



A LOOK INSIDE THE
FUTURE OF METALS

THE ALLOY SPECIALISTS

LEADING 100 YEARS OF ALLOY INNOVATION

With more than a century of experience in the invention, production and supply of high-performance nickel alloys and an aggressive plan for the future, there's no wonder Special Metals is setting design standards for engineers around the globe. As the inventor of more than 80% of the alloys on the market today, Special Metals touts the industry's widest range of nickel alloys, cobalt alloys and product forms. These alloys are highly engineered to perform in the world's most technically demanding applications, offering properties such as creep, heat and corrosion resistance, strength, fabricability, electrical properties and controlled thermal expansion.

ABOUT US

The Special Metals Corporation group of companies was created in 1998 when Special Metals Corporation of New Hartford, New York, acquired Inco Alloys International, including its Huntington Alloys, Wiggin Alloys and Welding Products divisions. In 2006, Special Metals Corporation became a part of Precision Castparts Corp., a worldwide manufacturer of complex metal components and products. With a rich history of alloy technology spanning more than 100 years, Special Metals continues to carry out our vision of customer respect, product quality and innovative technology now and for the future by means of time-tested products such as world-recognized INCONEL®, INCOLOY®, NIMONIC®, UDIMET®, MONEL® and NILO® alloys.

With corporate facilities collaborating to bring customers the best technical support, production capabilities and experience in alloy technology, the professional scientists, engineers and technologists at Special Metals are better equipped than ever to develop leading-edge materials and processes to meet industry needs worldwide.

NEWTON, NC



HUNTINGTON, WV



CANNING VALE, AU



HEREFORD, UNITED KINGDOM



NEW HARTFORD, NY



BRANDS YOU TRUST

Our expansive product portfolio includes more than 100 alloy compositions, wrought products and welding consumables, including INCONEL™, INCOLOY™, MONEL™ and more.

RESEARCH & TECHNOLOGY

Alloy & Process Development

SMC's Research and Technology (R&T) team is comprised of knowledgeable engineers, metallurgists and scientists tasked with the development of high technology products and processes. A recent research program resulted in the development of INCOLOY® alloys 945 and 945X, high-strength, corrosion-resistant nickel-based superalloys for sour oil and gas service. Another alloy developed by the R&T group is INCONEL® alloy 740H™, a superalloy specifically designed to meet the rigors of high temperature service in advanced ultra-supercritical (A-USC) power boilers for the high efficiency fossil-fuel fired power generation systems of the future.



Application Engineering

SMC metallurgists and engineers work with designers and fabricators of metallic equipment and systems to ensure that materials for the application meet the requirements of service but always with consideration of availability, economy and cost control.

Technology Processing Center

The SMC Technology Processing Center (TPC) is a mini-mill used for the production of small quantities of experimental alloys. Operated by a skilled staff of technicians, this department can also commercially produce small quantities of special alloy products for SMC customers.

MANUFACTURING PROCESSES & CAPABILITIES

Special Metals is considered a world leader in melting technology, offering the most comprehensive range of alloy compositions while guaranteeing the highest quality in all of our products.

- Primary Melting
- Secondary Melting (Remelting)
- Hot Working
- Cold Working
- Heat Treatment
- Descaling



PRODUCT FORMS

Special Metals offers the largest range of nickel alloys in all standard mill forms: ingot, billet, plate, sheet, strip, seamless tube and pipe, bar and wire, and welding filler metals, electrodes, and fluxes for joining and overlay. The time-tested nickel alloys and cobalt alloys of Special Metals Corporation are highly engineered to offer a superior combination of heat resistance, corrosion resistance, toughness and strength for the most demanding applications.

