

ONE STEP BETTER, ONE STEP AHEAD

YOUR PARTNER IN PLANT & PIPELINE DESIGN
FOR COMPLEX INDUSTRIAL PLANT



01 Consulting

FIRSTLY, WE CAREFULLY LISTEN TO YOU TO ENSURE COMPLETE UNDERSTANDING OF GOALS

Our customers have very specific ideas of how their projects should look. To jointly accomplish this, we begin by asking the correct questions to achieve the desired results.

Consequently, we structure a project specific framework of elements that combine to show the complete project picture. Our extensive experience thereafter allows us to quickly indicate any initial indication of potential problem areas which we can collectively resolve into working solutions.



02 Process Technology

YOU HAVE AN IDEA – WE FIND A SOLUTION

It is quite common that during the initial stages of a project, the client may not have complete understanding of the processes required to achieve the desired end results. However, our approach using a dedicated professional team of experts can comprehensively coordinate the technical processes required for successful project completion.

There is not always THE correct procedure or THE right plant. It is often not the purchase price, but the follow-up costs of a plant that have an effect on productivity. We help you assess and work out major advantages and drawbacks.

Our process engineers advise and assist you in all aspects of process development and equipment design and, of course, they will also assist you in the practical implementation.

DECADES OF EXPERIENCE IN DESIGNING PLANTS AND PIPELINES WITH SPECIALISED IT EXPERTISE.

WE KNOW YOUR INDUSTRY AND WE KNOW WHAT WE ARE TALKING ABOUT

Chemical, petrochemical, pharmaceutical, metallurgy, food industry, power stations or the local economy...

We know the specific processes and challenges of your industry. For over 35 years we have advised our industrial clients, planned their plants and ensured smooth and efficient project processes. 70 experienced design engineers, technicians and designers and the latest ICT offer in-depth process know-how and the efficient use of resources.



Klaus Kontorowitz and Henry Sackewitz, both managing directors of IKN Ingenieur-Planungs GmbH.

On request, we will integrate our specialists in your own team, right on your site.

FROM THE BEGINNING TO THE END

We take care of the complete project management or just specific tasks – depending on what you want. Whether you work with us from the beginning, or we start working together in a later phase of the project. Our project teams plan, calculate and design your pipeline systems or plants and support you in every phase of your project.

Our services for you are: process technology, basic engineering, detailed engineering, turnkey plants, project assistance, measurement and control technology, calculations (e.g. stress calculations) and administration.

As a planning partners we also carry out unusual and challenging projects. We look forward to your challenges!



At the projects commencement we combine to assemble an exclusive, tailored project team.



This team will accompany your project from planning through construction to approval.



Basic Engineering

WE CREATE A SOLID BASE FOR YOUR PROJECT

Within the Basic Engineering concept we develop the foundation for the project. In this initial phase our team evaluates the results of early project specific consultation reconciling them once again with the desired project goals to bring them in-line with requirements for initial plant layout development.

This results in concrete solutions for such items as process design, process flow diagrams, process control, P&I diagrams, building layout drawings, equipment design and enquiry drawings, pipeline layout & routing drawings, plant & installation layouts, requisition preparation as well as budgeting....

Based upon such data, initial budgets can be created for early project planning to serve as a basis for cost evaluation or forecasting. A typical budget number would include the costs for all essential components of the project including construction, installation of plant, building erection, soils reports & structural calculations etc.

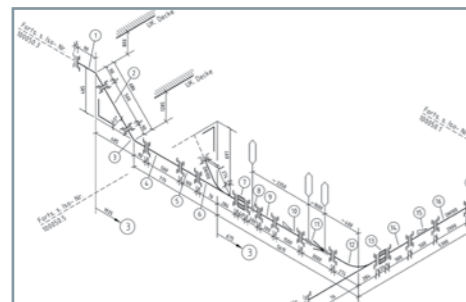
YOU HAVE AN IDEA FOR A PROJECT. WE WILL TAKE CARE OF THE REST.



POWERFUL TOOLS AND A STAFF THAT CONTROLS THEM PERFECTLY

Experienced and competent employees are the foundation of our success. But they need the appropriate tools so that they can put their knowledge into practice.

We therefore use efficient workstations and servers, and the most important planning programs for 2D and 3D design and software for the static and dynamic analysis of piping systems. Of course, our personnel master these tools. We take care of that with regular training and exercise activities.



The isometric representation of a piping system.

