

Filed by: MKS Instruments, Inc.
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Subject Company: Applied Science and Technology, Inc.
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MKS Instruments, Inc.

Around the Process...

Around the World...

Strategic Acquisition of ASTeX, October, 2000

Safe Harbor Passage

This presentation may contain forward-looking statements that are made under the safe harbor provisions of the Securities Litigation Reform Act of 1995. Such statements are estimates which involve risks and uncertainties. Actual results may vary significantly from those stated in forward-looking statements. Further information regarding risk factors can be found in the Companies' filings with the Securities and Exchange Commission.

John Bertucci
Chairman & CEO
MKS Instruments

Transaction Summary

- [] \$300M acquisition of ASTeX
 - [] 100% Stock and assumption of debt/cash

- [] Ownership
 - [] 70% MKS Instruments
 - [] 30% ASTeX

- [] Exchange Ratio
 - [] 0.7669 MKSI shares per ASTeX common share

- [] Pooling of interests

- [] Expected Closing: December 2000

Complementary Technologies ... Integrated Solutions

[MKS logo omitted]

- [] #1 supplier of gas process control instruments to semiconductor OEMs and Fabs
- [] Market Value ~\$700M
- [] 30 years of consecutive profitability, revenue CAGR 18% for 20 years
- [] World-class global infrastructure

[ASTeX logo omitted]

- [] #1 supplier of reactive gas solutions to semiconductor OEMs
- [] Market Value ~\$210M
- [] 5-years revenue CAGR 48% (3x industry growth rate)
- [] Broad, deep, technically experienced management team

Strong Strategic Fit
Around the Process

[Diagram of process chamber including the following MKS products:

- Specialty gases flowing through Mass-Flo(R) Gas Panel Instruments
- Gas Box Instruments
- Materials Delivery System
- Control Valve
- Shut-off Valve
- Process Monitor
- Baratron(R) Pressure Measurement
- Adaptive Controller
- HPS(R) Vacuum Components/Subsystems]

[Diagram of process chamber described above, adding on each of the following
ASTeX products:

- Ozone Generator
- ASTRON Reactive Gas Generators
- Power Generators]

Strategic Rationale

- [] One-stop Solution Leader
 - [] Most comprehensive product offering

- [] Strengthens Competitive Positioning
 - [] Integrated solutions leader
 - [] Most comprehensive offering
 - [] Enhanced critical mass
 - [] Complementary core technologies
 - [] Builds on leading global infrastructure

- [] Revenue Synergy Upside
 - [] 100% complementary product offerings
 - [] Cross-selling opportunities

Strategic Rationale

- [] Strong Financial Position
 - [] \$388 million in revenues (Combined companies, LTM)
 - [] \$157 million cash (Combined companies, June 30, 2000)
 - [] Positioned for additional acquisitions
 - [] Accretive to MKS' earnings (without synergies)

- [] Cost Synergy Upside
 - [] Leverage global infrastructure
 - [] Leverage MKS' lean manufacturing
 - [] Leverage supply chain management
 - [] Leverage R&D investment

- [] Enhanced Growth Platform
 - [] Depth of combined management team and technology
 - [] Complementary core competencies
 - [] Strong geographical and cultural fit

Critical Process Technologies

[First part of diagram shows the following semiconductor processes:

RTP	Etch
Epi	Ion Implant
SEM	Diffusion
Vacuum Processes	Strip
PVD	CVD]

'virtually every chip in the world is made with MKS' products'

[Diagram shows the following semiconductor processes:

RTP	Etch
Ion Implant	Strip
CVD	Clean]

'virtually every chip in the world is made with ASTeX products'

[Second part of diagram shows applications, other than semiconductor, which are made using the same process, specifically

Flat Panel Displays
 Micro-Machined Devices
 Magnetic/Optical Storage Media
 MRI
 Freeze Dried Pharmaceuticals
 LEDs
 Optical Filters & Fibers
 Sterilized Medical Instruments
 Solar Cells
 Lasers]

[Third part of diagram shows the growing markets that use these products, specifically

Telecommunications
 Internet Infrastructure
 Consumer Electronics
 Pharmaceutical & Medical
 PCs
 Automotive
 Electronics]

[Diagram of process chamber including the following MKS products:

- Specialty gases flowing through Mass-Flo(R) Gas Panel Instruments
- Gas Box Instruments
- Materials Delivery System
- Control Valve
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- Process Monitor
- Baratron(R) Pressure Measurement
- Adaptive Controller
- HPS(R) Vacuum Components/Subsystems]

[Diagram of process chamber described above, adding on each of the ASTeX products:

- Power Generators
- ASTRON Reactive Gas Generators
- Ozone Generator]

[Diagram of process chamber including the following integrated products:

- Integrated Vapor delivery
- Digital control network
- Integrated wafer power & cooling
- Integrated vacuum foreline cleaning]

Comprehensive Product Offerings

[Pictures of the following products omitted

- [] Pressure Measurement and Control Products
- [] Vacuum Products
- [] Materials Delivery & Analysis Products
- [] ASTeX Products
- [] Integrated Subsystems]

