered "Yes" to element (f). If none, enter -0-.	(h) Did the service provider give you a formula instead of an amount or estimated amount?
21 25 28 31 50 60 61 62 71 72	TRUSTEE	31513	Yes [X] No [ ]	Yes [X] No [ ]	0	Yes [X] No [ ]

(a) Enter name and EIN or address (see instructions)

MORGAN LEWIS & BOCKIUS, LLP

23-0891050

(b) Service Code(s)	(c) Relationship to employer, employee organization, or person known to be a party-in-interest	(d) Enter direct compensation paid by the plan. If none, enter -0-.	(e) Did service provider receive indirect compensation? (sources other than plan or plan sponsor)	(f) Did indirect compensation include eligible indirect compensation, for which the plan received the required disclosures?	(g) Enter total indirect compensation received by service provider excluding eligible indirect compensation for which you answered "Yes" to element (f). If none, enter -0-.	(h) Did the service provider give you a formula instead of an amount or estimated amount?
29 50	NONE	25745	Yes [ ] No [X]	Yes [ ] No [ ]		Yes [ ] No [ ]

2. Information on Other Service Providers Receiving Direct or Indirect Compensation. Except for those persons for whom you answered "Yes" to line 1a above, complete as many entries as needed to list each person receiving, directly or indirectly, $5,000 or more in total compensation (i.e., money or anything else of value) in connection with services rendered to the plan or their position with the plan during the plan year. (See instructions).

(a) Enter name and EIN or address (see instructions)

BDO USA, LLP

13-5381590

(b) Service Code(s)	(c) Relationship to employer, employee organization, or person known to be a party-in-interest	(d) Enter direct compensation paid by the plan. If none, enter -0-.	(e) Did service provider receive indirect compensation? (sources other than plan or plan sponsor)	(f) Did indirect compensation include eligible indirect compensation, for which the plan received the required disclosures?	(g) Enter total indirect compensation received by service provider excluding eligible indirect compensation for which you answered "Yes" to element (f). If none, enter -0-.	(h) Did the service provider give you a formula instead of an amount or estimated amount?
10 50	NONE	24966	Yes [ ] No [X]	Yes [ ] No [ ]		Yes [ ] No [ ]

(a) Enter name and EIN or address (see instructions)

MELLON CAPITAL MANAGEMENT

25-6078093

(b) Service Code(s)	(c) Relationship to employer, employee organization, or person known to be a party-in-interest	(d) Enter direct compensation paid by the plan. If none, enter -0-.	(e) Did service provider receive indirect compensation? (sources other than plan or plan sponsor)	(f) Did indirect compensation include eligible indirect compensation, for which the plan received the required disclosures?	(g) Enter total indirect compensation received by service provider excluding eligible indirect compensation for which you answered "Yes" to element (f). If none, enter -0-.	(h) Did the service provider give you a formula instead of an amount or estimated amount?
21 25 28 31 50 60 61 62 71 72	TRUSTEE	17843	Yes [X] No [ ]	Yes [X] No [ ]	0	Yes [X] No [ ]

(a) Enter name and EIN or address (see instructions)

(b) Service Code(s)	(c) Relationship to employer, employee organization, or person known to be a party-in-interest	(d) Enter direct compensation paid by the plan. If none, enter -0-.	(e) Did service provider receive indirect compensation? (sources other than plan or plan sponsor)	(f) Did indirect compensation include eligible indirect compensation, for which the plan received the required disclosures?	(g) Enter total indirect compensation received by service provider excluding eligible indirect compensation for which you answered "Yes" to element (f). If none, enter -0-.	(h) Did the service provider give you a formula instead of an amount or estimated amount?
			Yes [ ] No [ ]	Yes [ ] No [ ]		Yes [ ] No [ ]

Part I Service Provider Information (continued)

3. If you reported on line 2 receipt of indirect compensation, other than eligible indirect compensation, by a service provider, and the service provider is a fiduciary or provides contract administrator, consulting, custodial, investment advisory, investment management, broker, or recordkeeping services, answer the following questions for (a) each source from whom the service provider received $1,000 or more in indirect compensation and (b) each source for whom the service provider gave you a formula used to determine the indirect compensation instead of an amount or estimated amount of the indirect compensation. Complete as many entries as needed to report the required information for each source.

(a) Enter service provider name as it appears on line 2	**(b)** Service Codes (see instructions)	**(c)** Enter amount of indirect compensation
(d) Enter name and EIN (address) of source of indirect compensation	**(e)** Describe the indirect compensation, including any formula used to determine the service provider's eligibility for or the amount of the indirect compensation.	

(a) Enter service provider name as it appears on line 2	**(b)** Service Codes (see instructions)	**(c)** Enter amount of indirect compensation
(d) Enter name and EIN (address) of source of indirect compensation	**(e)** Describe the indirect compensation, including any formula used to determine the service provider's eligibility for or the amount of the indirect compensation.	

(a) Enter service provider name as it appears on line 2	**(b)** Service Codes (see instructions)	**(c)** Enter amount of indirect compensation
(d) Enter name and EIN (address) of source of indirect compensation	**(e)** Describe the indirect compensation, including any formula used to determine the service provider's eligibility for or the amount of the indirect compensation.	

Part II Service Providers Who Fail or Refuse to Provide Information

4 Provide, to the extent possible, the following information for each service provider who failed or refused to provide the information necessary to complete this Schedule.

(a) Enter name and EIN or address of service provider (see instructions)	**(b)** Nature of Service Code(s)	**(c)** Describe the information that the service provider failed or refused to provide

(a) Enter name and EIN or address of service provider (see instructions)	**(b)** Nature of Service Code(s)	**(c)** Describe the information that the service provider failed or refused to provide

(a) Enter name and EIN or address of service provider (see instructions)	**(b)** Nature of Service Code(s)	**(c)** Describe the information that the service provider failed or refused to provide

(a) Enter name and EIN or address of service provider (see instructions)	**(b)** Nature of Service Code(s)	**(c)** Describe the information that the service provider failed or refused to provide

(a) Enter name and EIN or address of service provider (see instructions)	**(b)** Nature of Service Code(s)	**(c)** Describe the information that the service provider failed or refused to provide

(a) Enter name and EIN or address of service provider (see instructions)	**(b)** Nature of Service Code(s)	**(c)** Describe the information that the service provider failed or refused to provide

Part III Termination Information on Accountants and Enrolled Actuaries (see instructions)

(complete as many entries as needed)

a Name:	**b** EIN:
c Position:	
d Address:	**e** Telephone:

Explanation:

a Name:	**b** EIN:
c Position:	
d Address:	**e** Telephone:

Explanation:

a Name:	**b** EIN:
c Position:	
d Address:	**e** Telephone:

Explanation:

a Name:	**b** EIN:
c Position:	
d Address:	**e** Telephone:

Explanation:

a Name:	**b** EIN:
c Position:	
d Address:	**e** Telephone:

Explanation:

SCHEDULE D (Form 5500)

Department of the Treasury
Internal Revenue Service

Department of Labor
Employee Benefits Security Administration

DFE/Participating Plan Information

This schedule is required to be filed under section 104 of the Employee Retirement Income Security Act of 1974 (ERISA).

▶ **File as an attachment to Form 5500.**

OMB No. 1210-0110

2018

This Form is Open to Public Inspection.

For calendar plan year 2018 or fiscal plan year beginning 07/01/2018 and ending 06/30/2019

A Name of plan
JOHNSON MATTHEY, INC. AMENDED AND RESTATED HOURLY EMPLOYEES PENSION PLAN

B Three-digit plan number (PN) ▶ 002

C Plan or DFE sponsor's name as shown on line 2a of Form 5500
JOHNSON MATTHEY, INC.

D Employer Identification Number (EIN)
23-0411710

Part I **Information on interests in MTIAs, CCTs, PSAs, and 103-12 IEs (to be completed by plans and DFEs)**
(Complete as many entries as needed to report all interests in DFEs)

a Name of MTIA, CCT, PSA, or 103-12 IE: BNYM-M DB SL INT CREDIT BIF

b Name of sponsor of entity listed in (a): BNY MELLON, N.A.

c EIN-PN	**d** Entity code	**e** Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)
25-6078093-060	C	3192979

a Name of MTIA, CCT, PSA, or 103-12 IE: BNYM-M DB SL LT CREDIT BIF

b Name of sponsor of entity listed in (a): BNY MELLON, N.A.

c EIN-PN	**d** Entity code	**e** Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)
25-6078093-062	C	37748485

a Name of MTIA, CCT, PSA, or 103-12 IE: BNYM-M DB SL LT GOVT BIF

b Name of sponsor of entity listed in (a): BNY MELLON, N.A.

c EIN-PN	**d** Entity code	**e** Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)
25-6078093-063	C	11157851

a Name of MTIA, CCT, PSA, or 103-12 IE: EB TEMP INV FD VAR RT

b Name of sponsor of entity listed in (a): BNY MELLON, N.A.

c EIN-PN	**d** Entity code	**e** Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)
25-6078093-023	C	1627208

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	**d** Entity code	**e** Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	**d** Entity code	**e** Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	**d** Entity code	**e** Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	**d** Entity code	**e** Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	**d** Entity code	**e** Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	**d** Entity code	**e** Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	**d** Entity code	**e** Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	**d** Entity code	**e** Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	**d** Entity code	**e** Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	**d** Entity code	**e** Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	**d** Entity code	**e** Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	**d** Entity code	**e** Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	**d** Entity code	**e** Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	**d** Entity code	**e** Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)

Part II Information on Participating Plans (to be completed by DFEs)

(Complete as many entries as needed to report all participating plans)

a Plan name	
b Name of plan sponsor	**c** EIN-PN

a Plan name	
b Name of plan sponsor	**c** EIN-PN

a Plan name	
b Name of plan sponsor	**c** EIN-PN

a Plan name	
b Name of plan sponsor	**c** EIN-PN

a Plan name	
b Name of plan sponsor	**c** EIN-PN

a Plan name	
b Name of plan sponsor	**c** EIN-PN

a Plan name	
b Name of plan sponsor	**c** EIN-PN

a Plan name	
b Name of plan sponsor	**c** EIN-PN

a Plan name	
b Name of plan sponsor	**c** EIN-PN

a Plan name	
b Name of plan sponsor	**c** EIN-PN

a Plan name	
b Name of plan sponsor	**c** EIN-PN

a Plan name	
b Name of plan sponsor	**c** EIN-PN

SCHEDULE H (Form 5500)

Department of the Treasury
Internal Revenue Service

Department of Labor
Employee Benefits Security Administration

Pension Benefit Guaranty Corporation

Financial Information

This schedule is required to be filed under section 104 of the Employee Retirement Income Security Act of 1974 (ERISA), and section 6058(a) of the Internal Revenue Code (the Code).

