

# SANDVIK MATERIALS TECHNOLOGY

## CAPITAL MARKETS DAY 2019



# AGENDA

---

ABOUT SANDVIK MATERIALS TECHNOLOGY

---

PERFORMANCE

---

A LEADING ADVANCED MATERIALS COMPANY

---

# SANDVIK MATERIALS TECHNOLOGY



6,450

EMPLOYEES  
INCL. TEMPS

14.3

BILLION SEK  
IN REVENUES

7.6%

EBIT EXCL. METAL  
PRICE EFFECTS



>900

ACTIVE ALLOY  
COMPOSITIONS

790

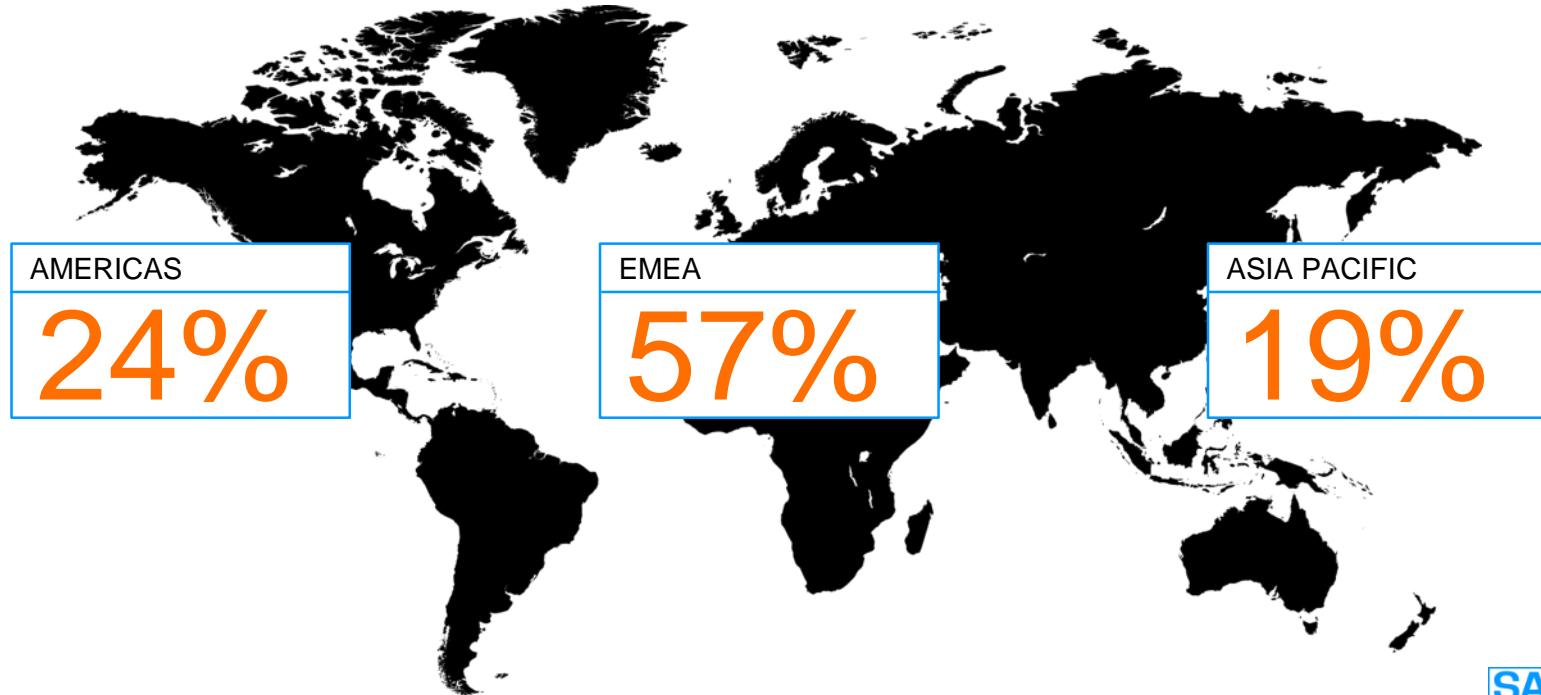
GRANTED  
PATENTS

270

EMPLOYEES  
IN R&D



# REVENUES BY MARKET AREA



Figures refer to SMT total 2018

# REVENUES PER SEGMENT

## SHARE OF SMT TOTAL 2018 REVENUES BY CUSTOMER SEGMENT



INDUSTRIAL

