RAMCUBE 3

ENGINEERING SERVICES

ENGINEERING SERVICES

We have decades of experience behind them in the fields of planning and stress analysis in general. This experience has been acquired through joint projects with major engineering companies. We are able to work on a wide range of plants (power, chemical, oil and gas) and on numerous aspects of plant planning, including carrying out checks on existing equipment and structures in cases where they show signs of breakage or potential instability. Our experiences allow us to offer valid support when checking documentation which is produced as part of the planning stage.

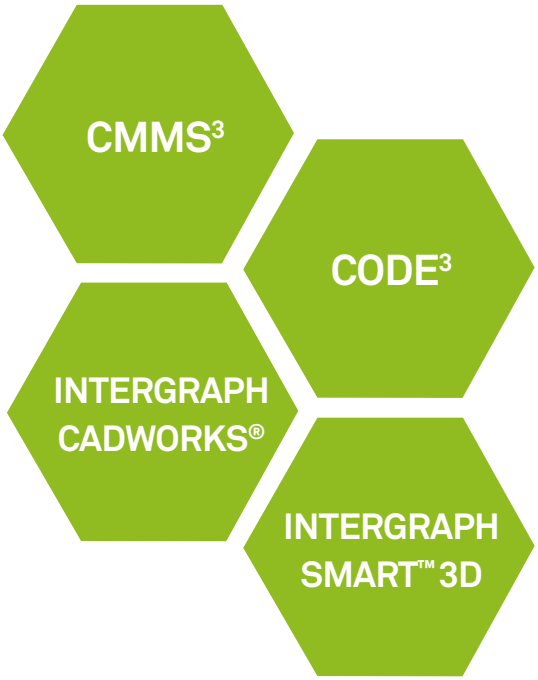
RELATED PRODUCTS

CMMS³ provides the means to develop a “Computerized Maintenance Management System” comprising the array of regulations, procedures and tools employed to collect and process the information needed to manage maintenance operations and to monitor equipment activity.

CODE³ is a material coding management system which can be used throughout a plant’s life cycle, from design to decommissioning.

Intergraph CADWorx® Plant Design Suite is a complete and fully AutoCAD®-integrated software solution. It is used in plant design, offering smart links between designs and databases, with advanced levels of user-friendly automation in the tool planning and design stage.

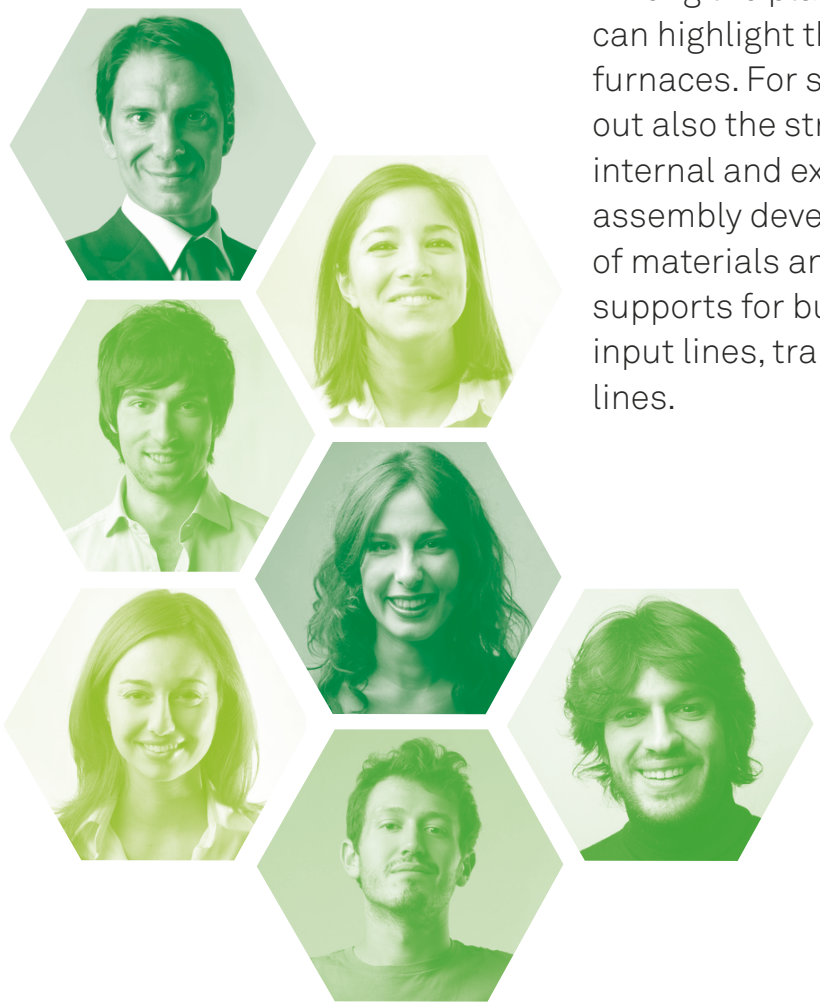
Intergraph Smart™ 3D is a software solution used in large-scale projects in the oil industry, for off-shore rigs, nuclear power plants, shipbuilding and mining projects, etc. The main products in the Smart range are: Smart 3D for plants, Smart 3D for marine industry, Smart 3D for metals and mining, SmartPlant Foundation, SmartPlant Material and SmartPlant Construction.