▶ **File as an attachment to Form 5500.**

OMB No. 1210-0110

2018

This Form is Open to Public Inspection

For calendar plan year 2018 or fiscal plan year beginning 07/01/2018 and ending 06/30/2019

A Name of plan
JOHNSON MATTHEY, INC. AMENDED AND RESTATED HOURLY EMPLOYEES PENSION PLAN

B Three-digit plan number (PN) ▶ 002

C Plan sponsor's name as shown on line 2a of Form 5500
JOHNSON MATTHEY, INC.

D Employer Identification Number (EIN)
23-0411710

Part I Asset and Liability Statement

1 Current value of plan assets and liabilities at the beginning and end of the plan year. Combine the value of plan assets held in more than one trust. Report the value of the plan's interest in a commingled fund containing the assets of more than one plan on a line-by-line basis unless the value is reportable on lines 1c(9) through 1c(14). Do not enter the value of that portion of an insurance contract which guarantees, during this plan year, to pay a specific dollar benefit at a future date. **Round off amounts to the nearest dollar.** MTIAs, CCTs, PSAs, and 103-12 IEs do not complete lines 1b(1), 1b(2), 1c(8), 1g, 1h, and 1i. CCTs, PSAs, and 103-12 IEs also do not complete lines 1d and 1e. See instructions.

Assets		(a) Beginning of Year	(b) End of Year
a Total noninterest-bearing cash	1a		
b Receivables (less allowance for doubtful accounts):			
(1) Employer contributions	1b(1)	2800000	0
(2) Participant contributions	1b(2)		
(3) Other	1b(3)	18911	0
c General investments:			
(1) Interest-bearing cash (include money market accounts & certificates of deposit)	1c(1)		
(2) U.S. Government securities	1c(2)		
(3) Corporate debt instruments (other than employer securities):			
(A) Preferred	1c(3)(A)		
(B) All other	1c(3)(B)		
(4) Corporate stocks (other than employer securities):			
(A) Preferred	1c(4)(A)		
(B) Common	1c(4)(B)		
(5) Partnership/joint venture interests	1c(5)		
(6) Real estate (other than employer real property)	1c(6)		
(7) Loans (other than to participants)	1c(7)		
(8) Participant loans	1c(8)		
(9) Value of interest in common/collective trusts	1c(9)	45980994	53726523
(10) Value of interest in pooled separate accounts	1c(10)		
(11) Value of interest in master trust investment accounts	1c(11)		
(12) Value of interest in 103-12 investment entities	1c(12)		
(13) Value of interest in registered investment companies (e.g., mutual funds)	1c(13)		
(14) Value of funds held in insurance company general account (unallocated contracts)	1c(14)		
(15) Other	1c(15)		

			(a) Beginning of Year	(b) End of Year
1d	Employer-related investments:			
	(1) Employer securities	1d(1)		
	(2) Employer real property	1d(2)		
e	Buildings and other property used in plan operation	1e		
f	Total assets (add all amounts in lines 1a through 1e)	1f	48799905	53726523
	Liabilities			
g	Benefit claims payable	1g		
h	Operating payables	1h	54821	96686
i	Acquisition indebtedness	1i		
j	Other liabilities	1j		
k	Total liabilities (add all amounts in lines 1g through1j)	1k	54821	96686
	Net Assets			
l	Net assets (subtract line 1k from line 1f)	1l	48745084	53629837

Part II Income and Expense Statement

2 Plan income, expenses, and changes in net assets for the year. Include all income and expenses of the plan, including any trust(s) or separately maintained fund(s) and any payments/receipts to/from insurance carriers. Round off amounts to the nearest dollar. MTIAs, CCTs, PSAs, and 103-12 IEs do not complete lines 2a, 2b(1)(E), 2e, 2f, and 2g.

	Income		(a) Amount	(b) Total
a	**Contributions:**			
	(1) Received or receivable in cash from: **(A)** Employers	2a(1)(A)	725000	
	(B) Participants	2a(1)(B)		
	(C) Others (including rollovers)	2a(1)(C)		
	(2) Noncash contributions	2a(2)		
	(3) Total contributions. Add lines **2a(1)(A), (B), (C),** and line **2a(2)**	2a(3)		725000
b	**Earnings on investments:**			
	(1) Interest:			
	(A) Interest-bearing cash (including money market accounts and certificates of deposit)	2b(1)(A)		
	(B) U.S. Government securities	2b(1)(B)		
	(C) Corporate debt instruments	2b(1)(C)		
	(D) Loans (other than to participants)	2b(1)(D)		
	(E) Participant loans	2b(1)(E)		
	(F) Other	2b(1)(F)		
	(G) Total interest. Add lines **2b(1)(A)** through **(F)**	2b(1)(G)		0
	(2) Dividends: **(A)** Preferred stock	2b(2)(A)		
	(B) Common stock	2b(2)(B)		
	(C) Registered investment company shares (e.g. mutual funds)	2b(2)(C)		
	(D) Total dividends. Add lines **2b(2)(A)**, **(B)**, and **(C)**	2b(2)(D)		0
	(3) Rents	2b(3)		
	(4) Net gain (loss) on sale of assets: **(A)** Aggregate proceeds	2b(4)(A)		
	(B) Aggregate carrying amount (see instructions)	2b(4)(B)		
	(C) Subtract line **2b(4)(B)** from line **2b(4)(A)** and enter result	2b(4)(C)		0
	(5) Unrealized appreciation (depreciation) of assets: **(A)** Real estate	2b(5)(A)		
	(B) Other	2b(5)(B)		
	(C) Total unrealized appreciation of assets. Add lines **2b(5)(A)** and **(B)**	2b(5)(C)		0

		(a) Amount	(b) Total
(6) Net investment gain (loss) from common/collective trusts	2b(6)		6593977
(7) Net investment gain (loss) from pooled separate accounts	2b(7)		
(8) Net investment gain (loss) from master trust investment accounts	2b(8)		
(9) Net investment gain (loss) from 103-12 investment entities	2b(9)		
(10) Net investment gain (loss) from registered investment companies (e.g., mutual funds)	2b(10)		
c Other income	2c		
d Total income. Add all **income** amounts in column (b) and enter total	2d		7318977
Expenses			
e Benefit payment and payments to provide benefits:			
(1) Directly to participants or beneficiaries, including direct rollovers	2e(1)	2146722	
(2) To insurance carriers for the provision of benefits	2e(2)		
(3) Other	2e(3)		
(4) Total benefit payments. Add lines **2e(1)** through **(3)**	2e(4)		2146722
f Corrective distributions (see instructions)	2f		
g Certain deemed distributions of participant loans (see instructions)	2g		
h Interest expense	2h		
i Administrative expenses: **(1)** Professional fees	2i(1)	193671	
(2) Contract administrator fees	2i(2)		
(3) Investment advisory and management fees	2i(3)	17844	
(4) Other	2i(4)	75987	
(5) Total administrative expenses. Add lines **2i(1)** through **(4)**	2i(5)		287502
j Total expenses. Add all **expense** amounts in column (b) and enter total	2j		2434224
Net Income and Reconciliation			
k Net income (loss). Subtract line **2j** from line **2d**	2k		4884753
l Transfers of assets:			
(1) To this plan	2l(1)		
(2) From this plan	2l(2)		

Part III Accountant's Opinion

3 Complete lines 3a through 3c if the opinion of an independent qualified public accountant is attached to this Form 5500. Complete line 3d if an opinion is not attached.

a The attached opinion of an independent qualified public accountant for this plan is (see instructions):

(1) [ ] Unqualified **(2)** [ ] Qualified **(3)** [X] Disclaimer **(4)** [ ] Adverse

b Did the accountant perform a limited scope audit pursuant to 29 CFR 2520.103-8 and/or 103-12(d)? [X] Yes [ ] No

c Enter the name and EIN of the accountant (or accounting firm) below:

(1) Name: BDO USA, LLP **(2)** EIN: 13-5381590

d The opinion of an independent qualified public accountant is **not attached** because:

(1) [ ] This form is filed for a CCT, PSA, or MTIA. **(2)** [ ] It will be attached to the next Form 5500 pursuant to 29 CFR 2520.104-50.

Part IV Compliance Questions

4 CCTs and PSAs do not complete Part IV. MTIAs, 103-12 IEs, and GIAs do not complete lines 4a, 4e, 4f, 4g, 4h, 4k, 4m, 4n, or 5. 103-12 IEs also do not complete lines 4j and 4l. MTIAs also do not complete line 4l.

