Nidec ASI S.p.A. - your tangible intangible asset

Know-how and experience are often considered competitive intangible assets. These assets play an important role in determining success – directly impacting effectiveness, productivity, wastage and opportunity costs within an organization. This in turn impacts issues close to your heart: costs, revenues, product quality, customer satisfaction, market value and share price. With over 150 years of experience, we are one of the most reliable suppliers of electrical and automation systems world-wide. Whether assisting you with a Greenfield turn-key project or revamping your existing plant, Nidec ASI provides tangible value you can measure.

Nidec ASI S.p.A. has installed more than 800 automation and control systems worldwide
Providing you with the flexibility to innovate

Today’s market leaders are changing the way the Metals industry does business by actively participating in their Customer’s Design Process to produce innovative new products that are taking raw materials to new edges of the technological spectrum. Since the day it was founded, Nidec ASI has always used this approach with its customers. It is a fundamental part of our corporate DNA. Not only can we help you design the process to manufacture these new products, we can also provide valuable assistance to you in working with your customers.

Our in-house design software, RTStudio, part of our ARTICS software suite, allows us to configure plants rapidly, allowing you to create models of the production sequence that provide reliable feedback on conceptual design ideas.

More on our process simulation tools

Nidec ASI can provide a wide range of simulation services. Our family of simulators was conceived as a standard tool for software testing, commissioning and training of personnel. These powerful tools not only aid in the design process, they help reduce start-up time and allow the customer to become familiar with the production process before it is actually in place. ARTICS is particularly suitable for online upgrades and revamping, which can be implemented during a normal shutdown period. Plus, the “monitor mode” allows new system to be tested before retiring the old one.
What is ARTICS?

The ARTICS difference: real time control and flexibility

User-friendly operation

Nidec ASI Real Time Integrated Control System (ARTICS) is our automation solution for process control and real-time data collection.

The ARTICS platform integrates and simplifies several steps in the automation architecture to help mechanical and electrical equipment control and to improve the production process.

ARTICS is designed to exceed even the most stringent real-time requirements, developed for real time control of fast processes with cycle times in the milliseconds. Anyone who has purchased a computer program recently knows that it may not be compatible with the hardware and software at home. This issue has always been a concern with customers. The ARTICS software platform was developed with this issue in mind.

As an open and standard platform, ARTICS can be used with off-the-shelf hardware and allows integration with the most popular programmable logic controllers (PLCs) and common standard software tools and, if new products come to market, there’s no problem integrating them into the system. In other words, ARTICS provides you with the flexibility to innovate and change to meet tomorrow’s market challenges.

ARTICS proves its reliability and versatility every day in hundreds of installations worldwide.

ARTICS seamlessly interfaces with third party components such as PLCs or local/remote input/output devices which means you don’t have to make costly changes your existing system’s architecture.

An easy graphic interface is your gateway to ARTICS powerful process management tools.

ARTICS gives you detailed diagnostics on drives - just point and click on a selected drive and ARTICS displays load, back up, status and download information.

ARTICS allows you to define a common software and data architecture with your existing system based on your plant’s global database. This means you only define the data used by each level of automation once and there is no need to create complicated interfaces for information exchange within the system.

Nidec ASI guarantees product compatibility on all product upgrades for the life of your system.
Brief Product Description

1 Power Quality
Nidec ASI has significant experience in the design and manufacture of Static Var Compensation and HVDC systems. We can design solutions to guarantee maximum reliability in terms of power quality to the network.

2 Drives
Our full range of low and medium voltage drives offers versatility, reliability and convenience. Along with maximum flexibility, our high-performance AC and DC drive designs also provide superior power factor and harmonic control capabilities.

3 Automation System
Our automation platform is based on the ARTICS architecture, a flexible, powerful open software platform. Our extensive library of algorithms and our advanced application software tools manage basic automation and process control functions, ensuring enhanced process automation and quality. Designed with flexibility in mind, our system can manage numerous communication interfaces at the same time and integrate different typologies in the same unit. There can be both slave (for an higher network integration) and master (for remote I/O connection) interfaces. This reduces the complexity and the cost of wiring and makes it possible to work with pre-existent communication architectures providing seamless system integration effortlessly.

4 Motors & Generators
Nidec ASI manufactures a wide range of AC and DC motors and generators. Our rotating machines are based on proven designs that give you the best in advanced drive technology. Known for their robust design and reliability in heavy-duty applications, these machines provide superior quality, maximum efficiency and low maintenance costs. They also play an important role in guaranteeing maximum plant availability.