25%



OIL & GAS

18%



CHEMICAL/PETROCHEMICAL

14%



POWER GENERATION

13%



CONSUMER

12%



TRANSPORTATION

9%



MINING & CONSTRUCTION

7%

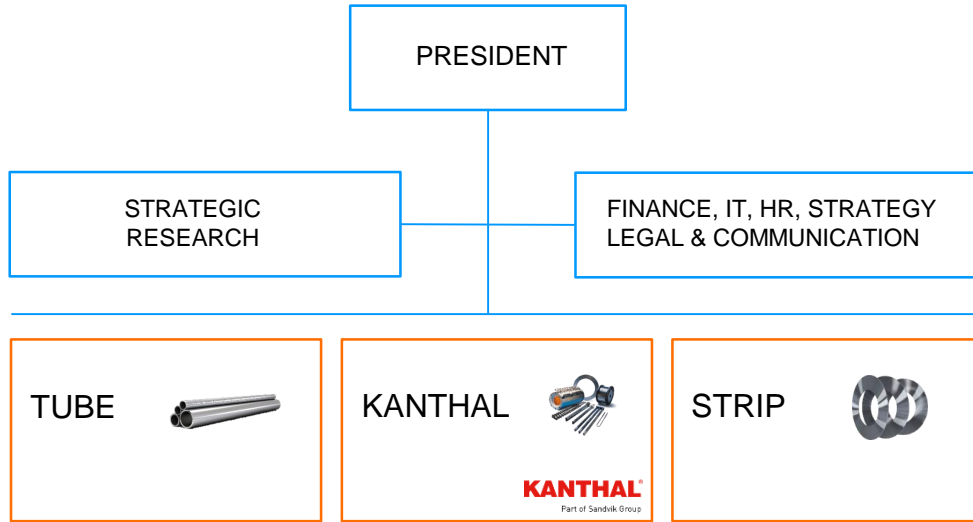


MEDICAL

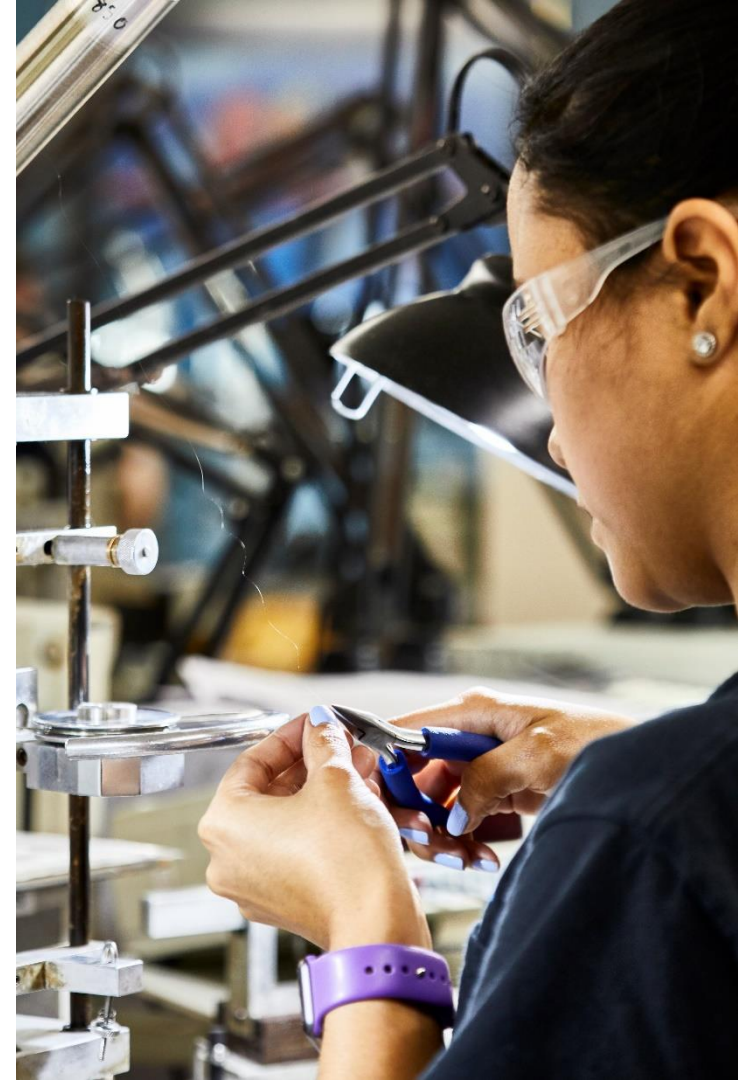
2%



# ORGANIZATION



DIVISIONS

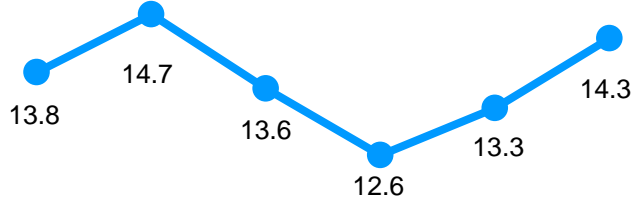


# SMT PERFORMANCE

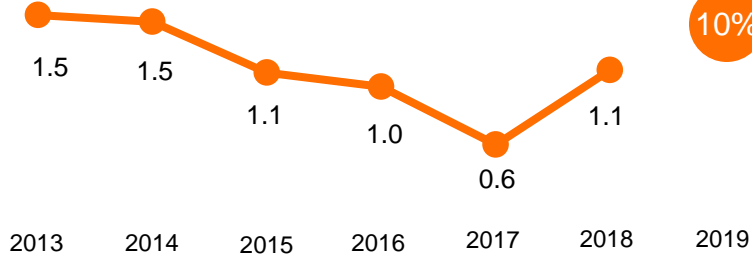
## FINANCIAL DEVELOPMENT

SEK billions

### REVENUES



### EBIT\*



\* EBIT excluding effects from changed metal prices, nonrecurring charges and Powder Division

## MARKET DEVELOPMENT

- World seamless tubular market recovery
- Oil and Gas recovery
- Gas to electric trend increasing within heating systems

## EXECUTION CULTURE

- Decentralized organization and governance
- Strong commitment to execute on plans
- Performance management
- Separate key initiatives reviews
- Contingency plan continuously updated

## INITIATIVES AND IMPROVEMENTS

- Portfolio optimization
- Mix optimization
- Cost adjustment program
- Footprint decisions
- More flexible manning
- Capex more adapted to SMT own financial performance