BILLET & BAR PRODUCTS



TUBULAR PRODUCTS



FLAT PRODUCTS



WELDING PRODUCTS



OVER A CENTURY OF ALLOY INNOVATION

1906

The birth of an industry
MONEL® alloy 400

Industry's first corrosion-resistant nickel alloy



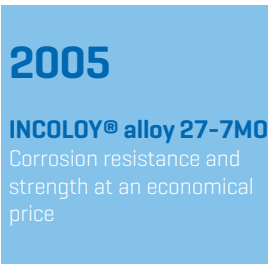
1949

INCOLOY® alloy 800
Setting the standard for performance in the thermal processing industry



1989

INCONEL® alloy 725
The first truly corrosion-resistant age hardenable alloy



2008

INCOLOY® alloy 945
Another innovative alloy from Special Metals Corporation for the oil & gas industry



1940

NIMONIC® alloy 75
Continuing to serve high-temperature turbine applications

1952

INCOLOY® alloy 825
Industry's solution to sulfuric acid

1964

INCONEL® alloy 625
Offering the widest versatility of uses in the process industries



1972

INCONEL® alloy 800
For the land base gas turbines to supply power for the 21st century



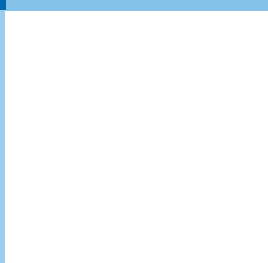
2007

INCOLOY® alloy 865
Increasing cost effectiveness of automotive applications



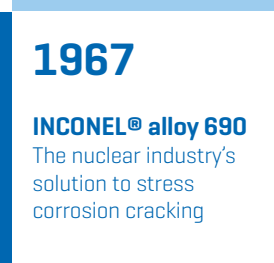
1931

INCONEL® alloy 600
Developed for milk cans, now used in nuclear reactors



1967

INCONEL® alloy 690
The nuclear industry's solution to stress corrosion cracking



1971

INCONEL® alloy 601
Premium alloy for the thermal process industry



1982

INCOLOY® alloy 925
Strength and corrosion resistance for the oilfields

1991

INCONEL® alloy 686
The ultimate in aqueous corrosion resistance



2006

INCONEL® alloy 693
The solution to metal dusting attack



2009

INCOLOY® alloy 945X
Extra strength for extra demanding oil & gas applications

1924

MONEL® alloy K-500
Keeping the U.S. Navy at sea



1962

INCONEL® alloy 718
The most widely used age hardenable aerospace alloy



1978

UDIMET® alloy 720
Strength and heat resistance for gas turbines



1998

INCOLOY® alloy 864
The automotive industry's solution to hot salt corrosion



Special Metals
Meeting future challenges with alloy solutions



INDUSTRIES

Oil and Gas Extraction

- Cold worked and precipitation hardened well casing for sour oil and gas extraction
- Bar and mechanical tube for well control components and sensors
- Products for fabrication of components for service in HPHT deep sour wells
- Co-extruded seamless piping for oil and gas transfer
- Welding products for cladding of line pipe
- Alloy plate for production of clad steel plate for risers



Refining and Petrochemical Processing

- Seamless pipe and tube
- Plate and strip for manufacture of welded pipe and tube
- Plate for manufacture of vessels and structural components
- Bar and tubular products for manufacture of pumps, valves, fittings and flanges
- Welding products for both joining and overlay cladding

Aerospace

- Sheet for exhaust ducting
- Bar for turbine blades and discs
- Bar for turbine casing, seals and shrouds
- Bar and wire for fasteners
- Bar for shafting

