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UNITED STATES SECURITIES AND EXCHANCE COMMISSION

OMB APPROVAL								
OMB Number:	3235-0287							
Estimated average burden								
iours per response:	0.5							

7. Nature of Indirect Beneficial Ownership (Instr. 4)

By The Gerald G. Colella 2018 Grantor Trust By The Gerald G. Colella Living Trust

11. Nature of Indirect

Beneficial Ownership

(Instr. 4)

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	FORM	14	UNITE	D ST	ATE	S SEC				XCHANG	E CO	MMISSIC	ON				
						Washing	gton, D.C	C. 2054	19					omb a	PPROV	AL	
Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).					-iled pu	rsuant to S	ection 16(a) 0(h) of the li	of the S	IERSHIP	SHIP		OMB Number: Estimated average bu hours per response:		3235-028 0.			
							and Ticker FRUME						ionship of Re all applicable Director		Person(s)	to Issuer 10% Owr	her
(Last) 2 TECH I		(First)	(Middle)			te of Earliest Transaction (Month/Day/Year) 5/2019						X	Officer (give title below)		Other (spe below) Director		∍cify
(Street) ANDOVI	ER	MA		4. If Amendment, Date of Original Filed (Month/Day/Year)								6. Individual or Joint/Group Filing (Check Applicable Line) X Form filed by One Reporting Person Form filed by More than One Reporting Person					
(City)		(State)	(Zip)										Forminied				
			Table I - No	n-Der	ivativ	e Secu	ities Acc	luired	, Disp	posed of, o	r Bene	ficially Ow	ned				
1. Title of Security (Instr. 3)		2. Transaction Date (Month/Day/Year)		ar) Exect	2A. Deemed Execution Date, if any (Month/Day/Year)		ction Instr.	4. Securities Acquired (A) or Disposed Of (D) (Instr. 3, 4 a		A) or 3, 4 and 5)	Following Re	Securities Beneficially Owned Following Reported		Direct I direct I . 4) 0	7. Nature Indirect Beneficial Ownershi		
								Code	v	Amount	(A) or (D)	Price	Transaction((Instr. 3 and				Instr. 4)
Common	Stock			02/1	15/201	9		М		15,653.663	A	(1)	15,653.	663	Ι	D I	
Common Stock 02			02/1	15/201	9		М		11,037.583	A	(1)	26,691.	246	I	C		
Common Stock			02/1	02/15/2019			М		8,936	A	(1)	35,627.246		I	c		
Common Stock			02/15/2019		9		М		7,386	A	(1)	43,013.246		I	C		
Common Stock		02/15/2019		9		М		6,885	A	(1)	49,898.246		D				
Common Stock		02/15/2019		9		М		5,250	A	(1)	55,148.246		D				
Common Stock			02/15/2019		9				24,488	D	\$84.7	30,660.246		D			
Common Stock											60,00	0]	I	By The Gerald (Colella 2018 Grantor Frust		
Common Stock												17,88	8]	I 0	By The Gerald (Colella Living Frust	
			Table II -							osed of, or onvertible			ed				
1. Title of Derivative Security (Instr. 3)	Conversion Date E: or Exercise (Month/Day/Year) if Price of (N Derivative		3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transa	L. 5. N Transaction Code (Instr. Acq Disp		lumber of ivative Securities quired (A) or posed of (D) (Instr. and 5)			cisable and 7 ate S Year) [. Title an	d Amount of Underlying Security	8. Price of Derivative Security (Instr. 5)	9. Numl derivati Securiti Benefic Owned Followin	e Ownersh es Form: ally Direct (D or Indirec		Benefic Owner t (Instr. 4
	Security			Code	v	(A)	(D)	Date Exerc	isable	Expiration Date 1	ïtle	Amount or Number of Shares		Reporte Transac (Instr. 4	ed ction(s)	(., (iii30. 4)	
Restricted Stock Unit	(1)	02/15/2019		Α		23,612.751		(3)	(3)	Common Stock	23,612.751	(1) 41,4		9.899	D	
Restricted Stock Unit	(1)	02/15/2019		М			15,653.663	3 (4)	(4)	Common Stock	15,653.663	(1)	38,53	0.52	D	

Explanation of Responses:

(1)

(1)

(1)

(1)

(1)

02/15/2019

02/15/2019

02/15/2019

02/15/2019

02/15/2019

Restricted

Stock Uni

Restricted Stock Unit

Restricted

Stock Uni Restricted Stock Unit

Restricted

Stock Uni

1. Each restricted stock unit represents the contingent right to receive one share of common stock of MKS Instruments, Inc.

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2. This transaction was effected pursuant to a Rule 10b5-1 trading plan previously adopted by the reporting person.

3. These RSUs vest in three equal annual installments commencing on February 15, 2020, provided that if, in any vesting year, February 15th is not a business day, such vesting shall occur on the next business day.

4. These RSUs are subject to the achievement of performance criteria determined in the first year of grant and thereafter vest in three equal annual installments beginning on February 15, 2017, provided that if, in any vesting

(5)

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(7)

(8)

(9)

Commo

Stock

Common Stock

Common Stock

Common Stock

Common Stock

11,037.583

8,936

7,386

6,885

5,250

(1)

(1)

(1)

(1)

(1)

30,523.148

29,594.52

23,137.148

22,709.52

17,887.148

(5)

(6)

(7)

(8)

(9)

year, February 15th is not a business day, such vesting shall occur on the next business day.

5. These RSUs vest in three equal annual installments commencing on February 15, 2017, provided that if, in any vesting year, February 15th is not a business day, such vesting shall occur on the next business day.

11,037.583

8.936

7.386

6,885

5.250

6. These RSUs are subject to the achievement of performance criteria determined in the first year of grant and thereafter vest in three equal annual installments beginning on February 15, 2018, provided that if, in any vesting year, February 15th is not a business day, such vesting shall occur on the next business day.

7. These RSUs vest in three equal annual installments commencing on February 15, 2018, provided that if, in any vesting year, February 15th is not a business day, such vesting shall occur on the next business day.

8. These RSUs are subject to the achievement of performance criteria determined in the first year of grant and thereafter vest in three equal annual installments beginning on February 15, 2019, provided that if, in any vesting year, February 15th is not a business day, such vesting shall occur on the next business day.

9. These RSUs vest in three equal annual installments commencing on February 15, 2019, provided that if, in any vesting year, February 15th is not a business day, such vesting shall occur on the next business day.

/s/ M. Kathryn Rickards, attorney- 02/19/2019 <u>in-fact</u> Date

** Signature of Reporting Person

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

 \ast If the form is filed by more than one reporting person, see Instruction 4 (b)(v).

** Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.