# TUBE DIVISION FOOTPRINT PROGRAM

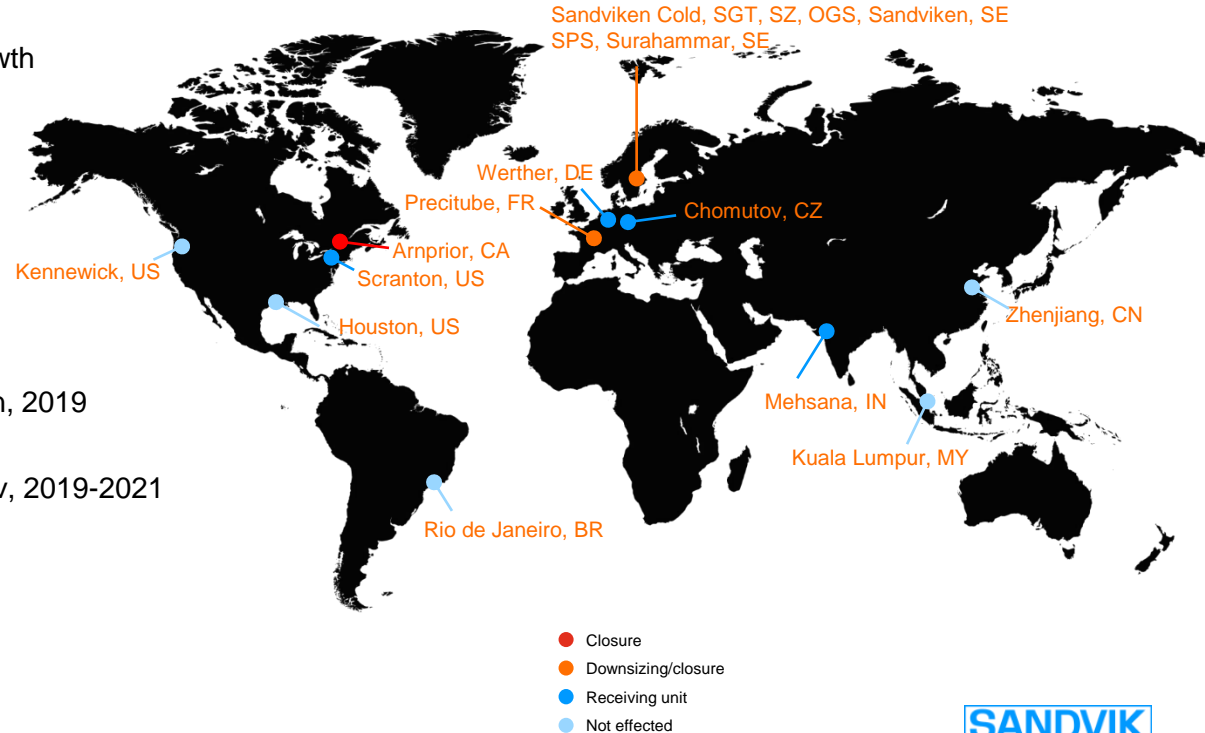
## PROGRAM BUSINESS OBJECTIVES

- Strengthen market/regional positions for growth
- Strengthen production capabilities
- Reduce COGS to improve profitability

## DECISIONS TAKEN

- Consolidation North America:  
Close PU Arnprior and move to PU Scranton, 2019
- Consolidation Europe:  
Move two PU's from Sandviken to Chomutov, 2019-2021
- Consolidation Europe:  
Merge PU Werther and PU Précitube, 2019
- Increase capacity and capability in India  
Three phases, 2018-2021

PU = Production Unit



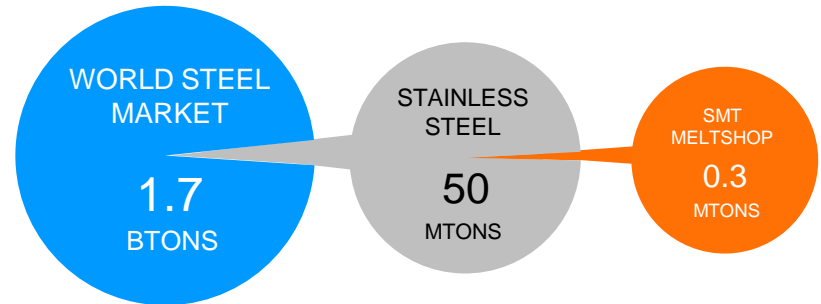


# A LEADING ADVANCED MATERIALS COMPANY

- A true innovation leader in materials technology
- World-leading manufacturer of advanced stainless steels and special alloys
- Strong industry position across its end-markets
- Long-term customer relationships
- Well-positioned to capitalize on the global trends of energy efficiency and sustainability

