



HUGO PETERSEN
Verfahrenstechnischer Anlagenbau

PROCESS ENGINEERING
Process Integration Network Consulting PINC™

www.hugo-petersen.de

The company

HUGO PETERSEN GmbH located in Wiesbaden, origins from the renowned engineering company Hugo Petersen, founded in 1906, in Berlin. HUGO PETERSEN is part of the Chemieanlagenbau Chemnitz (CAC) group and as such can provide full support and security for the development and implementation of small to large scale installations.

Initially using the expertise gained in the classical production of sulphuric acid, from off-gases generated in the refining of metallurgical ores, the company HUGO PETERSEN specialized in the field of manufacture of sulphuric acid, hydrochloric acid and gas cleaning.



Pic. 1:
Hugo Petersen 1906

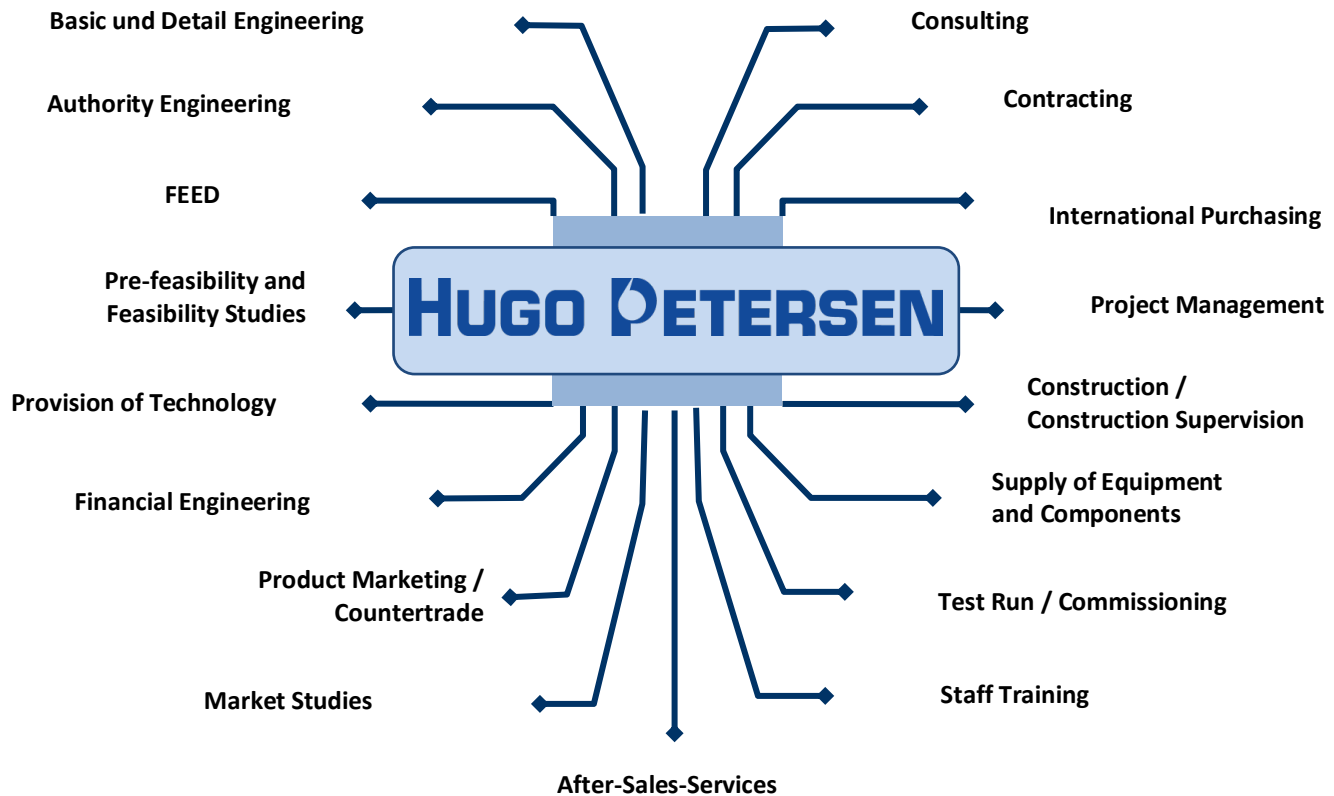
HUGO PETERSEN has more than 110 years of experience in the design and operation of sulphuric acid plants and their equipment. Today, HUGO PETERSEN offers a vast range of technology, to this industry. The design, whilst incorporating HUGO PETERSEN's extensive experience, has been developed and optimised through a comprehensive research program, conducted using HUGO PETERSEN'S own pilot plant facilities.