During the plan year:

		Yes	No	Amount
a Was there a failure to transmit to the plan any participant contributions within the time period described in 29 CFR 2510.3-102? Continue to answer "Yes" for any prior year failures until fully corrected. (See instructions and DOL's Voluntary Fiduciary Correction Program.)	4a		X	
b Were any loans by the plan or fixed income obligations due the plan in default as of the close of the plan year or classified during the year as uncollectible? Disregard participant loans secured by participant's account balance. (Attach Schedule G (Form 5500) Part I if "Yes" is checked.)	4b		X	

			Yes	No	Amount
c	Were any leases to which the plan was a party in default or classified during the year as uncollectible? (Attach Schedule G (Form 5500) Part II if "Yes" is checked.)	4c		X	
d	Were there any nonexempt transactions with any party-in-interest? (Do not include transactions reported on line 4a. Attach Schedule G (Form 5500) Part III if "Yes" is checked.)	4d		X	
e	Was this plan covered by a fidelity bond?	4e	X		20000000
f	Did the plan have a loss, whether or not reimbursed by the plan's fidelity bond, that was caused by fraud or dishonesty?	4f		X	
g	Did the plan hold any assets whose current value was neither readily determinable on an established market nor set by an independent third party appraiser?	4g		X	
h	Did the plan receive any noncash contributions whose value was neither readily determinable on an established market nor set by an independent third party appraiser?	4h		X	
i	Did the plan have assets held for investment? (Attach schedule(s) of assets if "Yes" is checked, and see instructions for format requirements.)	4i	X		
j	Were any plan transactions or series of transactions in excess of 5% of the current value of plan assets? (Attach schedule of transactions if "Yes" is checked, and see instructions for format requirements.)	4j	X		
k	Were all the plan assets either distributed to participants or beneficiaries, transferred to another plan, or brought under the control of the PBGC?	4k		X	
l	Has the plan failed to provide any benefit when due under the plan?	4l		X	
m	If this is an individual account plan, was there a blackout period? (See instructions and 29 CFR 2520.101-3.)	4m		X	
n	If 4m was answered "Yes," check the "Yes" box if you either provided the required notice or one of the exceptions to providing the notice applied under 29 CFR 2520.101-3.	4n			

5a Has a resolution to terminate the plan been adopted during the plan year or any prior plan year? ☐ Yes ☒ No
If "Yes," enter the amount of any plan assets that reverted to the employer this year _____.

5b If, during this plan year, any assets or liabilities were transferred from this plan to another plan(s), identify the plan(s) to which assets or liabilities were transferred. (See instructions.)

5b(1) Name of plan(s)	**5b(2)** EIN(s)	**5b(3)** PN(s)

5c If the plan is a defined benefit plan, is it covered under the PBGC insurance program (See ERISA section 4021.)? ..... ☒ Yes ☐ No ☐ Not determined
If "Yes" is checked, enter the My PAA confirmation number from the PBGC premium filing for this plan year 4198972. (See instructions.)

SCHEDULE R (Form 5500)

Department of the Treasury
Internal Revenue Service

Department of Labor
Employee Benefits Security Administration

Pension Benefit Guaranty Corporation

Retirement Plan Information

This schedule is required to be filed under sections 104 and 4065 of the Employee Retirement Income Security Act of 1974 (ERISA) and section 6058(a) of the Internal Revenue Code (the Code).

▶ **File as an attachment to Form 5500.**

OMB No. 1210-0110

2018

This Form is Open to Public Inspection.

For calendar plan year 2018 or fiscal plan year beginning 07/01/2018 and ending 06/30/2019

A Name of plan
JOHNSON MATTHEY, INC. AMENDED AND RESTATED HOURLY EMPLOYEES PENSION PLAN

B Three-digit plan number (PN) ▶ 002

C Plan sponsor's name as shown on line 2a of Form 5500
JOHNSON MATTHEY, INC.

D Employer Identification Number (EIN)
23-0411710

Part I Distributions

All references to distributions relate only to payments of benefits during the plan year.

1 Total value of distributions paid in property other than in cash or the forms of property specified in the instructions **1** 0

2 Enter the EIN(s) of payor(s) who paid benefits on behalf of the plan to participants or beneficiaries during the year (if more than two, enter EINs of the two payors who paid the greatest dollar amounts of benefits):

EIN(s): 25-1880033

Profit-sharing plans, ESOPs, and stock bonus plans, skip line 3.

3 Number of participants (living or deceased) whose benefits were distributed in a single sum, during the plan year **3** 7

Part II Funding Information (If the plan is not subject to the minimum funding requirements of section 412 of the Internal Revenue Code or ERISA section 302, skip this Part.)

4 Is the plan administrator making an election under Code section 412(d)(2) or ERISA section 302(d)(2)? ..... ☐ **Yes** ☒ **No** ☐ **N/A**

If the plan is a defined benefit plan, go to line 8.

5 If a waiver of the minimum funding standard for a prior year is being amortized in this plan year, see instructions and enter the date of the ruling letter granting the waiver. **Date:** Month _____ Day _____ Year _____

If you completed line 5, complete lines 3, 9, and 10 of Schedule MB and do not complete the remainder of this schedule.

6 **a** Enter the minimum required contribution for this plan year (include any prior year accumulated funding deficiency not waived) **6a**

b Enter the amount contributed by the employer to the plan for this plan year **6b**

c Subtract the amount in line 6b from the amount in line 6a. Enter the result (enter a minus sign to the left of a negative amount) **6c**

If you completed line 6c, skip lines 8 and 9.

7 Will the minimum funding amount reported on line 6c be met by the funding deadline? ..... ☐ **Yes** ☐ **No** ☐ **N/A**

8 If a change in actuarial cost method was made for this plan year pursuant to a revenue procedure or other authority providing automatic approval for the change or a class ruling letter, does the plan sponsor or plan administrator agree with the change? ..... ☐ **Yes** ☐ **No** ☒ **N/A**

Part III Amendments

9 If this is a defined benefit pension plan, were any amendments adopted during this plan year that increased or decreased the value of benefits? If yes, check the appropriate box. If no, check the "No" box. ..... ☒ **Increase** ☐ **Decrease** ☐ **Both** ☐ **No**

Part IV ESOPs (see instructions). If this is not a plan described under section 409(a) or 4975(e)(7) of the Internal Revenue Code, skip this Part.

10 Were unallocated employer securities or proceeds from the sale of unallocated securities used to repay any exempt loan? ..... ☐ **Yes** ☐ **No**

11 **a** Does the ESOP hold any preferred stock? ..... ☐ **Yes** ☐ **No**

b If the ESOP has an outstanding exempt loan with the employer as lender, is such loan part of a "back-to-back" loan? (See instructions for definition of "back-to-back" loan.) ..... ☐ **Yes** ☐ **No**

12 Does the ESOP hold any stock that is not readily tradable on an established securities market? ..... ☐ **Yes** ☐ **No**

Part V Additional Information for Multiemployer Defined Benefit Pension Plans

13 Enter the following information for each employer that contributed more than 5% of total contributions to the plan during the plan year (measured in dollars). See instructions. *Complete as many entries as needed to report all applicable employers.*

a Name of contributing employer

b EIN **c** Dollar amount contributed by employer

d Date collective bargaining agreement expires *(If employer contributes under more than one collective bargaining agreement, check box* ☐ *and see instructions regarding required attachment. Otherwise, enter the applicable date.)* Month _____ Day _____ Year _____

e Contribution rate information *(If more than one rate applies, check this box* ☐ *and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)*
(1) Contribution rate (in dollars and cents) _____
(2) Base unit measure: ☐ Hourly ☐ Weekly ☐ Unit of production ☐ Other (specify):

---

a Name of contributing employer

b EIN **c** Dollar amount contributed by employer

d Date collective bargaining agreement expires *(If employer contributes under more than one collective bargaining agreement, check box* ☐ *and see instructions regarding required attachment. Otherwise, enter the applicable date.)* Month _____ Day _____ Year _____

e Contribution rate information *(If more than one rate applies, check this box* ☐ *and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)*
(1) Contribution rate (in dollars and cents) _____
(2) Base unit measure: ☐ Hourly ☐ Weekly ☐ Unit of production ☐ Other (specify): _____

---

a Name of contributing employer

b EIN **c** Dollar amount contributed by employer

d Date collective bargaining agreement expires *(If employer contributes under more than one collective bargaining agreement, check box* ☐ *and see instructions regarding required attachment. Otherwise, enter the applicable date.)* Month _____ Day _____ Year _____

e Contribution rate information *(If more than one rate applies, check this box* ☐ *and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)*
(1) Contribution rate (in dollars and cents) _____
(2) Base unit measure: ☐ Hourly ☐ Weekly ☐ Unit of production ☐ Other (specify): _____

---

a Name of contributing employer

b EIN **c** Dollar amount contributed by employer

d Date collective bargaining agreement expires *(If employer contributes under more than one collective bargaining agreement, check box* ☐ *and see instructions regarding required attachment. Otherwise, enter the applicable date.)* Month _____ Day _____ Year _____

e Contribution rate information *(If more than one rate applies, check this box* ☐ *and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)*
(1) Contribution rate (in dollars and cents) _____
(2) Base unit measure: ☐ Hourly ☐ Weekly ☐ Unit of production ☐ Other (specify): _____

---

a Name of contributing employer

b EIN **c** Dollar amount contributed by employer

d Date collective bargaining agreement expires *(If employer contributes under more than one collective bargaining agreement, check box* ☐ *and see instructions regarding required attachment. Otherwise, enter the applicable date.)* Month _____ Day _____ Year _____

e Contribution rate information *(If more than one rate applies, check this box* ☐ *and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)*
(1) Contribution rate (in dollars and cents) _____
(2) Base unit measure: ☐ Hourly ☐ Weekly ☐ Unit of production ☐ Other (specify): _____

---

a Name of contributing employer

b EIN **c** Dollar amount contributed by employer

d Date collective bargaining agreement expires *(If employer contributes under more than one collective bargaining agreement, check box* ☐ *and see instructions regarding required attachment. Otherwise, enter the applicable date.)* Month _____ Day _____ Year _____

e Contribution rate information *(If more than one rate applies, check this box* ☐ *and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)*
(1) Contribution rate (in dollars and cents) _____
(2) Base unit measure: ☐ Hourly ☐ Weekly ☐ Unit of production ☐ Other (specify): _____