## A NICHE PLAYER

ADDRESSING 0.02% OF WORLD STEEL MARKET



Source: [www.worldsteel.org](http://www.worldsteel.org), [www.worldstainless.org](http://www.worldstainless.org),  
SMR - Steel & Metals Market Research, Sandvik Materials Technology

# WORLD CLASS CAPABILITIES

## CONTROL OF THE SUPPLY CHAIN FROM MELT TO FINAL PRODUCT

### MELT SHOP



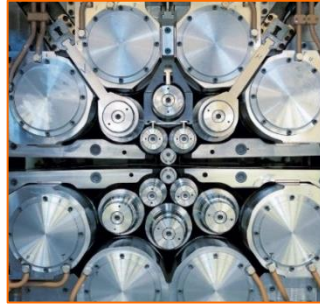
- BILLETS
- BLOOMS

### HOT WORKING



- BILLETS
- BAR
- HOLLAWS
- EXTRUDED PIPES

### COLD WORKING



- TUBE
- RESISTANCE MATERIALS
- STRIP

### FINISHING



- E.G.
- COILED AND UMBILICAL TUBES
  - HEATING ELEMENTS & SYSTEMS
  - FLAPPER VALVE STEEL

ENSURE  
INDEPENDENCE

SECURE PRODUCT  
QUALITY

PREREQUISITE FOR NEW MATERIALS  
AND PRODUCT DEVELOPMENT

# WORLD CLASS CAPABILITIES

## STRONG GLOBAL PRODUCTION FOOTPRINT

### SANDVIKEN, SWEDEN



#### MAIN SITE

- Melt shop and hot rolling
- Hot extrusion (three extrusion presses)
- Tube mills
- Rock drill steels
- Precision strip
- Kanthal wire
- R&D

### GLOBAL FOOTPRINT



GLOBAL PRESENCE AND  
CLOSE TO CUSTOMER

CREATING FLEXIBILITY  
AND BACK-UP

ENABLING  
SPECIALIZATION

# WORLD CLASS CAPABILITIES

## LEADING R&D CAPABILITIES IN ADVANCED MATERIALS

- Unique expertise in advanced stainless steels and special alloys
- Extensive knowledge about customer applications
- Driving the materials evolution to a safer, more efficient and sustainable industry



### MATERIALS EVOLUTION FOCUSING ON DEMANDING INDUSTRIES:



#### NICKEL AND SUPER ALLOYS

To accelerate growth in high corrosion applications



#### POWDER BASED ALLOY PRODUCTS

Offer complex shapes and unique material properties



#### ADVANCED STAINLESS AND DUPLEX

Next generation materials setting the industry standard

### THE BEST PEOPLE AND PARTNERS:

- 270 employees in R&D
- 40 PhDs, 5 senior experts
- Four Research Centers
- Close cooperation with leading technical universities



# GLOBAL MEGATRENDS

## CREATING INCREASED DEMANDS ON MATERIALS

### POPULATION

Growing middle class and aging population is increasing the need for energy and medical treatment