Semiconductor Capital Equipment

Semiconductor Manufacturers

<input type="checkbox"/> Applied Materials	<input type="checkbox"/> Lam Research	<input type="checkbox"/> AMD	<input type="checkbox"/> Mitsubishi	<input type="checkbox"/> ST Microelectronics
<input type="checkbox"/> ASM	<input type="checkbox"/> Novellus	<input type="checkbox"/> Fujitsu	<input type="checkbox"/> Motorola	<input type="checkbox"/> Siemens
<input type="checkbox"/> Axcelis	<input type="checkbox"/> PSK	<input type="checkbox"/> Hitachi	<input type="checkbox"/> National Semi	<input type="checkbox"/> TI
<input type="checkbox"/> Gasonics	<input type="checkbox"/> Quester	<input type="checkbox"/> Hyundai	<input type="checkbox"/> NEC	<input type="checkbox"/> Toshiba
<input type="checkbox"/> Genus	<input type="checkbox"/> Semitool	<input type="checkbox"/> IBM	<input type="checkbox"/> Philips	<input type="checkbox"/> TSMC
<input type="checkbox"/> Hitachi	<input type="checkbox"/> SVS	<input type="checkbox"/> Intel	<input type="checkbox"/> Samsung	<input type="checkbox"/> UMC
<input type="checkbox"/> Jusung	<input type="checkbox"/> Tokyo Electron	<input type="checkbox"/> Micron		
	<input type="checkbox"/> ULVAC			
	<input type="checkbox"/> Varian			

Data Storage and FPD

Specialty Gas Suppliers

Diverse Vacuum Processes

<input type="checkbox"/> AKT	<input type="checkbox"/> NEC	<input type="checkbox"/> Air Liquide	<input type="checkbox"/> Abbott Labs	<input type="checkbox"/> GE
<input type="checkbox"/> Alcatel	<input type="checkbox"/> Seagate	<input type="checkbox"/> Air Products	<input type="checkbox"/> Delco	<input type="checkbox"/> Johnson & Johnson
<input type="checkbox"/> Anelva	<input type="checkbox"/> Sharp	<input type="checkbox"/> BOC	<input type="checkbox"/> Ford	<input type="checkbox"/> OSRAM
<input type="checkbox"/> CVC	<input type="checkbox"/> Toshiba	<input type="checkbox"/> Kinetics		<input type="checkbox"/> Westinghouse
<input type="checkbox"/> Komag	<input type="checkbox"/> Unaxis	<input type="checkbox"/> Nippon Sanso		
<input type="checkbox"/> Lucent	<input type="checkbox"/> Veeco	<input type="checkbox"/> Praxair		

Top 10 Customers (LTM)

MKS	ASTeX	Combined
Applied Materials	Applied Materials	Applied Materials
Axcelis	Chipbond	Chipbond
Hitachi	FSI	Gasonics
Intel	Gasonics	Lam
Lam	J & J	Novellus
Motorola	Lam	Philips Med.
Novellus	Philips Med.	SVG
Samsung	SVG	TEL
TEL	Ulvac	Ulvac
Ulvac	Varian	Varian

Leaders in Growing Market

[Pie chart showing total available market, served market and MKS and ASTeX shares of served market]

Served Market ~\$750M (1999)
MKS ~25%

Served Market ~\$1450M (1999)
[Pie chart indicates MKS and ASTeX portion of market]

Total Market Around the Process
~\$3.5bn (1999)
~\$5.5bn (2000) est.
[Pie chart indicates MKS and ASTeX portion of market]

Source: AVEM, SEMI, Company Estimates

Pressure Measurement & Control	Materials Delivery and Analysis		Vacuum Products	Reactive Gas Generators	Power Generators
	Flow Control	Gas Analysis			
<input type="checkbox"/> MKS	<input type="checkbox"/> MKS	<input type="checkbox"/> MKS	<input type="checkbox"/> MKS	<input type="checkbox"/> ASTeX	<input type="checkbox"/> ASTeX
<input type="checkbox"/> Millipore	<input type="checkbox"/> Aera	<input type="checkbox"/> Inficon	<input type="checkbox"/> Edwards	<input type="checkbox"/> AE	<input type="checkbox"/> AE
	<input type="checkbox"/> Millipore	<input type="checkbox"/> * Spectra	<input type="checkbox"/> Helix	<input type="checkbox"/> Ebara	<input type="checkbox"/> Analogic
	<input type="checkbox"/> STEC		<input type="checkbox"/> Inficon	<input type="checkbox"/> Sumitomo	<input type="checkbox"/> Daihen
	<input type="checkbox"/> Unit Instruments		<input type="checkbox"/> MDC		<input type="checkbox"/> ENI
			<input type="checkbox"/> Nor-Cal		
			<input type="checkbox"/> Varian		

* Acquired by MKS

Unique Competitive Position

	PRESSURE	FLOW	MONITOR	VACUUM COMP	VACUUM GAUGE	SUB- SYSTEMS	DIGITAL NETWORK
MKS	X	X	X	X	X	X	X
Aera		X					
Edwards				X	X		
Helix					X		
Inficon			X	X	X		
MDC				X			
Millipore	X	X					
Nor-Cal				X			
STEC		X					
Unit		X					
Varian				X	X		

	OZONE	LIQUOZONE	RF POWER	DC POWER	uW POWER	REACTIVE GAS	SYS. INTEGRATION
ASTeX	X	X	X	X	X	X	X
Aera							
Edwards							
Helix							
Inficon							
MDC							
Millipore							
Nor-Cal							
STEC							
Unit							
Varian							
AE			X	X		X	
Analogic			X				
Daihen			X		X		
Ebara	X	X					
ENI			X	X			
Sumitomo	X	X					

Source: Company estimates of market participants with share >5%.