14 Enter the number of participants on whose behalf no contributions were made by an employer as an employer of the participant for:

a The current year	**14a**	
b The plan year immediately preceding the current plan year	**14b**	
c The second preceding plan year	**14c**	

15 Enter the ratio of the number of participants under the plan on whose behalf no employer had an obligation to make an employer contribution during the current plan year to:

a The corresponding number for the plan year immediately preceding the current plan year	**15a**	
b The corresponding number for the second preceding plan year	**15b**	

16 Information with respect to any employers who withdrew from the plan during the preceding plan year:

a Enter the number of employers who withdrew during the preceding plan year	**16a**	
b If line 16a is greater than 0, enter the aggregate amount of withdrawal liability assessed or estimated to be assessed against such withdrawn employers	**16b**	

17 If assets and liabilities from another plan have been transferred to or merged with this plan during the plan year, check box and see instructions regarding supplemental information to be included as an attachment. ☐

Part VI Additional Information for Single-Employer and Multiemployer Defined Benefit Pension Plans

18 If any liabilities to participants or their beneficiaries under the plan as of the end of the plan year consist (in whole or in part) of liabilities to such participants and beneficiaries under two or more pension plans as of immediately before such plan year, check box and see instructions regarding supplemental information to be included as an attachment ☐

19 If the total number of participants is 1,000 or more, complete lines (a) through (c)

a Enter the percentage of plan assets held as:
Stock: _____% Investment-Grade Debt: _____% High-Yield Debt: _____% Real Estate: _____% Other: _____%

b Provide the average duration of the combined investment-grade and high-yield debt:
☐ 0-3 years ☐ 3-6 years ☐ 6-9 years ☐ 9-12 years ☐ 12-15 years ☐ 15-18 years ☐ 18-21 years ☐ 21 years or more

c What duration measure was used to calculate line 19(b)?
☐ Effective duration ☐ Macaulay duration ☐ Modified duration ☐ Other (specify):

Johnson Matthey Inc.
Amended and Restated Hourly Employees Pension Plan

Financial Statements and
Supplemental Schedules
As of June 30, 2019 and 2018
and for the Years Then Ended

The report accompanying these financial statements was issued by
BDO USA, LLP, a Delaware limited liability partnership and the U.S. member of BDO
International Limited, a UK company limited by guarantee.

Johnson Matthey Inc.
Amended and Restated Hourly Employees Pension Plan

Financial Statements and Supplemental Schedules
As of June 30, 2019 and 2018 and for the Years Then Ended

Johnson Matthey Inc.
Amended and Restated Hourly Employees Pension Plan

Contents

Independent Auditors' Report 3-4

Financial Statements

Statements of Net Assets Available for Benefits as of June 30, 2019 and 2018 6

Statements of Changes in Net Assets Available for Benefits for the Years Ended June 30, 2019 and 2018 7

Notes to Financial Statements 8-14

Supplemental Schedules

Schedule of Assets (Held at End of Year) as of June 30, 2019 16

Schedule of Reportable Transactions for the Year Ended June 30, 2019 17

Tel: 215-564-1900
Fax: 215-564-3940
www.bdo.com

Ten Penn Center
1801 Market Street, Suite 1700
Philadelphia, PA 19103

Independent Auditors' Report

Plan Administrator
Johnson Matthey Inc. Amended and Restated Hourly Employees Pension Plan
Wayne, Pennsylvania

Report on the Financial Statements

We were engaged to audit the accompanying financial statements of the Johnson Matthey Inc. Amended and Restated Hourly Employees Pension Plan (the Plan), which comprise the statements of net assets available for benefits as of June 30, 2019 and 2018, and the related statements of changes in net assets available for benefits for the years then ended and the related notes to the financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on conducting the audits in accordance with auditing standards generally accepted in the United States of America. Because of the matter described in the *Basis for Disclaimer of Opinion* paragraph, however, we were not able to obtain sufficient appropriate audit evidence to provide a basis for an audit opinion.

Basis for Disclaimer of Opinion

As permitted by 29 CFR 2520.103-8 of the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974, the plan administrator instructed us not to perform, and we did not perform, any auditing procedures with respect to the information summarized in Note 4, which was certified by The Bank of New York Mellon/BNY Mellon, N.A., the trustee of the Plan, except for comparing such information with the related information included in the financial statements. We have been informed by the plan administrator that the trustee holds the Plan's investment assets and executes investment transactions. The plan administrator has obtained a certification from the trustee as of June 30, 2019 and 2018, and for the years then ended, that the information provided to the plan administrator by the trustee is complete and accurate.

BDO USA, LLP, a Delaware limited liability partnership, is the U.S. member of BDO International Limited, a UK company limited by guarantee, and forms part of the international BDO network of independent member firms.

BDO is the brand name for the BDO network and for each of the BDO Member Firms.

Disclaimer of Opinion

Because of the significance of the matter described in the *Basis for Disclaimer of Opinion* paragraph, we have not been able to obtain sufficient appropriate audit evidence to provide a basis for an audit opinion. Accordingly, we do not express an opinion on these financial statements.

Other Matter

The supplemental Schedule of Assets (Held at End of Year) as of June 30, 2019 and Schedule of Reportable Transactions for the year ended June 30, 2019 are required by the Department of Labor's (DOL) Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974 and are presented for the purpose of additional analysis and are not a required part of the financial statements. Because of the significance of the matter described in the *Basis for Disclaimer of Opinion* paragraph, we do not express an opinion on these supplemental schedules.

Report on Form and Content in Compliance With DOL Rules and Regulations

The form and content of the information included in the financial statements and supplemental schedules, other than that derived from the information certified by the trustee, have been audited by us in accordance with auditing standards generally accepted in the United States of America and, in our opinion, are presented in compliance with the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974.

BDO USA, LLP

Philadelphia, Pennsylvania
April 15, 2020

Financial Statements

Johnson Matthey Inc.
Amended and Restated Hourly Employees Pension Plan

Statements of Net Assets Available for Benefits

June 30,	**2019**	2018
Assets		
Investments		
Common collective trusts	**$ 53,726,523**	$ 45,980,994
Receivable		
Employer's contributions	**-**	2,800,000
Due from related party	**-**	18,911
Total Receivables	**-**	2,818,911
Total Assets	**53,726,523**	48,799,905
Liabilities		
Administrative expenses payable	**96,686**	54,821
Net Assets Available for Benefits	**$ 53,629,837**	$ 48,745,084

See accompanying notes to financial statements.

Johnson Matthey Inc.
Amended and Restated Hourly Employees Pension Plan

Statements of Changes in Net Assets Available for Benefits

Year ended June 30,	**2019**	2018
Additions		
Employer contributions	**$ 725,000**	$ 4,562,000
Net appreciation (depreciation) in common collective trusts	**6,593,977**	(689,163)
Total Additions	**7,318,977**	3,872,837
Deductions		
Benefits paid to participants and beneficiaries	**(2,146,722)**	(3,441,380)
Administrative expenses	**(287,502)**	(222,778)
Total Deductions	**(2,434,224)**	(3,664,158)
Net Increase	**4,884,753**	208,679
Net Assets Available for Benefits, beginning of year	**48,745,084**	48,536,405
Net Assets Available for Benefits, end of year	**$ 53,629,837**	$ 48,745,084

See accompanying notes to financial statements.

1. Description of Plan

The following description of the Johnson Matthey Inc. Amended and Restated Hourly Employees Pension Plan (the Plan) provides only general information. Participants should refer to the Plan Document for a more complete description of the Plan's provisions.

General

The Plan is a defined benefit plan covering all hourly employees of Johnson Matthey Inc. (the Company) and subsidiaries represented by the United Steelworkers of America. The Plan is subject to the provisions of the Employee Retirement Income Security Act of 1974 (ERISA), as amended. The Plan was amended and restated as of July 1, 2018 to incorporate all prior amendments adopted after July 1, 2015.

The Bank of New York Mellon/BNY Mellon, N.A. is the trustee of the Plan. Overall responsibility for administering the Plan rests with the Benefits Investment Committee of the Company. The Plan's trustee is responsible for management and control of the Plan's assets and has certain discretionary authority and control over such assets.

Eligibility

Under the terms of the Plan, employees who have completed one year of service are eligible to participate in the Plan. Effective January 1, 2019, the Plan was closed to new employees.

Pension Benefits

Plan participants are fully vested after five years of credited service and entitled to pension benefits beginning at the normal retirement age of 65. The normal monthly retirement benefit is equal to the number of years of credited service times a benefit multiplier, as defined in the Plan Agreement. The benefit multiplier was increased to $62 for years of credited service on or after November 17, 2018.

The Plan also permits early retirement, which can be subject to a reduced benefit depending on a participant's age and years of service, as defined in the Plan Agreement. If employees terminate before rendering five years of service, they forfeit the right to receive the portion of their accumulated plan benefits attributable to the Company's contribution. Benefits for unmarried participants are payable monthly for life; for married participants benefits are generally in the form of a qualified joint-and-survivor annuity.

Death and Disability Benefits

If an active participant dies after completing a minimum of five years of credited service, the participant's surviving spouse shall be entitled to receive a survivor's annuity benefit.

Participants who become disabled after completing a minimum of ten years of credited service are entitled to receive pension benefits commencing as of the participant's normal retirement date, or at the participant's election, the early retirement date. Such benefits are computed as if the participant had continued in employment and as if earnings had not changed from the date of disability to the normal retirement date if such election is made.

2. Summary of Accounting Policies

Basis of Accounting

The financial statements of the Plan are prepared using the accrual basis of accounting.