### GLOBALIZATION

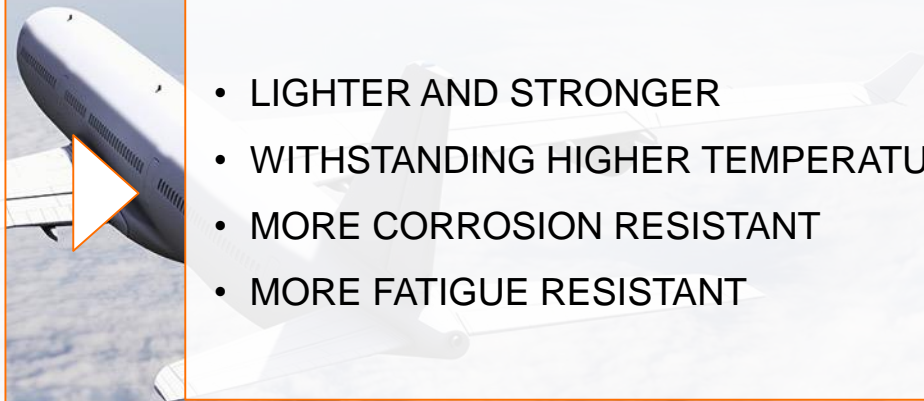
More efficient solutions as regards to communication and travel is required

### SUSTAINABILITY

Climate change means increased demand for renewable energy as well as more energy efficient technical solutions

### DIGITALIZATION

Industry 4.0 technologies, robotization and 3D printing let manufacturers digitize and optimize production processes

- 
- LIGHTER AND STRONGER
  - WITHSTANDING HIGHER TEMPERATURES
  - MORE CORROSION RESISTANT
  - MORE FATIGUE RESISTANT

# SMT STRATEGY FOR GROWTH AND PROFITABILITY

NUMBER ONE  
MATERIALS TECHNOLOGY  
INNOVATOR

LEADING FINANCIAL PERFORMANCE  
IN OUR INDUSTRY

REDUCED  
VOLATILITY



## CUSTOMER FOCUS

Exceed our customers' expectations and enable them to excel in their business



## MATERIAL SCIENCE AND INNOVATION

Strengthen our position being a materials innovator and technology leader



## ABILITY TO INDUSTRIALIZE

Leading operational and commercial excellence



## EXPAND SEGMENT PORTFOLIO

Maximize opportunities in growth segments



## GEOGRAPHICAL POSITION

Strengthen geographical market position

SAFETY

SUSTAINABILITY

PEOPLE

# STRONG OFFERING ACROSS SMT DIVISIONS

## TUBE DIVISION

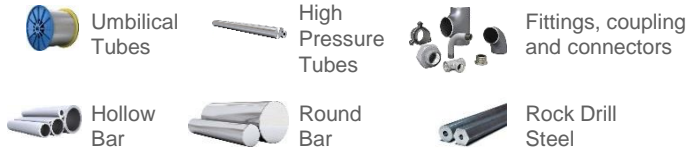
Seamless tubes, rock drill steel and other long products in advanced stainless steels

Used in O&G, nuclear & other energy-related end-markets as well as chemicals, automotive and aerospace

### POSITIONING

**#1** Oil & Gas    **#1** Aerospace Tubes    **#1** Rock Drill Steel

### PRODUCTS

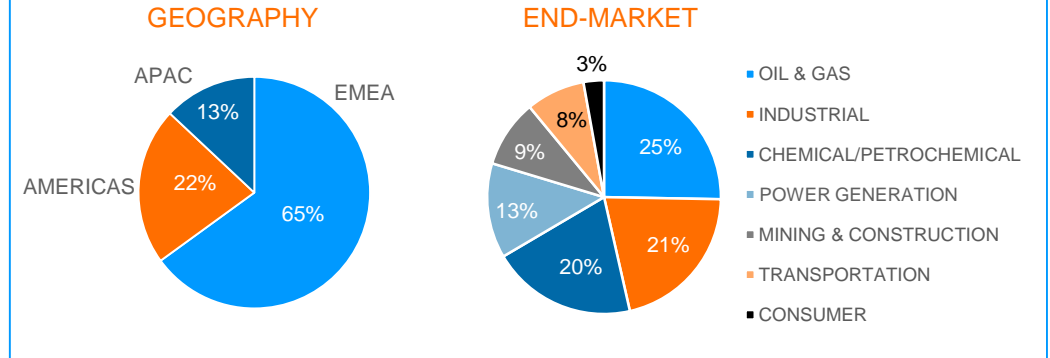


### STRATEGIC DIRECTION

- Capitalize on strong new product portfolio
- Develop strong position in Nickel base alloys
- Balance dependency on fossil based energy
- Grow renewable energy, aerospace, medical, automotive
- Enhanced focus on digitalization and new business models
- Footprint optimization