Another ASI advantage:
a complete, fully integrated electrical package based on our state-of-the-art drive systems and components.

See individual product brochures for further detail.
**Automation Functions**

**HOT ROLLING MILLS FOR LONG PRODUCTS**

**Level 0 System**
- Complete system supply, management and supervision of:
  - Power distribution
  - Motor and drive system
  - Field sensor and instrumentation
  - Technological measuring instruments
  - Auxiliary systems

**Level 1 System**
- Technological Controls
  - Automatic temperature, humidity, natural spread, marking
  - Thickness Control (Hydraulic Gap Control, Automatic Gauge Control, Main and auxiliary logic, Remote adjustable mould control, Remote adjustable mould control/temperature tracking, Automatic Gauge Control, Main and auxiliary logic, Remote adjustable mould control/temperature tracking)
- Basic Functions
  - Control panel and instrumentation
  - Interface with 3rd party packages
  - HW system (SCADA based on Client Server architecture)
  - Drive control

**Level 2 System**
- Technological Controls
  - Automatic gauge control
  - Thickness Control (Hydraulic Gap Control, Automatic Gauge Control, Main and auxiliary logic, Remote adjustable mould control/temperature tracking, Automatic Gauge Control, Main and auxiliary logic, Remote adjustable mould control/temperature tracking)
  - Basic Functions
  - Control panel and instrumentation
  - Interface with 3rd party packages
  - HW system (SCADA based on Client Server architecture)
  - Drive control

**Level 3 System**
- Technological Controls
  - Automatic gauge control
  - Thickness Control (Hydraulic Gap Control, Automatic Gauge Control, Main and auxiliary logic, Remote adjustable mould control/temperature tracking, Automatic Gauge Control, Main and auxiliary logic, Remote adjustable mould control/temperature tracking)
  - Basic Functions
  - Control panel and instrumentation
  - Interface with 3rd party packages
  - HW system (SCADA based on Client Server architecture)
  - Drive control

**Level 4 System**
- Complete system supply, management and supervision of:
  - Power distribution
  - Motor and drive system
  - Field sensor and instrumentation
  - Technological measuring instruments
  - Auxiliary systems

**Real-time Simulation Tools**
- Astra AI 4-Stand Rolling mill simulator

**COLD MILLS**

**Level 0 System**
- Complete system supply, management and supervision of:
  - Power distribution
  - Motor and drive system
  - Field sensor and instrumentation
  - Technological measuring instruments
  - Auxiliary systems

**Level 1 System**
- Technological Controls
  - Automatic temperature, humidity, natural spread, marking
  - Thickness Control (Hydraulic Gap Control, Automatic Gauge Control, Main and auxiliary logic, Remote adjustable mould control/temperature tracking, Automatic Gauge Control, Main and auxiliary logic, Remote adjustable mould control/temperature tracking)
- Basic Functions
  - Control panel and instrumentation
  - Interface with 3rd party packages
  - HW system (SCADA based on Client Server architecture)
  - Drive control

**Level 2 System**
- Complete system supply, management and supervision of:
  - Power distribution
  - Motor and drive system
  - Field sensor and instrumentation
  - Technological measuring instruments
  - Auxiliary systems

**Level 3 System**
- Complete system supply, management and supervision of:
  - Power distribution
  - Motor and drive system
  - Field sensor and instrumentation
  - Technological measuring instruments
  - Auxiliary systems

**Real-time Simulation Tools**
- Astra AI 4-Stand Rolling mill simulator

**PROCESSING LINES**

**Level 0 System**
- Complete system supply, management and supervision of:
  - Power distribution
  - Motor and drive system
  - Field sensor and instrumentation
  - Technological measuring instruments
  - Auxiliary systems

**Level 1 System**
- Complete system supply, management and supervision of:
  - Power distribution
  - Motor and drive system
  - Field sensor and instrumentation
  - Technological measuring instruments
  - Auxiliary systems

**Level 2 System**
- Complete system supply, management and supervision of:
  - Power distribution
  - Motor and drive system
  - Field sensor and instrumentation
  - Technological measuring instruments
  - Auxiliary systems

**REAL-TIME SIMULATION TOOLS**
- Astra AI 4-Stand Rolling mill simulator

**SEAMLESS PIPE MILLS**

**Level 0 System**
- Complete system supply, management and supervision of:
  - Power distribution
  - Motor and drive system
  - Field sensor and instrumentation
  - Technological measuring instruments
  - Auxiliary systems