The engineering company has evolved from HUGO PETERSEN - consulting engineers, to an operating entity with a worldwide network of representatives and subsidiary companies.

In the field of Process Engineering, the focus is on the integration of process into the local process network with the aim of the increase of energy efficiency, product integration and emission control. HUGO PETERSEN with its unique expertise in chemical plant-engineering environmental process knowledge and its experience in energy utilization and integration allows to add value for our clients benefit.

About 50 well trained process technologists and engineers contribute their knowledge and expertise in the fields of mechanical and electronic engineering, as well as material science, to their design work.

Our Services for You



Accurate Planning - the basis for our work

Process Integration Network Consulting (PINC™)

HUGO PETERSEN's Process Integration Network Consulting (PINC™) constitutes a holistic approach to the comprehension of all the variables that intervene or preferably should interact on separate processes. Of particular interest for HUGO PETERSEN is the analysis of an industrial process and to understand how the different variables and peripheral conditions interact and generate a particular result.

The goal of HUGO PETERSEN by applying PINC™ is to optimize the interactions of the variables to produce the desired product with the least impact on consumption of natural resources, e.g. raw materials, energy, human labour, consumables, by-products, etc., a minimum impact on the environment and without long-term liabilities.

For a given industrial process, being on the drawing board or in an existing industrial plant, HUGO PETERSEN will apply PINC™ with the following approach:

- Identify the relevant variables which determine the viability and the efficiency of the process
- Develop a mathematical model of the interaction of the variables
- Optimize the model with the aim of:
 - Producing the intended product to the required specifications and quality
 - Minimizing consumption of resources: materials, energy, etc.
 - Minimizing wastes of all types
 - Minimizing short-term environmental impact and long term liabilities
 - Maximizing product value
 - Maximize return on investment for the customer
 - Maximise the Plant Life Cycle

With the use of the PINC™ services, HUGO PETERSEN provides its customers an optimum and at the same time a down-to-earth solution to its industrial production requirements.

PINC™ in Particular and amongst others

PINC analyses the needs and demands of utilities and energy for intelligent Energy Recovery Concepts based on the ENER^{REC}-Methodology.

The importance of clients' needs and the possibilities of the process plants is one of the key factors achieving the highest recovery of energy and the most effective utilization of the same.

At today's energy costs the PINC™-Programme allows the evaluation of different opportunities for the improvement of the energy balance more plant flexibility, BAT emission control and economically safe and sound plant operation.

PINC covers electro-power generation as well as the replacement or at least reduction of the use of fossil fuels in the surrounding plants. At the same time the environmental aspects are considered as well. These are the treatment effluents and limitation of gaseous emissions, as well. Here the special expertise of HUGO PETERSEN with its more than 60 years' experience in gas cleaning supports the PINC-idea.