### SALES 2018



# TUBE

## PRODUCTS AND INNOVATIONS - EXAMPLES

### SANICRO® 25

High-alloyed austenitic stainless steel tube with excellent high temperature properties. Highly suitable option for use in heaters in advanced coal-fired power plants, contributing to the production of cleaner coal power energy. Market activities specifically targeting China and India.



### SANICRO® 35

New 6Mo super austenitic high strength steel with high structure stability to simplify welding and heat treatment. Extreme localized corrosion properties making it suitable for a broad range of applications. Global market launch in Q1 2020.



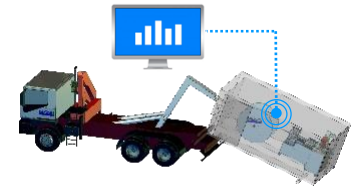
### TUBES FOR HYDROGEN APPLICATIONS

Modified austenitic stainless grades for use in Hydrogen storage, refuel and in-car applications. The combination of modified grades and world leading production technology allowing the safe handling of hydrogen at high pressure.



### TUBE PRODUCTION ON CUSTOMER SITE

Smart digital tubular service system for set up at customer sites to enable on demand consumption.





# STRONG OFFERING ACROSS SMT DIVISIONS



## KANTHAL DIVISION

Number one in sustainable industrial heating

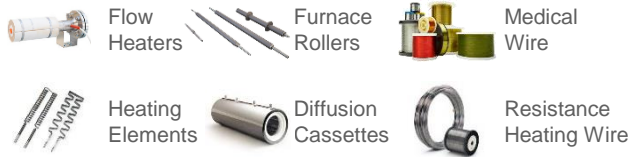
Heating elements and resistance wire for heating solutions (consumer and industrial heating) as well as wire for medical devices

### POSITIONING

**#1** Industrial Heating Solutions  
(Electric - 0 to 1950 C)

**#1** Medical Wire

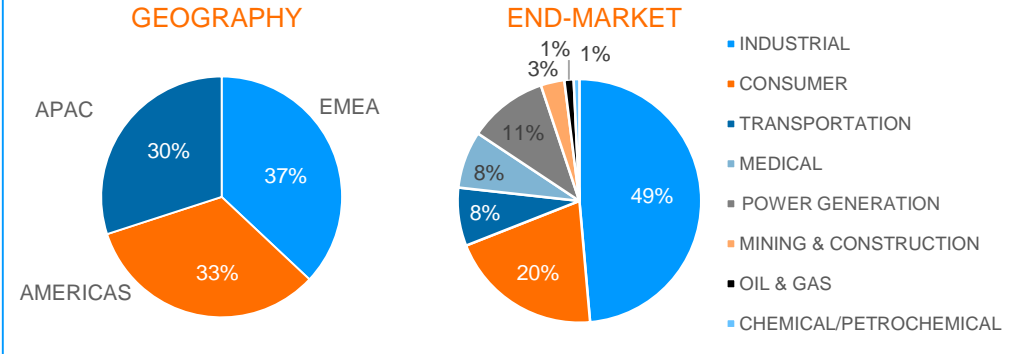
### PRODUCTS



### STRATEGIC DIRECTION

- Profitable growth through innovation, operational excellence and a strong brand
- Accelerate growth by forward integration - organic and through M&A
- Expand the heating solution service offering and grow the medical business
- Innovate new production technology through Additive manufacturing
- Digitalization - Internal efficiency and for improved customer experience
- Digital offerings in on-line process predictions and maintenance

### SALES 2018

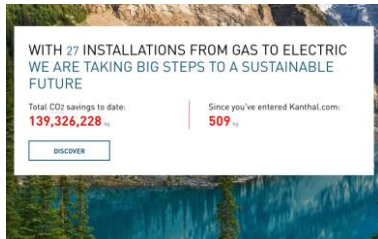


# KANTHAL

## PRODUCTS AND INNOVATIONS - EXAMPLES

### CONVERSION FROM GAS TO ELECTRIC HEATING

A global quest for energy efficient heating solutions.