Use of Estimates

The preparation of financial statements in accordance with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the amounts reported of assets and liabilities and changes therein, disclosures of contingent assets and liabilities, and the actuarial present value of accumulated benefits at the date of the financial statements. Accordingly, actual results could differ from those estimates.

Investment Valuation and Income Recognition

The Plan's investments are stated at fair value. The fair value of a financial instrument is the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The investments in the common collective trusts are valued at net asset value (NAV) per unit, as determined by the trustee at year end. The NAV is used as the practical expedient to estimate fair value. There are no unfunded commitments or trading/redemption restrictions on the common collective trusts.

Investment transactions are recorded on a trade-date basis. Interest income is recorded on the accrual basis. Dividends are recorded on the ex-dividend date.

Payment of Benefits

Benefits are recorded when paid.

Administrative Expenses

The Company pays some of the administrative costs of the Plan associated with professional services provided to the Plan, the balance being paid directly by the Plan. Expenses that are paid by the Company are excluded from these financial statements. Administrative expenses recorded in the Plan may include professional fees, investment fees, and the insurance premiums for the Pension Benefit Guaranty Corporation.

3. Funding Policy for Company Contributions

The Company's policy is to make cash contributions to the Plan in amounts that will provide for employees' benefits by the time they retire.

Employer contributions to the Plan are made monthly on the basis of actuarial calculations of the normal cost and required amortization payments, and are sufficient to satisfy funding requirements under applicable federal income tax regulations and ERISA. The Plan has met or exceeded the minimum funding requirements of ERISA for both Plan years.

4. Certified Investments

Certain information related to investments disclosed in the accompanying financial statements and supplemental schedules, including investments held at June 30, 2019 and 2018 and net appreciation (depreciation) in common collective trusts for the years ended June 30, 2019 and 2018, was obtained or derived from information supplied to the plan administrator and certified as complete and accurate by the trustee of the Plan.

The Plan's independent accountants did not perform auditing procedures with respect to this information, except for comparing such information to the related information included in the financial statements and supplemental schedules.

5. Fair Value Measurement

The framework for measuring fair value provides a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (level 1) and the lowest priority to unobservable inputs (level 3).

The investments in common collective trusts, which are valued at NAV, have not been classified in the fair value hierarchy in accordance with applicable accounting standards updates.

For a description of the valuation methodologies used for assets measured at fair value, see Note 2. There have been no changes in the methodologies used at June 30, 2019 and 2018. The valuation methods described may produce a fair value calculation that may not be indicative of net realizable value or reflective of future fair values. Furthermore, although the Plan believes is valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different fair value measurement at the reporting date.

6. Actuarial Present Value of Accumulated Plan Benefits

Accumulated plan benefits are those future periodic payments that are attributable under the Plan's provisions to the service employees have rendered. Accumulated plan benefits include benefits expected to be paid to: (a) retired or terminated employees or their beneficiaries; (b) beneficiaries of employees who have died; and (c) present employees or their beneficiaries. Benefits under the Plan are based on the number of years of credited service times a benefit multiplier. The accumulated plan benefits for active employees are based on their number of years of credited service times the current benefit multiplier on the date as of which the benefit information is presented (the valuation date). Benefits payable under all circumstances - retirement, death, disability, and termination of employment - are included, to the extent they are deemed attributable to employee service rendered to the valuation date.

A summary of the actuarial present value of accumulated plan benefits as of July 1, 2018 and 2017, the dates of the latest actuarial valuations, is as follows:

July 1,	**2018**	2017
Actuarial Present Value of Accumulated Plan Benefits		
Vested benefits		
Participants currently receiving payments	**$ 42,015,473**	$ 41,420,002
Other participants	**5,827,686**	5,969,640
Total vested benefits	**47,843,159**	47,389,642
Nonvested benefits	**1,944,743**	1,860,473
Total Actuarial Present Value of Accumulated Plan Benefits	**$ 49,787,902**	$ 49,250,115

A summary of the change in the accumulated plan benefits from July 1, 2017 to July 1, 2018 is as follows:

	Amount
Actuarial present value of accumulated plan benefits at July 1, 2017	$ 49,250,115
Increase (decrease) during the year attributable to:	
Benefits accumulated	2,245,153
Benefits paid	(3,460,291)
Increase from interest due to the decrease in the discount period	1,942,407
Change in actuarial assumptions	(189,482)
Actuarial present value of accumulated plan benefits at July 1, 2018	$ 49,787,902

The change in actuarial assumptions in the July 1, 2018 valuation relates to the increase in the discount rate, the updated mortality improvement scale and changes to the lump sum interest rates.

The actuarial present value of accumulated plan benefits is determined by Mercer Human Resource Consulting and is the amount that results from applying actuarial assumptions to adjust the accumulated plan benefits earned by the participants to reflect the time value of money (through discounts for interest) and the probability of payment (by means of decrements such as for death, disability, withdrawal, or retirement) between the valuation date and the expected date of payment.

As of July 1, 2018 and 2017, significant assumptions underlying the actuarial calculations are as follows:

Discount rate	-	4.00% per annum (2018)
Discount rate	-	4.10% per annum (2017)
Mortality – Healthy	-	RP 2014 Generational Mortality Tables adjusted back to 2006 and projected using Scale MP2018 (2018)
Mortality – Healthy	-	RP2014 Generational Mortality Tables adjusted back to 2006 and projected using Scale MP2018 (2017)
Mortality – Disabled	-	RP2014 Generational Mortality Table Projected using scale MP2017 (2018)
Mortality - Disabled	-	RP2014 Generational Mortality Table Projected using scale MP2016 (2017)
Retirement age	-	Based on the probabilities below, applied to the remaining employees eligible for retirement at the age indicated.

Age	Retirement Rate
Under 55	0.0%
55 - 60	3.0%
61 - 63	5.0%
64 - 65	25.0%
66 - 69	20.0%
70	100.0%

These actuarial assumptions are based on the presumption that the Plan will continue. Were the Plan to terminate, different actuarial assumptions and other factors might be applicable in determining the actuarial present value of accumulated plan benefits.

7. Plan Termination

Although it has not expressed any intent to do so, the Company has the right under the Plan to discontinue its contributions at any time and to terminate the Plan subject to the provisions set forth in ERISA.

In the event the Plan terminates, the net assets of the Plan will be allocated, as prescribed by ERISA and its related regulations, generally to provide the following benefits in the order indicated:

(a) Annuity benefits that former employees or their beneficiaries have been receiving for at least three years, or that employees eligible to retire for that three-year period would have been receiving if they had retired with benefits in the normal form of annuity under the Plan. The

priority amount is limited to the lowest benefit that was payable (or would have been payable) during those three years. The amount is further limited to the lowest benefit that would be payable under Plan provisions in effect at any time during the five years preceding Plan termination.

(b) Other vested benefits insured by the Pension Benefit Guaranty Corporation (PBGC) (a U.S. government agency) up to the applicable limitations.

(c) All other vested benefits (that is, vested benefits not insured by the PBGC).

(d) All nonvested benefits.

Certain benefits under the Plan are insured by the PBGC if the Plan terminates. Generally, the PBGC guarantees most vested normal age retirement benefits, early retirement benefits, and certain disability and survivor's pensions. However, the PBGC does not guarantee all types of benefits under the Plan, and the amount of benefit protection is subject to certain limitations. Vested benefits under the Plan are guaranteed at the level in effect on the date of the Plan's termination.

Whether all participants receive their benefits should the Plan terminate at some future time will depend on the sufficiency, at that time, of the Plan's net assets to provide for accumulated benefit obligations and may also depend on the financial condition of the Plan sponsor and the level of benefits guaranteed by the PBGC.

8. Tax Status

The Internal Revenue Service (IRS) has determined and informed the Company by a letter dated October 3, 2016, that the Plan and related trust are designed in accordance with the applicable sections of the Internal Revenue Code. The Plan has been amended since receiving the determination letter. However, the Plan Administrator believes the Plan is currently designed and being operated in compliance with the applicable requirements of the IRC.

Accounting principles generally accepted in the United States of America require Plan management to evaluate tax positions taken by the Plan and recognize a tax liability if the Plan has taken an uncertain position that more likely than not would not be sustained upon examination by federal, state and/or local taxing authorities. The Plan is subject to routine audits by taxing jurisdictions; however, there are currently no audits for any tax periods in progress.

9. Related-Party and Party In Interest Transactions

During the June 30, 2019 Plan year, the Plan was reimbursed by the Johnson Matthey Inc. Amended and Restated Salaried Employees Pension Plan for a benefit payment to a beneficiary. This amount was reflected as a due from related party in the statements of net assets available for benefits as of June 30, 2018.

Certain Plan investments are managed by an affiliate of The Bank of New York Mellon/BNY Mellon, N.A., the trustee of the Plan. The Plan paid certain expenses related to plan operations and investment activity to various service providers. These transactions are exempt party in interest transactions under ERISA.

10. Risks and Uncertainties

The Plan invests in various investment securities. Investment securities are exposed to various risks such as interest rate, market, and credit risks. Due to the level of risk associated with certain investment securities, it is at least reasonably possible that changes in the values of investment securities will occur in the near term and that such change could materially affect the amounts reported in the statements of net assets available for benefits.

Plan contributions are made and the actuarial present value of accumulated plan benefits are reported based on certain assumptions pertaining to interest rates, inflation rates and employee demographics, all of which are subject to change. Due to uncertainties inherent in the estimates and assumptions process, it is at least reasonably possible that changes in these estimates and assumptions in the near term would be material to the financial statements.

11. Subsequent Events

On January 30, 2020, the World Health Organization (WHO) announced a global health emergency because of a new strain of coronavirus originating in Wuhan, China (the COVID-19 outbreak) and the risks to the international community as the virus spreads globally beyond its point of origin. In March 2020, the WHO classified the COVID-19 outbreak as a pandemic, based on the rapid increase in exposure globally.