OUR 2D AND 3D SOFTWARE

2D-Software

- AutoCAD
- Comos PT
- Intergraph PDS-PID
- ISOMET
- Microstation
- SmartPlant P&ID
- ...

3D-Software

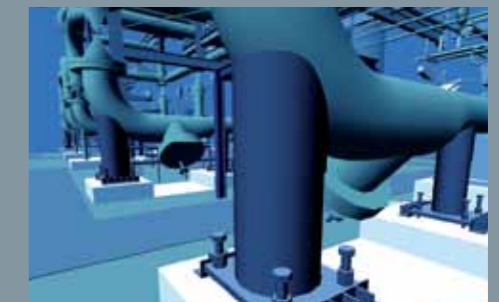
- AVEVA PDMS
- Intergraph PDS
- Inventor
- Microstation 3D
- SmartPlant 3D
- Solid Edge
- Solid Works
- Speedikon M
- ...

If your favourite software is not on this list, please contact us. Our range is constantly expanding.

SPECIAL BRACKETS WITH SUcad +

SUcad+ allows the construction of piping special supports in 3D. With SUcad+ hangers, racks, support frames and other special bracket designs are created and managed.

The special brackets produced and processed in SUcad+ can be integrated as 3D models into the PDS project, including the attribution, and thus complete the entire plant model.



Detail Engineering

ACCURATE PLANNING DOWN TO THE LAST DETAIL

Following the Basic Engineering & once the project is sanctioned, work can begin in earnest. The extent of the detail & accuracy required to successfully complete the project is reflected in the experience & expertise that we can bring to the table to execute the works in the form of our staff specialists.

From the building design to the equipment handling, plant and piping design, the bracket design and the creation of isometrics up to the numerical data and all necessary calculations, we manage your project through to completion. Nothing is left to chance.

With the help of the documents from the detail engineering all components and subsections can now be planned accurately, requested and ordered.

On request or within the context of "Turnkey projects" we support our customers also in the subsequent construction phase of their project.



WE DESIGN YOUR PLANT TO THE LAST WELD SEAM... ... THEN YOU ONLY HAVE TO BUILD IT!*

PERMANENT QUALITY IS A DUTY

We set the highest standards of our services we offer to you. Therefore we established a modern quality management system in IKN according to DIN EN ISO 9001, which is certified by TÜV CERT.

- According to DIN EN ISO 9001:2008 Quality Management
- QM-Manual DIN EN ISO 9001 quality plan
- Quality assurance through possible continuous work with CAD system

WE OFFER YOU A BIT MORE, IF YOU LIKE

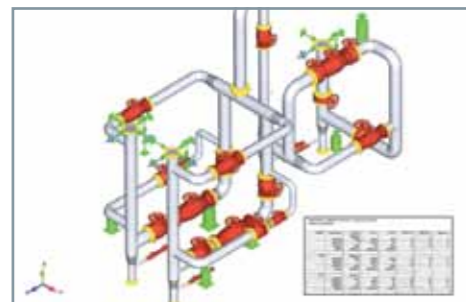
Beyond classic pipeline and plant design, we also provide other services:

- Construction management
- Start-up assistance
- CAD Administration (PDS, PDMS, etc.)
- Laser scanning
- Special machinery
- Fire emergency plans and escape plans
- Engineering for public authorities
- Machine construction design

STRESS TESTS OF PIPING SYSTEMS

Stress test calculations and stress analysis ensure that a pipeline under thermal stress as well as in selected dynamic loading cases is not damaged, and also that other parts of the plant are not damaged or people injured.

- AutoPipe
- Caesar II
- Rohr 2



The draft of a pipe system in a stress test calculation.



Our project engineers will ensure the exact implementation of the plans.



This 3D plant and piping design is detailed up to the last bracket.

* We can also take this on, however, on request.

WE MEASURE OUR SUCCESS BY THE NUMBER
OF OUR SATISFIED CUSTOMERS.

Here is a small selection of our references:

- ▶ AgrEvo
- ▶ BASF AG
- ▶ Bayer AG
- ▶ Boehringer
- ▶ Clariant GmbH Deutschland
- ▶ Evonik Industries AG
- ▶ mg Lurgi GmbH
- ▶ Outotec GmbH
- ▶ Sanofi Aventis GmbH
- ▶ Siemens AG
- ▶ ThyssenKrupp Uhde GmbH
- ▶ Ticona GmbH



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