Established Global Infrastructure

[Diagram of world showing locations of MKS and ASTeX facilities.]

- [] 12 Manufacturing Facilities
- [] 22 Customer Support Centers
- [] Provides SG&A Leverage
- [] ASTeX Locations

Richard Post, Ph.D

Chairman & CEO
ASTeX

ASTeX Growth Drivers

- [] Increased customer reliance on suppliers for value-add
- [] Higher level of integration
- [] Increased outsourcing by semiconductor equipment OEMs
- [] New etch and deposition systems increase available market

ASTeX semiconductor equipment subsystems

- [] Reactive gas products for deposition, etch and cleaning
- [] RF, DC and microwave power sources
 - [] Semiconductor
 - [] Medical
 - [] Lasers/Optoelectronics

[Pictures of the following ASTeX subsystems omitted

ASTRON(R)
Ozone
Microwave
RF]

ASTeX product line expansion accelerates revenue growth

[Graphical display of revenue growth from \$8.4m FY in 1993 to \$140m (LTM) in 2000 indicating the year in which the following products were introduced

RF generator
Orbital planetary PVD
PVD system
Single chamber etch/CVD
Batch reactor etch
Microwave match
Microwave applicator set
CPS microwave
Microwave OEM
Microwave
ASTRON abatement
ASTRON chamber clean
4 channel RF/microwave
300 mm ozone generator
Low dopant ozone
Dissolved ozone
Integrated ozone delivery
Semozon
Ozone generator]

ASTeX expanding customer base

[Graphical display of the years 1992 to 2000 in which the development and production of products occurred for the following major customers

DNS
TEL
ASM, JuSung, others
PSK
Novellus
Lam
SVG, Quester
Ulvac
GaSonics
Applied Materials]

Case study: ASTeX Penetration at Applied Materials

[Graphical display of the years 1992 to 2000 in which development and production occurred for Applied Materials relative to the following chambers

Chamber #1
Chamber #2
 300 mm
 Chamber Clean
 Deposition
Chamber #3
 Chamber Clean
 Deposition
Chamber #4
Chamber #5
 Chamber Clean
 Deposition
Chamber #6
Chamber #7
Chamber #8]

Ron Weigner
VP & CFO
MKS Instruments

Key Financial Statistics
(LTM, June 30, 2000/\$M)

	MKS	ASTeX	Combined
Revenue	\$248.2	\$139.9	\$388.1
EBIT	50.7	19.4	70.0
Pro Forma Net Income	33.1	14.0	47.1
Shareholder's Equity	154.3	159.1	313.4

[] Slightly accretive without synergies

Combined Capitalization
(June 30, 2000/\$M)

	MKS	ASTeX	Combined
Debt	\$29.3	\$9.6	\$38.9
Equity	154.3	159.1	313.4
Cash	65.8	91.2	157.0
Current Market Value	700	210	910

Source: Financials as of June 30, 2000, Market Value as of September 29, 2000

Combined Management Strength

Career Years

John Bertucci	Chairman, CEO	35
Peter Younger	President, COO	25
Ronald Weigner	Vice President, CFO	32
William Stewart	Corporate VP/GM, Vacuum Products	30
Joseph Maher	Corporate VP/GM, Pressure Measurement/Control	26
Robert Klimm	Corporate VP/GM, Materials Delivery/Analysis	24
Leo Berlinghieri	Corporate VP, Customer Support Operations	24
Donald Smith	Corporate VP, Chief Technical Officer	13
Gerald Colella	Corporate VP, Business Operations	23
Paul Blackborow	Corporate VP, Marketing	18

Dick Post	Chairman, CEO	27
John Ross	President, COO	30
Bill Hurley	Sr. Vice President, CFO	32
Jack Schuss	Vice President, Engineering	23
Stanley Burg	Sr. Vice President, Systems	35

Summary

- [] One-stop Solution Leader
- [] Strengthens Competitive Positioning
- [] Revenue Synergy Upside
- [] Strong Financial Position
- [] Cost Synergy Upside
- [] Enhanced Growth Platform

MKS Instruments, Inc.

Around the Process...

Around the World...

These documents and amendments to these documents have or will be filed with the United States Securities and Exchange Commission. When these and other documents are filed with the SEC, they may be obtained free at the SEC's web site at www.sec.gov. You may also obtain for free each of these documents (when available) from MKS by directing your request to Ronald C. Weigner, Vice President and Chief Financial Officer of MKS at (978) 975-2350, or from John Tarrh, Vice President and Treasurer of ASTeX at (978) 284-4135.