PLANT ENGINEERING

Our team of staff is made of plant technicians with vast experience, coming from the major Italian engineering companies. They got together and created a group able to meet the demands of development of engineering for onshore and offshore petrochemical plants.

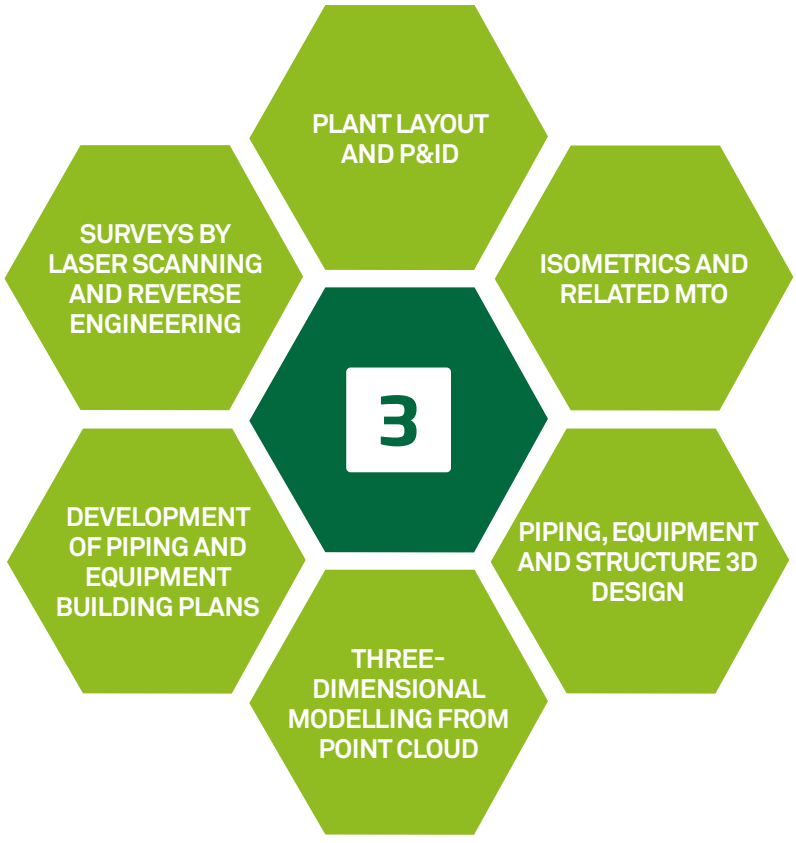
The team supports Customers throughout the project starting from the layout viability until the preparation of shop drawings for isometrics, supports and steel structures ancillary.