The full impact of the COVID-19 outbreak continues to evolve as of the date of this report. This pandemic has adversely affected global economic activity and greatly contributed to significant deterioration and instability in financial markets. As a result, the Plan's investment portfolio has incurred a significant decline in fair value since June 30, 2019. However, because the values of the Plan's investments have and will fluctuate in response to changing market conditions, the amount of losses that will be recognized in subsequent periods, if any, cannot be determined. The value of the Plan's investments has a direct impact on its funded status. As a result of such declines in market value and possible changes to the actuarial assumptions used in determining the present value of accumulated plan benefits, the Company may need to make greater cash contributions to fund the Plan. Based on the Plan's funded percentage, there may be certain benefit limitations imposed. However, the actual impact, if any, on future required contributions, Plan liquidity, and benefit limitations cannot be determined at this time.

The Plan has evaluated subsequent events through April 15, 2020, the date the financial statements were available to be issued.

Supplemental Schedules

Schedule SB, line 26 — Schedule of Active Participant Data

ATTAINED AGE	YEARS OF CREDITED SERVICE										
	UNDER 1	1–4	5–9	10–14	15–19	20–24	25–29	30–34	35–39	40 & UP	TOTAL
Under 25		5									5
25–29		11	6								17
30–34		13	6	3							22
35–39		6	11	9	2						28
40–44		5	3	5	4	2					19
45–49		6	3	9	4	5	1				28
50–54		8	8	7	10	5	6	4			48
55–59		7	11	12	18	9	9	11	11		88
60–64		5	8	13	6	4	7	8	7	3	61
65–69		1	2	3	1	1	2	2	2	1	15
70 & up		2								2	4
Total		69	58	61	45	26	25	25	20	6	335

In each cell, the number is the count of active participants for each age/service combination.

Schedule SB, Part V — Statement of Actuarial Assumptions/Methods

ACTUARIAL ASSUMPTIONS FOR JULY 1, 2018 FUNDING VALUATION

DISCOUNT RATE SPONSOR ELECTIONS			
• Segment rates or full yield curve	Segment		
• Look-back months	0		
	Stabilized	**Nonstabilized**	
• First 5 years	3.92%	2.14%	
• Next 15 years	5.52%	3.73%	
• Over 20 years	6.29%	4.44%	
Mortality sponsor elections			
• Healthy and disabled participants	Section 430(h)(3) prescribed separate static annuitant and nonannuitant mortality tables. These tables are based on the RP-2014 mortality tables with improvements beyond 2006 removed with static mortality improvement based on the IRS methodology and projection scale MP-2016.		
Other economic assumptions			
• Salary increases	N/A		
• Social Security wage base	N/A		
• Inflation	N/A		
• Expenses	$250,000 added to current year normal cost		
• Lump sum			
- Interest	Same as funding		
- Mortality	2018 417(e) unisex mortality		

RATIONALE FOR ECONOMIC ASSUMPTIONS

- Discount rate – Selected by Johnson Matthey Inc. from one of the allowable methods prescribed by The Pension Protection Act.

- Expenses – The expense load is based on the prior plan year actual expenses less PBGC premiums paid, increased by 5% and adjusted for the expected PBGC premiums for the current plan year and rounded up to the nearest $10,000.

- Lump sum – Liabilities are determined based on the underlying annuity used by the plan to determine the lump sum amount, rather than valuing the lump sum payment. This annuity is valued based on funding interest rates rather than 417(e) rates and the current year 417(e) unisex mortality. For 2018, the funding interest rates are the stabilized rates shown above.

DEMOGRAPHIC ASSUMPTIONS	
• Withdrawal	See Table of Sample Rates
• Disability incidence	82% of the Class 3 table (sex-distinct) from the 1985 study performed by the Conference of Consulting Actuaries. See Table of Sample Rates.

Schedule SB, Part V — Statement of Actuarial Assumptions/Methods

• Retirement age	**Attained age**	**Percentage**			
	Under 55	0.0%			
	55	3.0%			
	56	3.0%			
	57	3.0%			
	58	3.0%			
	59	3.0%			
	60	3.0%			
	61	5.0%			
	62	5.0%			
	63	5.0%			
	64	25.0%			
	65	25.0%			
	66	20.0%			
	67	20.0%			
	68	20.0%			
	69	20.0%			
	70	100.0%			
• Benefit commencement age for					
– Future vested deferred	65				
– Current vested deferred	65				
• Spouse assumptions	**Male participants**			**Female participants**	
– Percentage married	90%			60%	
– Spouse age difference	2 years younger			2 years older	
Form of payment - males and females	**Life annuity**	**Joint and survivor 75%**	**Joint and survivor 50%**	**Deferred lump sum**	**Immediate lump sum**
• Active retirements	25%	25%	0%	N/A	50%
• Future vested deferred	12.5%	12.5%	0%	25%	50%
• Future disabilities	100%	0%	0%	0%	0%
• Future deaths	0%	0%	100%	0%	0%
• Current vested deferred	25%	25%	0%	50%	0%
Unpredictable contingent event assumptions	Not applicable				

RATIONALE FOR DEMOGRAPHIC ASSUMPTIONS

- Funding Mortality - Prescribed by the IRS based on plan sponsor elections.

- Withdrawal Rates - The withdrawal rates are based on an experience study undertaken in 2017 using data from 7/1/2012 through 6/30/2016 and the expectation that the future retirement patterns and circumstances of the employer will not differ significantly from the period studied.

Schedule SB, Part V — Statement of Actuarial Assumptions/Methods

- Retirement Rates - The retirement rates are based on an experience study undertaken in 2017 using data from 7/1/2012 through 6/30/2016 and the expectation that the future retirement patterns and circumstances of the employer will not differ significantly from the period studied.

- Disability Incidence - The disability incidence table is based on the Conference of Consulting Actuaries 1985 Pension Disability Study Class 3 rates multiplied by 82% because the plan's population most closely resembles the occupations that Class 3 table was based on.

- Forms of Payment - This assumption is based on a blending of the actuary's experience with many plans, discussions with employer representatives and an experience study undertaken in 2017 using data from 7/1/2012 through 6/30/2016. It is the plan sponsor's expectation that the future circumstances of the employer will not differ significantly from the period studied and that the results of the study can reasonably be expected to carry into the future.

Table of Sample Rates

	PERCENTAGE		
		DISABILITY INCIDENCE	
ATTAINED AGE	WITHDRAWAL	MALE	FEMALE
20	6.78%	0.12%	0.07%
25	4.85%	0.18%	0.12%
30	4.02%	0.25%	0.21%
35	3.53%	0.35%	0.32%
40	3.19%	0.49%	0.45%
45	2.92%	0.68%	0.64%
50	2.70%	1.00%	0.98%
55	2.51%	1.74%	1.61%
60	2.35%	2.66 %	1.91%
65	2.21%	0.00%	0.00%
70	0.00%	0.00%	0.00%

ACTUARIAL METHODS FOR FUNDING

Asset Methods

The asset valuation method is the fair market value.

Participant Methods

Participants or former participants are included or excluded from the valuation as described below:

- **Participants included:** The plan sponsor provides us with data on all employees as of the valuation date, but only those employees who have completed the plan's eligibility requirements are included in the valuation of liabilities.

Schedule SB, Part V — Statement of Actuarial Assumptions/Methods

- **Participants excluded:** No actuarial liability is included for nonvested participants who terminated prior to the valuation date. For this purpose, participants with a break in service on the valuation date are treated as terminated participants.

- **Insurance contracts**: The plan does not have any insurance contracts.

Minimum Funding Methods

The funding target for minimum funding calculations is computed using the traditional unit credit method of funding. The objective under this method is to fund each participant's benefits under the plan as they accrue. Thus, the total pension to which each participant is expected to become entitled at retirement is broken down into units, each associated with a year of past or future credited service.

A detailed description of the calculation follows:

- The plan's valuation date is the beginning of the plan year.

- An individual's **funding target** is the present value of future benefits based on credited service as of the beginning of the plan year, and an individual's **target normal cost** is the present value of the benefit expected to accrue in the plan year. If multiple decrements are used, the funding target and the target normal cost for an individual are the sum of the component funding targets and target normal costs associated with the various anticipated separation dates.

- The plan's **target normal cost** is the sum of the individual target normal costs, and the plan's **funding target** is the sum of the individual funding targets for all participants under the plan.

Johnson Matthey Inc.
Amended and Restated Hourly Employees Pension Plan

Schedule of Reportable Transactions
For the Year Ended June 30, 2019
Employer Identification Number: 23-0411710 Plan Number: 002

(a) Identity of Party Involved*	(b) Description of Asset	(c) Purchase Price	(d) Selling Price	(f) Expense Incurred with Transaction	(g) Cost of Asset	(h) Current Value of Asset at Transaction Date	(i) Net Gain or (Loss)
Single Reportable Security Transaction Exceeding 5% of Plan Assets:							
EB TEMP INV FD VAR RT	Common Collective Trust	$ 2,800,000	$ -	$ -	$ 2,800,000	$ 2,800,000	$ -
Series of Reportable Security Transactions Exceeding 5% of Plan Assets:							
EB TEMP INV FD VAR RT	Common Collective Trust	$ 5,659,708	$ -	$ -	$ 5,659,708	$ 5,659,708	$ -
EB TEMP INV FD VAR RT	Common Collective Trust	-	4,354,728	-	4,354,728	4,354,728	-
BNYM-M DB SL LT GOVT BIF	Common Collective Trust	1,806,000	-	-	1,806,000	1,806,000	-
BNYM-M DB SL LT GOVT BIF	Common Collective Trust	-	550,000	-	500,205	500,205	49,795

** There are no category (iii) or (iv) transactions.*

SCHEDULE SB (Form 5500)

Department of the Treasury
Internal Revenue Service

Department of Labor
Employee Benefits Security Administration

Pension Benefit Guaranty Corporation

Single-Employer Defined Benefit Plan Actuarial Information

This schedule is required to be filed under section 104 of the Employee Retirement Income Security Act of 1974 (ERISA) and section 6059 of the Internal Revenue Code (the Code).