**Level 1 System**
- Complete system supply, management and supervision of:
  - Power distribution
  - Motor and drive system
  - Field sensor and instrumentation
  - Technological measuring instruments
  - Auxiliary systems

**Level 2 System**
- Complete system supply, management and supervision of:
  - Power distribution
  - Motor and drive system
  - Field sensor and instrumentation
  - Technological measuring instruments
  - Auxiliary systems

**Real-time Simulation Tools**
- Astra AI 4-Stand Rolling mill simulator

**NON FERROUS MILLS (ALUMINUM, COPPER & BRASS)**

**Level 0 System**
- Complete system supply, management and supervision of:
  - Power distribution
  - Motor and drive system
  - Field sensor and instrumentation
  - Technological measuring instruments
  - Auxiliary systems

**Level 1 System**
- Complete system supply, management and supervision of:
  - Power distribution
  - Motor and drive system
  - Field sensor and instrumentation
  - Technological measuring instruments
  - Auxiliary systems

**Level 2 System**
- Complete system supply, management and supervision of:
  - Power distribution
  - Motor and drive system
  - Field sensor and instrumentation
  - Technological measuring instruments
  - Auxiliary systems

**Real-time Simulation Tools**
- Astra AI 4-Stand Rolling mill simulator

**CONTINUOUS CASTERS**

**Level 0 System**
- Complete system supply, management and supervision of:
  - Power distribution
  - Motor and drive system
  - Field sensor and instrumentation
  - Technological measuring instruments
  - Auxiliary systems

**Level 1 System**
- Complete system supply, management and supervision of:
  - Power distribution
  - Motor and drive system
  - Field sensor and instrumentation
  - Technological measuring instruments
  - Auxiliary systems

**Level 2 System**
- Complete system supply, management and supervision of:
  - Power distribution
  - Motor and drive system
  - Field sensor and instrumentation
  - Technological measuring instruments
  - Auxiliary systems

**Real-time Simulation Tools**
- Astra AI 4-Stand Rolling mill simulator

**IRON & STEEL MAKING**

**Level 0 System**
- Complete system supply, management and supervision of:
  - Power distribution
  - Motor and drive system
  - Field sensor and instrumentation
  - Technological measuring instruments
  - Auxiliary systems

**Level 1 System**
- Complete system supply, management and supervision of:
  - Power distribution
  - Motor and drive system
  - Field sensor and instrumentation
  - Technological measuring instruments
  - Auxiliary systems

**Level 2 System**
- Complete system supply, management and supervision of:
  - Power distribution
  - Motor and drive system
  - Field sensor and instrumentation
  - Technological measuring instruments
  - Auxiliary systems
Project management

Our experience in managing the development of Greenfield plants allows us to provide you with a highly skilled project management team. Our team of professionals prides itself in meeting or beating our customer's expectations in terms of project deadlines and overall quality. From basic engineering to final commissioning, our Project Managers are fully accountable and dedicated to providing you with the support you need.

Customer Service & Support

Our commitment doesn’t end with final commissioning and plant start up. Nidec ASI is dedicated to life-cycle assistance and provides the following Services and Support for the life of your plant:

• Call Center Support Service 24 hours a day, 7 days a week
• Remote diagnostics and on-line technical assistance & troubleshooting
• Global preventive and predictive maintenance contracts
• Original equipment manufacturer’s renewal parts
• System upgrades and refurbishments
• Extensive, modular training programs on maintenance and operation
• Effective repairs to guarantee quality
• Plant optimization evaluation

Centers of Excellence

• MILAN - Power Electronics
• MONFALCONE - Electric Motors & Generators
• GENOA - Flat Products, Steel Making, Tube Mills
• MONTEBELLO - Metals Long Products
Our own personal commitment towards Sustainable Development

Nidec ASI’s manufacturing units are ISO 14001 certified.

Our Engineering team is dedicated to finding solutions that help customers minimize their plant’s impact on the environment. Reducing footprints, energy efficiency, power quality and the study of new more environmentally friendly components and technologies are a basic part of our Research and Development activities.

A valid partner in your efforts towards Sustainable Development

By designing your electrical system to meet your process requirements, Nidec ASI can provide a significant contribution towards your efforts in sustainable development. By optimizing power quality and energy efficiency we help you make better use of valuable energy resources.

Our automation systems also help optimize the use of raw materials. Our real time control makes adjustments to your manufacturing process in milliseconds, taking you closer to your goal of zero tolerances. It’s a small contribution to material savings but, when considered over the life of your plant, it can add up to several tons.