Among the plants we have developed we can highlight those for heating oil refinery furnaces. For such projects we have carried out also the stress analysis activity for internal and external lines, the piping assembly development, isometrics, bills of materials and the specifications of the supports for burner supply lines, product input lines, transfer lines and decocking lines.

PLANT ENGINEERING

The field surveys are an integral part of our business. They are carried out mainly by laser scanner: this cutting-edge technology provides a result which can be integrated with modern 3D design technologies.
The software most commonly used for design are Autocad 3D®, CADWorx®, PDMS, AutoPLANT®, PDS, Smart 3D®, etc. For the laser scanning we rely on technologies provided by Leica, a company of the Hexagon/Intergraph group of which we are a partner.



Our experience in the machinery sector focuses in particular on the following activities

1. Engineering involved in the construction of machines for the iron and steel industry featuring hydraulic and pneumatic movements, including the fitting of gear motors, chains, piston rods, oil-pressure and pneumatic cylinders

2. Machines used to load and unload products for rolling mills (slab, blooming, billet, etc.), lifting and moving frames, ramps, wheels, etc.

3. Stacking and destacking machines used for accumulated material as well as conveyor belts, shore unloaders, continuous ship unloaders, bridge cranes, machines for the iron and steel industry

ANALYSIS ENGINEERING

1

STRESS ANALYSIS

Our vast experience in the sector has been developed over years of collaboration with various engineering companies. Since we are able to assess a wide range of plant types (power, chemical, oil & gas, etc.) it is within our power to deal with several aspects of planning, including any potential checks on existing plants should breakages occur or instable situations emerge. Our previous experience also allows us to offer valid support regarding audits on documentation produced during the planning stage. Our technical staff mainly uses Intergraph Caesar II ® software

2

DIMENSIONING SUPPORT

Along with stress analysis checks, our company prides itself on its vast experience in defining and dimensioning support for plant tubing

3

FEM ANALYSIS

Structural checks on finished parts through the use of software of both mechanical components and more complex structures. Checking procedures for pressure vessels in accordance with European, ASME and API regulations

4

STRUCTURAL CHECKS

Structural checks on finished parts, checks on pressure vessels in accordance with European, ASME and API 650 regulations. Creation of basic and detailed engineering documentation for:

- Plant dimensioning
- PFD and P&ID development
- Component data sheets generation
- Creating of operating manuals
- Planning of electric, civic and industrial structures
- Tubing plans

5

PIPING MATERIAL SPECIFICATIONS

We are able to develop piping material specifications taking into account the requirements of ASME, European, and JIS regulations