▶ File as an attachment to Form 5500 or 5500-SF.

OMB No. 1210-0110

2018

This Form is Open to Public Inspection

For calendar plan year 2018 or fiscal plan year beginning 07/01/2018 and ending 06/30/2019

▶ **Round off amounts to nearest dollar.**

▶ **Caution:** A penalty of $1,000 will be assessed for late filing of this report unless reasonable cause is established.

A Name of plan
JOHNSON MATTHEY, INC. AMENDED AND RESTATED HOURLY EMPLOYEES PENSION PLAN

B Three-digit plan number (PN) ▶ 002

C Plan sponsor's name as shown on line 2a of Form 5500 or 5500-SF
JOHNSON MATTHEY, INC.

D Employer Identification Number (EIN)
23-0411710

E Type of plan: [X] Single [ ] Multiple-A [ ] Multiple-B

F Prior year plan size: [ ] 100 or fewer [ ] 101-500 [X] More than 500

Part I Basic Information

1 Enter the valuation date: Month 07 Day 01 Year 2018

2 Assets:

a Market value	**2a**	48,716,137
b Actuarial value	**2b**	48,716,137

3 Funding target/participant count breakdown

	(1) Number of participants	(2) Vested Funding Target	(3) Total Funding Target
a For retired participants and beneficiaries receiving payment	164	13,148,885	13,148,885
b For terminated vested participants	102	4,405,058	4,405,058
c For active participants	335	20,890,041	22,921,904
d Total	601	38,443,984	40,475,847

4 If the plan is in at-risk status, check the box and complete lines (a) and (b) [ ]

a Funding target disregarding prescribed at-risk assumptions	**4a**	
b Funding target reflecting at-risk assumptions, but disregarding transition rule for plans that have been in at-risk status for fewer than five consecutive years and disregarding loading factor	**4b**	
5 Effective interest rate	**5**	5.77%
6 Target normal cost	**6**	1,446,893

Statement by Enrolled Actuary

To the best of my knowledge, the information supplied in this schedule and accompanying schedules, statements and attachments, if any, is complete and accurate. Each prescribed assumption was applied in accordance with applicable law and regulations. In my opinion, each other assumption is reasonable (taking into account the experience of the plan and reasonable expectations) and such other assumptions, in combination, offer my best estimate of anticipated experience under the plan.

SIGN HERE

VJ S — Signature of actuary

3/12/2020 — Date

VANESSA SOSKIND, ASA, EA, MAAA — Type or print name of actuary

1706307 — Most recent enrollment number

MERCER — Firm name

813-207-6306 — Telephone number (including area code)

3031 N ROCKY POINT DRIVE WEST
SUITE 700
TAMPA FL 33607
Address of the firm

If the actuary has not fully reflected any regulation or ruling promulgated under the statute in completing this schedule, check the box and see instructions [ ]

Part II Beginning of Year Carryover and Prefunding Balances

		(a) Carryover balance	(b) Prefunding balance
7	Balance at beginning of prior year after applicable adjustments (line 13 from prior year)	8,035,272	0
8	Portion elected for use to offset prior year's funding requirement (line 35 from prior year)	0	0
9	Amount remaining (line 7 minus line 8)	8,035,272	0
10	Interest on line 9 using prior year's actual return of -1.48%	-118,922	0
11	Prior year's excess contributions to be added to prefunding balance:		
	a Present value of excess contributions (line 38a from prior year)		4,294,010
	b(1) Interest on the excess, if any, of line 38a over line 38b from prior year Schedule SB, using prior year's effective interest rate of 5.95%		255,494
	b(2) Interest on line 38b from prior year Schedule SB, using prior year's actual return		
	c Total available at beginning of current plan year to add to prefunding balance		4,549,504
	d Portion of (c) to be added to prefunding balance		0
12	Other reductions in balances due to elections or deemed elections	0	0
13	Balance at beginning of current year (line 9 + line 10 + line 11d – line 12)	7,916,350	0

Part III Funding Percentages

14	Funding target attainment percentage	14	100.80%
15	Adjusted funding target attainment percentage	15	120.35%
16	Prior year's funding percentage for purposes of determining whether carryover/prefunding balances may be used to reduce current year's funding requirement	16	128.71%
17	If the current value of the assets of the plan is less than 70 percent of the funding target, enter such percentage.	17	%

Part IV Contributions and Liquidity Shortfalls

18 Contributions made to the plan for the plan year by employer(s) and employees:

(a) Date (MM-DD-YYYY)	(b) Amount paid by employer(s)	(c) Amount paid by employees	(a) Date (MM-DD-YYYY)	(b) Amount paid by employer(s)	(c) Amount paid by employees
07/08/2018	145,000	0			
08/13/2018	145,000	0			
09/10/2018	145,000	0			
10/15/2018	145,000	0			
11/13/2018	145,000	0			
			Totals ► 18(b)	725,000	18(c) 0

19	Discounted employer contributions – see instructions for small plan with a valuation date after the beginning of the year:		
	a Contributions allocated toward unpaid minimum required contributions from prior years	19a	0
	b Contributions made to avoid restrictions adjusted to valuation date	19b	0
	c Contributions allocated toward minimum required contribution for current year adjusted to valuation date	19c	716,995

20 Quarterly contributions and liquidity shortfalls:

a Did the plan have a "funding shortfall" for the prior year? ☐ Yes ☒ No

b If line 20a is "Yes," were required quarterly installments for the current year made in a timely manner? ☐ Yes ☐ No

c If line 20a is "Yes," see instructions and complete the following table as applicable:

Liquidity shortfall as of end of quarter of this plan year

(1) 1st	(2) 2nd	(3) 3rd	(4) 4th

Part V Assumptions Used to Determine Funding Target and Target Normal Cost

21 Discount rate:

a Segment rates:

1st segment:	2nd segment:	3rd segment:	☐ N/A, full yield curve used
3.92 %	5.52 %	6.29%	

b Applicable month (enter code)	**21b**	0
22 Weighted average retirement age	**22**	65

23 Mortality table(s) (see instructions)

Prior regulation: ☐ Prescribed - combined ☒ Prescribed - separate ☐ Substitute

Current regulation: ☐ Prescribed - combined ☐ Prescribed - separate ☐ Substitute

Part VI Miscellaneous Items

24 Has a change been made in the non-prescribed actuarial assumptions for the current plan year? If "Yes," see instructions regarding required attachment. ☒ Yes ☐ No

25 Has a method change been made for the current plan year? If "Yes," see instructions regarding required attachment. ☐ Yes ☒ No

26 Is the plan required to provide a Schedule of Active Participants? If "Yes," see instructions regarding required attachment. ☒ Yes ☐ No

27 If the plan is subject to alternative funding rules, enter applicable code and see instructions regarding attachment	**27**	

Part VII Reconciliation of Unpaid Minimum Required Contributions For Prior Years

28 Unpaid minimum required contributions for all prior years	**28**	0
29 Discounted employer contributions allocated toward unpaid minimum required contributions from prior years (line 19a)	**29**	0
30 Remaining amount of unpaid minimum required contributions (line 28 minus line 29)	**30**	0

Part VIII Minimum Required Contribution For Current Year

31 Target normal cost and excess assets (see instructions):

a Target normal cost (line 6)	**31a**	1,446,893
b Excess assets, if applicable, but not greater than line 31a	**31b**	323,940

32 Amortization installments:

	Outstanding Balance	Installment
a Net shortfall amortization installment	0	0
b Waiver amortization installment	0	0

33 If a waiver has been approved for this plan year, enter the date of the ruling letter granting the approval (Month _____ Day _____ Year _____) and the waived amount	**33**	
34 Total funding requirement before reflecting carryover/prefunding balances (lines 31a - 31b + 32a + 32b - 33)	**34**	1,122,953

	Carryover balance	Prefunding balance	Total balance
35 Balances elected for use to offset funding requirement	405,958	0	405,958

36 Additional cash requirement (line 34 minus line 35)	**36**	716,995
37 Contributions allocated toward minimum required contribution for current year adjusted to valuation date (line 19c)	**37**	716,995

38 Present value of excess contributions for current year (see instructions)

a Total (excess, if any, of line 37 over line 36)	**38a**	0
b Portion included in line 38a attributable to use of prefunding and funding standard carryover balances	**38b**	0
39 Unpaid minimum required contribution for current year (excess, if any, of line 36 over line 37)	**39**	0
40 Unpaid minimum required contributions for all years	**40**	0

Part IX Pension Funding Relief Under Pension Relief Act of 2010 (See Instructions)

41 If an election was made to use PRA 2010 funding relief for this plan:

a Schedule elected ☐ 2 plus 7 years ☐ 15 years

b Eligible plan year(s) for which the election in line 41a was made ☐ 2008 ☐ 2009 ☐ 2010 ☐ 2011

Schedule SB, line 22 — Description of Weighted Average Retirement Age

Each employee is assumed to retire in accordance with the table of retirement rates. The proportion of employees expected to retire at each potential retirement age is shown below. The average retirement age is 65.