### SEMICONDUCTORS COMPONENTS FOR ELECTRONIC DEVICES

Semiconductor components for smartphones and other digital gadgets are processed in industrial furnaces with extremely precise demands for dimensional stability and purity.



### ADDITIVE MANUFACTURING FOR INDUSTRIAL HEATING

3D-printed heating elements and high-temperature furnace components designed to offer significant benefits.



### EXERA™ CONTINUOUS GLUCOSE SENSOR WIRE

Sensor wire in devices for continuous measuring of blood glucose levels in real-time, critical for diabetes patients.



# STRONG OFFERING ACROSS SMT DIVISIONS

## STRIP DIVISION

Wide range of strip steel and a variety of strip-based products

Mainly supplying consumer driven products within white goods, automotive, shaving and the printing industry

### POSITIONING

**#1** Flapper Valve Steel    **#1** Knife Steels    **#2** Razor Blade Steel

### PRODUCTS



Razor Blade



Doctor Blade



Knife & Spring Steel



Coated Strip Steel



Creeping Blade



Fuel Cell Materials

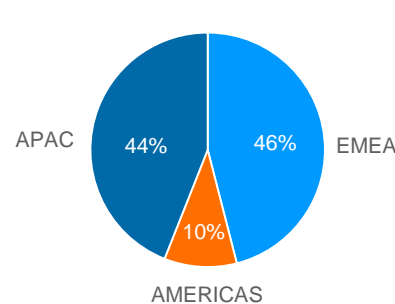
### STRATEGIC DIRECTION

- Improve and stabilized production efficiency
- Increased focus on new products and new applications
- Secure price leadership
- Expand Americas Market
- Extend service center footprint in Asia

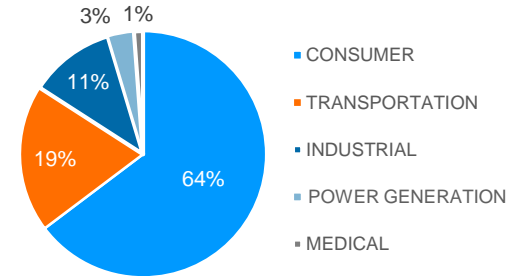


### SALES 2018

#### GEOGRAPHY



#### END-MARKET



# STRIP

## PRODUCTS AND INNOVATIONS - EXAMPLES

### VALVE STEEL

Next generation compressor valve steel with enhanced fatigue properties to facilitate more energy efficient compressors.



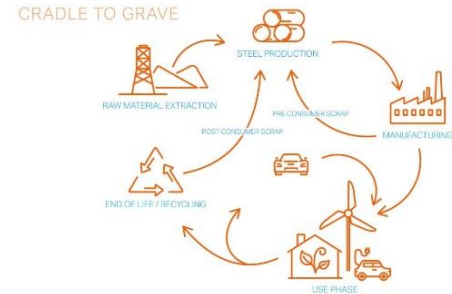
### SANDVIK HIFLEX MATERIAL

Sandvik Hiflex is a material used where high fatigue performance is critical. Stirling engine technology utilizes Sandvik Hiflex for many applications including cryogenic cooling of super conductors.



### LIFE CYCLE ASSESSMENT

Describes the environmental footprint of a product and includes every production step from cradle-to-gate.



# SUMMARY

- Strong development over the last years, creating a solid platform to build from
- World leading capabilities and market position
- Well positioned for profitable growth



# QUESTIONS