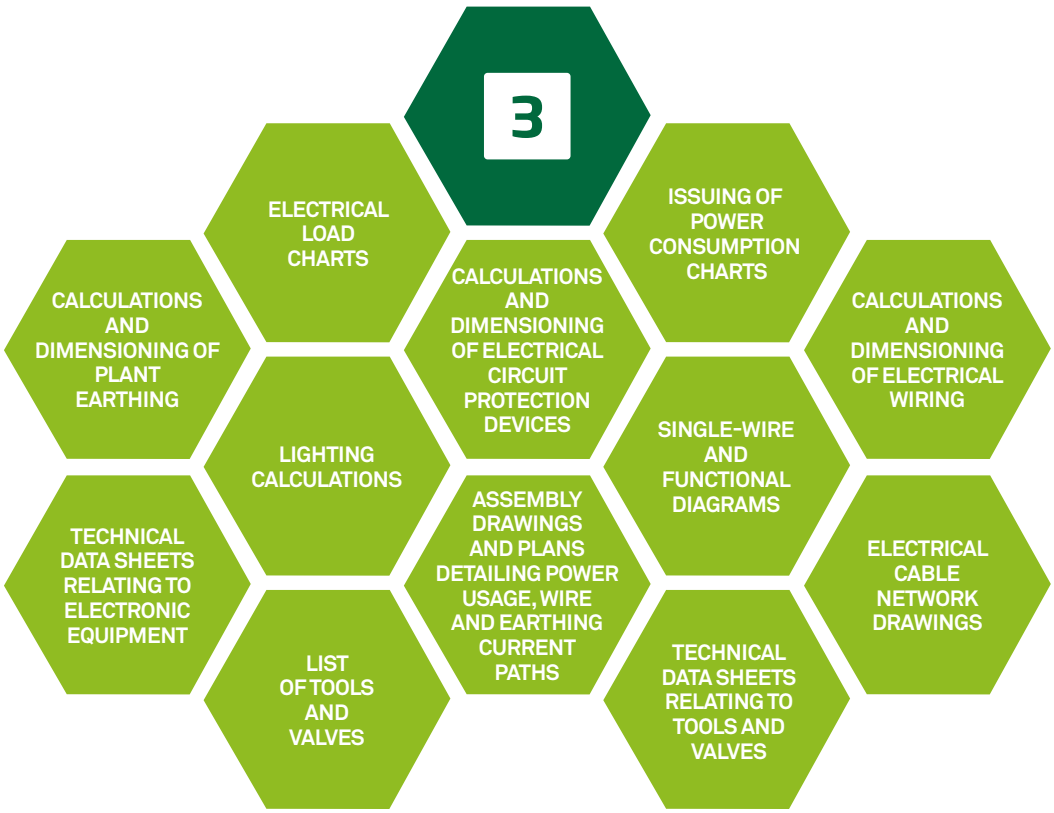
6

INSTRUMENTAL SURVEYS

Thanks to close collaboration with a major company operating in this sector, we can undertake thermographic, noise and vibration surveys

ELECTRO AND INSTRUMENT ENGINEERING

RAMCUBE offers electrical instrumentation engineering services, both in terms of automation and control, to be used in the designing of systems exposed to medium- and low-tension environments, including the relative plant design. This also includes all instrumental and automation systems




3
ASSEMBLY DRAWINGS AND INSTRUMENTATION DETAILS, JUNCTION BOXES AND TUBING PLANS
TYPICAL ASSEMBLING TOOLS (HOOK-UP)
CABLE NETWORK AND JUNCTION BOX DRAWINGS
ISSUING OF WIRING DIAGRAMS
LIST OF ELECTRIC AND INSTRUMENTATION CABLES
MATERIALS LIST
SPECIFIC TECHNICAL PURCHASES
SPECIFIC FUNCTIONAL DETAILS OF AUTOMATION AND CONTROL SYSTEMS
I/O LISTS
ELABORATION OF AUTOMATION AND REGULATION LOGIC DIAGRAMS
SCOPE STATEMENTS FOR ASSEMBLY AND CARRYING OUT OF WORK
BUILDING SUPERVISION AND ASSISTANCE

MATERIAL DATA MANAGEMENT SERVICES

Our company is able to supply specialized resources and specific software applications for the collection and management of plant data and documents

1 DATA MANAGEMENT

- Management and planning of engineering documentation
- Interface with and support to the project teams for all the monitor and control activities of the works in progress
- Protocol of all technical documentation
- Paper and computer filing of the documentation
- Project cost control and planning

2 DATA COLLECTION

- Vendors' data collection relating: TAG, models, spare-parts, operating instructions, maintenance instructions and technical documents (data-sheets)
- Control and qualitative analyses of the data collected
- Creation of technical database preparatory to the activities of plant production and maintenance
- Generation of a plant data book
- Computerized transfer of the collected data to the Customer's IT systems via: identification of data and structures to be transferred, format and template specification for data and document transfer, implementation of a file storage for sharing, managing, controlling, downloading and retention of data and documents

QUALIFICATIONS

Our company is a qualified supplier by the following companies

CERTIFICATIONS

RAMCUBE is certified
according to
UNI EN ISO 9001:2008
for the following activities

RAMCUBE 3

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