(A)	(B)	(C)	(D)	(E)
Retirement age	**Retirement Percent**	**Lx**	**Number of employees expected to retire (B) x (C)**	**(A) x (D)**
55	3.00%	10,000	300	16,500
56	3.00%	9,700	291	16,296
57	3.00%	9,409	282	16,074
58	3.00%	9,127	274	15,892
59	3.00%	8,853	266	15,694
60	3.00%	8,587	258	15,480
61	5.00%	8,329	416	25,376
62	5.00%	7,913	396	24,552
63	5.00%	7,517	376	23,688
64	25.00%	7,141	1,785	114,240
65	25.00%	5,356	1,339	87,035
66	20.00%	4,017	803	52,998
67	20.00%	3,214	643	43,081
68	20.00%	2,571	514	34,952
69	20.00%	2,057	411	28,359
70	100.00%	1,646	1,646	115,220
Total				645,437
Average				64.54

Schedule SB, Part V — Summary of Plan Provisions

SUMMARY OF MAJOR PLAN PROVISIONS

Effective date and plan year	Original plan: July 1, 1950 Restated plan: July 1, 2015 Plan year: July 1 to June 30
Current Collective Bargaining Agreement	November 21, 2015 through November 16, 2018. Former CMC participants: June 21, 2015 through November 16, 2018.
Status of the plan	The plan has ongoing benefit accruals and new employees are eligible to participate in the plan once they satisfy the participation requirements.
Significant events that occurred during the year	None.
Definitions	
• Participation	An employee shall become a participant upon completion of one year of Credited Service.
• Employee contributions	None.
• Vesting Service	Equals Credited Service
• Credited Service	**Credited Service:** Years and completed months of service from date of hire. Credited Service shall include periods of layoff not exceeding two years provided the employee returns to work after recall. **Break in Service:** Twelve-month employment period during which less than 501 hours of service are worked (unless on a Qualified Leave of Absence). If the participant is not vested and the number of consecutive one-year Breaks in Service equals or exceeds the greater of the total number of years of Vesting Service and Credited Service earned prior to break, or five years, such prior service is lost.
• Accrued Benefit	**Accrued Benefit:** Monthly benefit equals: — $47 multiplied by Credited Service, plus — $9 multiplied by Credited Service earned after November 16, 2012. **Accrued Benefit for former CMC participants:** [1] Monthly benefit equals: — $46 multiplied by Credited Service, plus — $1 multiplied by Credited Service earned after June 21, 2012, plus — $1 multiplied by Credited Service earned after June 21, 2013, plus — $1 multiplied by Credited Service after June 21, 2014, plus — $1 multiplied by Credited Service after June 21, 2015, plus — $1 multiplied by Credited Service after June 21, 2016, plus — $1 multiplied by Credited Service after June 21, 2017.
Normal retirement	
• Eligibility	Retirement on the first day of the month coincident with or following attainment of age 65.
• Benefit	Accrued Benefit as of date of termination.

[1] Seven active participants are covered under a separate collective bargaining agreement.

Schedule SB, Part V — Summary of Plan Provisions

Early retirement	
• Eligibility	1. Retirement on the first day of any month coincident with or following attainment of age 62 and completion of at least 10 Years of Credited Service, or 2. Retirement on the first day of any month coincident with or following attainment of age 55 and completion of at least 15 Years of Credited Service.
• Benefit	An immediate benefit equal to the Normal Retirement Benefit reduced as follows: For Annuity Starting dates prior to July 1, 2017, benefit multiplied by the applicable percentage below.

Attained Age	Percentage
55	33.0%
56	37.0%
57	41.0%
58	45.0%
59	50.0%
60	56.0%
61	63.0%
62	75.0%
63	83.0%
64	90.0%
65	100.0%

	For annuity starting dates on and after July 1, 2017, the actuarially equivalent benefit based on the applicable interest rates specified under section 417(e)(3)(C) of the code for the March immediately preceding the plan year and the applicable mortality table specified under section 417(e)(3)(B) of the code. Under no circumstance will the early retirement benefit determined on this basis be less than the benefit accrued through December 31, 2017 (or termination date, if earlier) multiplied by the factors above. Participants may retire with an unreduced benefit once they attain age 62 if they have completed 15 Years of Credited Service. This only applies to participants who retire from active service.
Late retirement	
• Eligibility	Retirement after attainment of normal retirement age.
• Benefit	Accrued Benefit as of late retirement date.
Deferred vested	
• Eligibility	Completion of five Years of Credited Service
• Benefit	Accrued Benefit as of date of termination, payable unreduced at Normal Retirement Date. If the participant has completed at least 10 Years of Credited Service prior to termination, the Accrued Benefit is payable as early as age 62, reduced for Early Retirement. If the participant has completed at least 15 Years of Credited Service prior to termination, the Accrued Benefit is payable as early as age 55, reduced for Early Retirement.

Schedule SB, Part V — Summary of Plan Provisions

Disability	
• Eligibility	Completion of 10 Years of Credited Service. For Disability Retirement due to platinum allergy, a participant must also be at least age 60 (age 55 if prior to November 21, 2009 and age 50 if prior to November 22, 2003).
• Benefit	Accrued Benefit as of date of disability, payable immediately. For Disability Retirement due to platinum allergy there is continued service accrued during the period the employee has recall rights under section D.2 or D.3 of the November 21, 2009 Collective Bargaining Agreement.
Pre-retirement death	
• Eligibility prior to early retirement	Participant vested in Accrued Benefit and married for at least one year prior to date of death.
• Benefit prior to early retirement	Annuity payable to participant's spouse equal to 50% of the benefit the employee would have received had the employee terminated the day before his/her death, retired when first eligible for early retirement, and elected the Joint & 50% Survivor option.
• Eligibility after early but before normal retirement	Participant eligible for early retirement, not yet receiving a benefit; married for at least one year.
• Benefit after early but before normal retirement	Annuity payable to participant's spouse equal to 50% of the benefit the employee would have received had the employee retired on the day before his/her death and elected the Joint & 50% Survivor option.
Form of benefits	
• Automatic form for unmarried participants	Life Annuity
• Automatic form for married participants	Joint and 50% Survivor Annuity (actuarially reduced)
• Optional forms	Life annuity; Life annuity with 60 or 120 months guaranteed; Joint and 50%, 66 2/3%, 75%, or 100% Survivor annuity; Unlimited lump sum
• Optional form conversion factors	For annuities with Annuity Starting Dates prior to July 1, 2017- UP84 mortality with three year setback for beneficiaries and 8.0% interest. For all lump sums and annuities with Annuity Starting Dates on or after July 1, 2017– 417(e) interest rates for the month of March preceding the plan year in which the payment is made and the applicable 417(e) mortality table.
Miscellaneous	
• Maximum benefits	Annual benefits may not exceed the limits in IRC Section 415. This limit is indexed annually. For 2018 the limit is $220,000.
• Funding medium	Master trust fund with Mellon Capital Management Corporation.

Benefits Included or Excluded

Unless noted below, all benefits provided by the plan, as restated and amended effective July 1, 2015, are included in this valuation.

- Most recent plan amendments included: Amendment 2018-1.

Schedule SB, Part V — Summary of Plan Provisions

- Plan amendments excluded: None that were adopted as of the valuation date for that particular measurement.
- Late retirement increases:
  - *Active participants:* The plan provides benefit suspension notices to participants who work beyond normal retirement; therefore, late retirement actuarial increases only apply to participants who defer retirement beyond age 70½. This valuation includes increases for current participants over age 70 ½.
  - *Deferred vested participants:* Current deferred vested participants over normal retirement age are valued including the late retirement actuarial increase.
- **Internal Revenue Code limitations:** The limitations of Internal Revenue Code Section 415(b) and 401(a)(17) have been incorporated into our calculations.
- **IRC Section 416 rules for top-heavy plans:** The plan is not top-heavy (when the present value of benefits for key employees equals or exceeds 60% of the present value for all participants) since all employees who participate in the plan are covered by a collective bargaining agreement.

PLAN PROVISIONS SPECIFIC TO FUNDING

Additional Benefits Included or Excluded

- **IRC Section 436 benefit restrictions:**
  - *Unpredictable contingent event benefits:* This valuation excludes restricted contingent event benefits that occurred before the valuation date but includes contingent event benefits which are expected to occur on or after the valuation date regardless of anticipated funding-based limitations.
  - *Plan amendments:* See above.
  - *Prohibited payments:* Limitations on prohibited benefits (if any) are reflected for annuity starting dates before the valuation date but are ignored for annuity starting dates on or after the valuation date.
  - *Benefit accruals:* The plan's funding target does not reflect any limitation on benefit accruals. The target normal cost does not reflect any limitation on benefit accruals.
- **Scheduled benefit increases:** Scheduled benefit increases effective after the end of the current plan year are excluded for minimum funding requirements.
- **Unpredictable contingent event benefits:** The plan does not have any unpredictable contingent event benefits.

Schedule SB, Part V — Summary of Plan Provisions

PLAN PROVISION CHANGES SINCE PRIOR VALUATION

- Maximum compensation amounts and maximum benefit amounts under IRS rules were updated from 2017 to 2018.

Johnson Matthey Inc.
Amended and Restated Hourly Employees Pension Plan

Schedule of Assets (Held at End of Year) as of June 30, 2019
Employer Identification Number: 23-0411710 Plan Number: 002

(a)	*(b)*	*(c)*	*(d)*	*(e)*
	Identity of issuer, borrower or similar party	Description of investment, including maturity date, rate of interest, collateral, par or maturity value**	Cost	Current Value
*	EB TEMP INV FD VAR RT	Common collective trust	$ 1,627,208	$ 1,627,208
*	BNYM-M DB SL LT GOVT BIF	Common collective trust	9,555,795	11,157,851
*	BNYM-M DB SL INT CREDIT BIF	Common collective trust	2,941,380	3,192,979
*	BNYM-M DB SL LT CREDIT BIF	Common collective trust	32,572,306	37,748,485

* A party-in-interest as defined by ERISA.

** There is no maturity date, rate of interest, collateral, par or maturity vaue for the investment in the Plan.

Schedule SB, line 24 — Change in Actuarial Assumptions

- The mortality rates and interest rates were updated as prescribed by PPA.
- Lump sum mortality was updated to 2018 417(e) unisex mortality