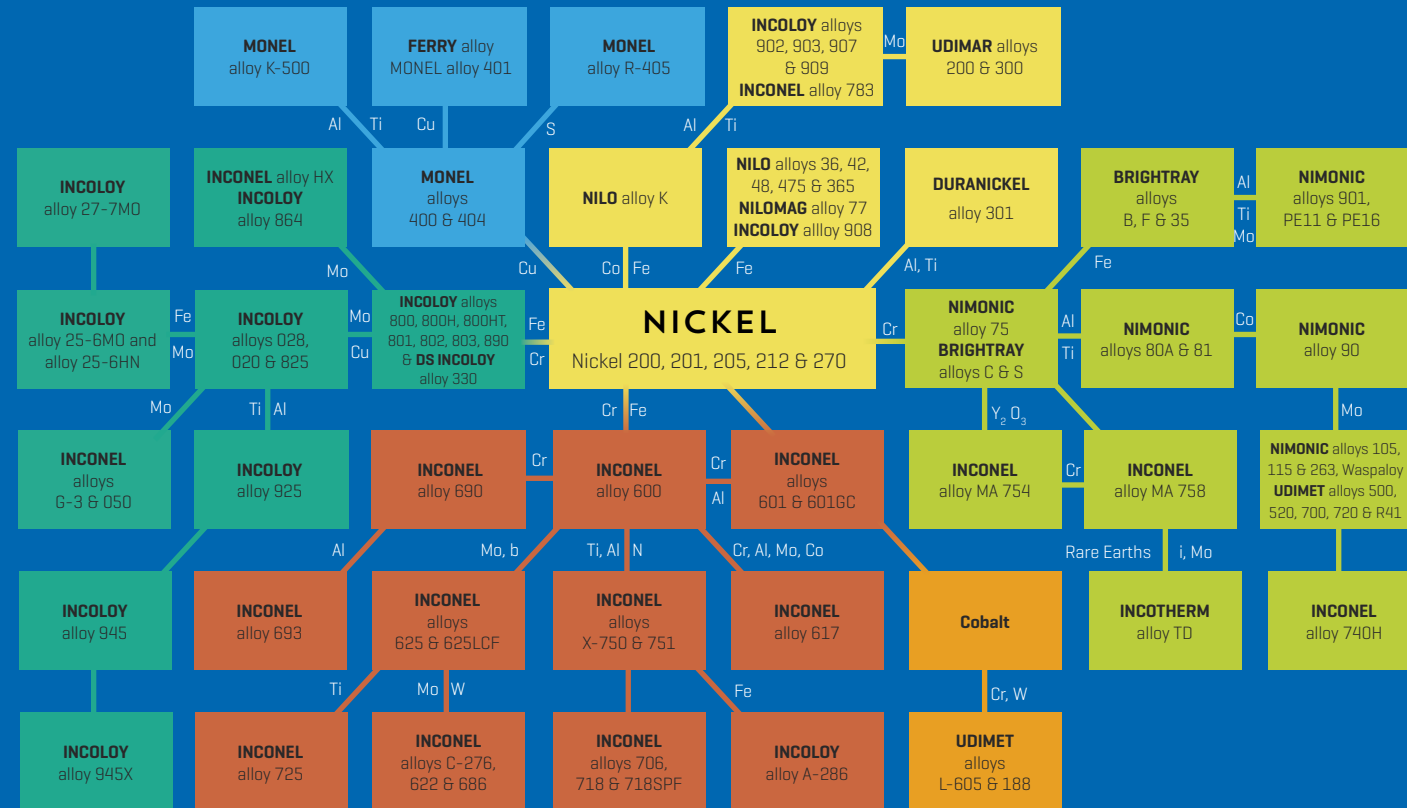
Chemical Processing and Other Process Industries

- Bio-pharmaceutical vessels for production of today's "wonder drugs"
- Processing and pressure vessels for producing the chemicals that we use daily
- Cracking and gas-to-liquid equipment for processing the world's wealth of natural and shale gas
- Desalination systems for production of clean drinking water from seawater
- Marine heat exchangers that allow seawater to be used for industrial use instead of precious fresh water

Power Generation

- Hot-rolled plate and cold-rolled sheet for use in flue gas desulfurization (FGD) systems
- Hot-worked and cold-reduced seamless pipe and tube for boiler superheaters
- Welding consumables for overlay of tubesheets for nuclear steam generators
- Large bar for manufacture of nuclear valves
- Precipitation-hardenable bar and forgings for LBGT shafts, fasteners and rotors

ALLOY FAMILIES





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A CENTURY OF ALLOY INNOVATION

For over 100 years, Special Metals has been a world leader in the invention and production of highly engineered nickel alloys for demanding applications. In fact, Special Metals has invented over 80 percent of the alloys in the market today—offering the industry's widest range of nickel alloys, cobalt alloys and product forms. As part of Precision Castparts Corporation (PCC), Special Metals can leverage the capabilities of other leaders in metal to offer an unmatched range of alloy components and products.