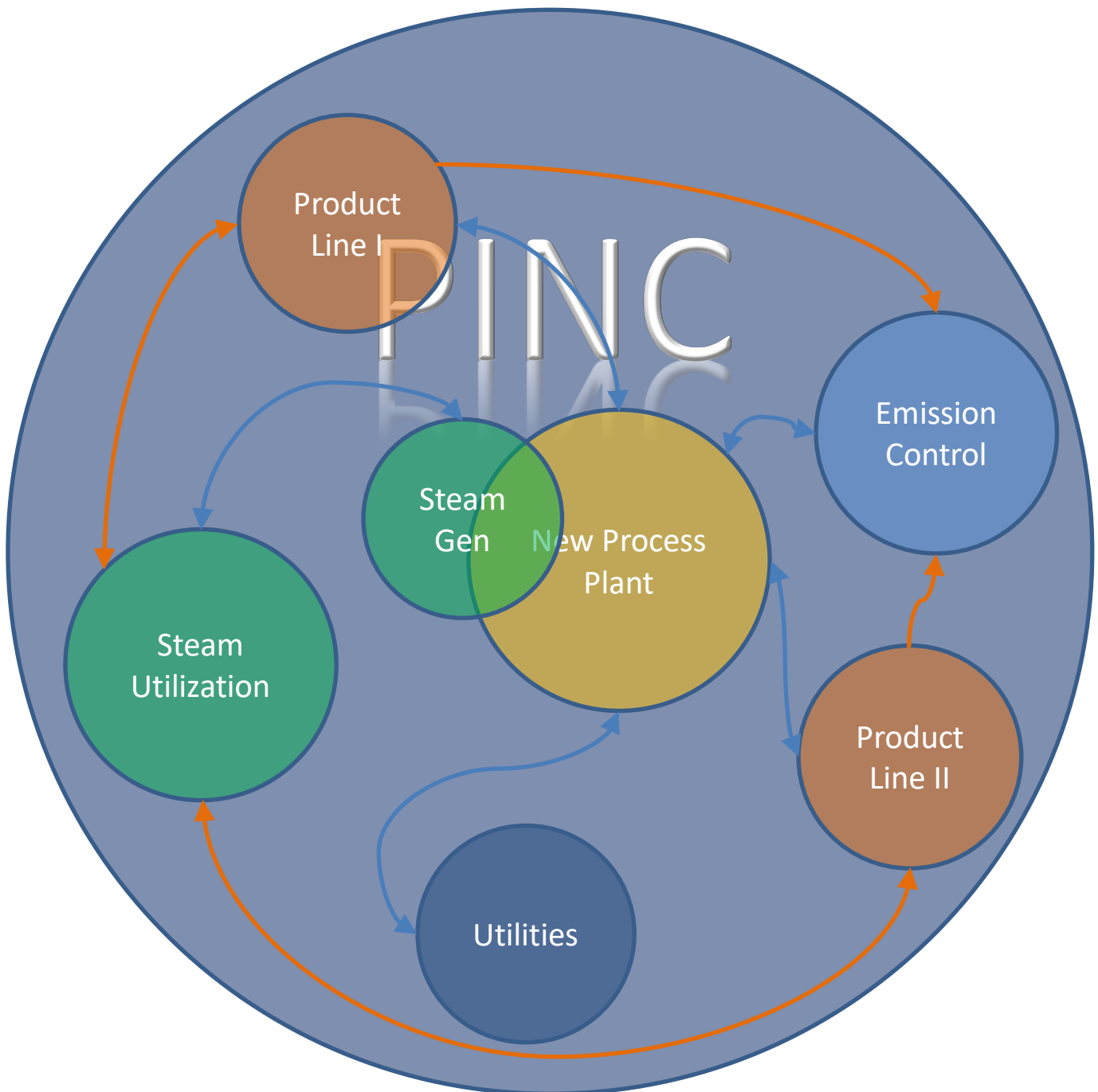
The PINC™ has harmonized energy networks to achieve nearly 97% energy recovery of acid plants including the drying and absorption heat, or part of it for the utilization in the neighbouring plants and processes.

HUGO PETERSEN evaluates the current condition vs. the new modified situation, consequently the amortization calculation is the basis for the later judgement of the add value respective savings.

The add value will be demonstrated in a CAPEX / OPEX comparison. HUGO PETERSEN is warranting the savings by the implementation of the modifications proposed.

HUGO PETERSEN encourages its customers to challenge us to come up with a custom-tailored alternative for maximum benefit and long term satisfaction. We promise that you will not be disappointed!

Let us save resources and money for you!



Selection of PINC™-Projects



Pic. 1: 2,000 tpd Sulphuric Acid DC-Plant based on sulphur burning with PINC™



Pic. 2: Complete revamped Sulphuric Acid DC-Plant (600 tpd) with PINC™



Pic. 3: Wet-Gas-Cleaning Plant down a Mo-roasting plant PINC™



Pic. 4: S-Burning-Plant 740 tpd Mh based on PINC™



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HUGO PETERSEN GmbH
Rheingastr. 190-196, Geb. K330
65203 Wiesbaden
Deutschland

Tel.: +49-611-9627820 Fax: +49-611-962 9099
E-Mail: contact@hugo-petersen.de Web: www.hugo-petersen.de

ENGINEERING IS OUR PASSION

www.hugo-petersen.de