



A S T

T E C H N O L O G Y
I N N O V A T I O N F O R R E S P O N S I B L E I N D U S T R Y

AST Technology based in Switzerland and Austria is an interdisciplinary structured engineering company specializing in holistic development and implementation of industrial projects

Combining the expertise of 60 PhDs, highly qualified Engineers and specialists from a wide range of disciplines AST Technology develops tailor-made solutions for complex tasks in a dynamically structured network

Each of our renowned senior expert has an average 30 years of expertise in specific area such as:

- Electrical Expertise (Primary and secondary electrical circuit),
- Arc Physics Expertise ("Open Arc" and "Submerged Arc"),
- Process Expertise ("Melting" and "Smelting" "Metallurgical and Refining" and "Slag optimization"),
- Engineering Expertise ("Mechanical" and "Hydraulic"),
- Metallurgical Waste Management Expertise and Emission Control Expertise.

Modern management methods, flexible use of in-house tools and the permanent higher qualification of our employees form the foundation for our success





RANGE OF SERVICES BY AST

Process Technology

Management Systems

Plant Planning

Measuring Technology

Authority Engineering

Process Simulation

Business Consulting

Software Development

PROCESS TECHNOLOGY

We offer efficient, state-of-the-art solutions based on a systematic and methodical approach.

A network of different specialist areas for the interdisciplinary development of solutions guarantees a well-founded, practice-related engineering service for tailor-made implementation.

- Process technology and optimization
- Environmental engineering
- Energy concepts and energy studies
- Contamination remediation
- Recycling technologies





AUTHORITY ENGINEERING

Our many years of experience in plant law matters, good contacts with the responsible authorities, support you in a quick handling of approval procedures.

We prepare necessary submission documents for you for applications from the authorities, water law, waste law and other applications.

We check the legal framework in advance for the rapid acquisition of positive decisions.

We take into account *EIA, **IPPC procedures and other specifics from the existing legal material in order to achieve economically justifiable consensus.

- Authority management
- Approval process
- Legal compliance
- Measurements / expert opinion

MANAGEMENT SYSTEMS

Today's management systems have to be futuristic and must take into account environment, quality and safety in daily actions

We use our experience in building up and integrating management systems in order to use synergy potentials.

By identifying and eliminating weak points, operational procedures and processes are optimized and existing risks are reduced to a minimum

Interdisciplinary contemplation of problem definitions by our engineers ensures implementation of practical state-of-the-art structures during conception and realization of systems.

- Integrated Management Systems
- Environmental Management
- Quality Management
- Safety Management





EXPERT SERVICE SOLUTIONS & PROCESS SIMULATION

1. Conversion cost

Our team uses modeling and simulation to improve the process parameters in order to optimize the conversion costs. That includes the optimization of slag, the foaming slag, the arc, the vibration of the secondary mechanical system (electrode columns, arms and masts).

2. Productivity

Our team is a world-class expert in arc furnace process and have proven records of improving productivity in 600 electrical steel-making shops around the world.

3. Training

- Benchmarking of your arc furnace
- Tool kit to improve productivity in arc furnace
- Total energy modeling and factors that influence energy consumption
- How to improve refining in ladle metallurgical furnace
- Electrical principles in arc furnace
- Chemical energy use and abuse
- Mode of graphite electrode consumption

4. Design and revamping of arc furnace

- a- Electrical design and equipment (transformer, SVC, ...)
- b- Conceptual optimal design (water cooled elements, ...)



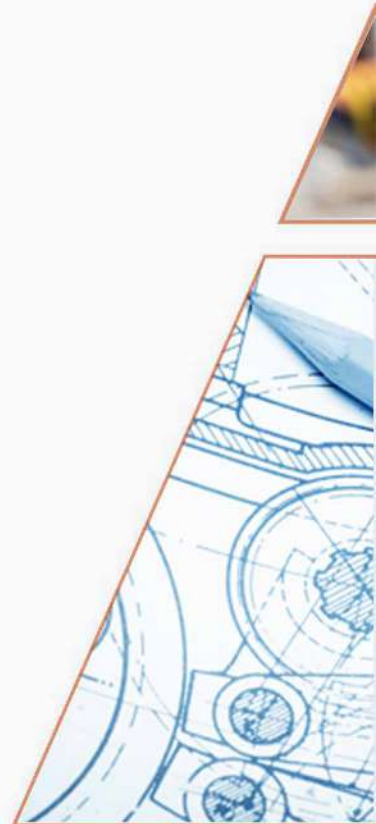
PLANNING OF PLANTS

We help you determine the main goals to ensure an investor-oriented realization of the project.

Our engineers support you when defining system requirements in order to achieve a high degree of flexibility.

Our innovative project management ensures that decisions can be made timely according to requirements of the individual case during the entire planning and realization period. We will be pleased to help you attain your goals by means of project processing without gaps concerning technology, costs and deadlines.

- General Planning
- Concept Creation
- Project Management
- Handling

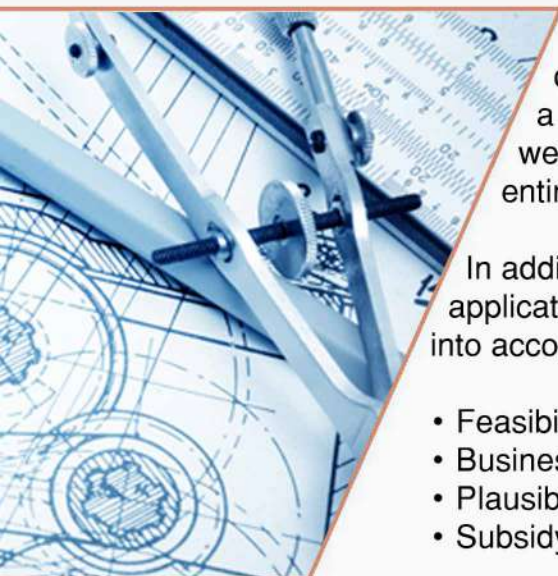




BUSINESS CONSULTING

The basis of successful project realization is a systematic and extensive contemplation of all essential project-related events, risks and factors which may have an influence on the objective with regard to technology, business economics and deadlines.

We prepare/check for you feasibility studies and business plans according to technical, economic and ecological parameters and simulate scenarios in order to prepare evaluation foundations for decision making processes.



As a result, weak points are detected and corrective measures demonstrated by exhausting optimization potentials in order to support a successful realization. When preparing/evaluating financing models as well as during the planning and realization stage itself, we take over the entire subsidy management.

In addition to selecting and structuring of financing models, we prepare any applications required and accompany you throughout the project taking into account the funding agencies.

- Feasibility Studies
- Business Plans
- Plausibility Checks
- Subsidy Management



SOFTWARE DEVELOPMENT

We do not only provide support for advice and planning of *EDP systems for companies but also realize projects in the field of internetworking of various systems including maintenance.

Our experts for development of individual software solutions are of course available on site.





MEASUREMENT TECHNOLOGY and DATA ANALYSIS

Expert Service Solutions

Snapshot (Diagnose on demand)
Watch Dog (24/24 surveillance)



MEASUREMENT TECHNOLOGY

DIGITAL ARC FURNACE ANALYSER

Hardware
Software

Dedicated Arc Furnace Equipment
Dedicated Arc Furnace Software

Monitoring
Alert

Realtime
Realtime (Customizable)

Data Collection

Real time and very high-speed data
acquisition

Data Storage
Big Data

Local or cloud
Interface available and recommended



MEASUREMENT TECHNOLOGY

Data Mining

Analyze using sophisticated data mining algorithm

Artificial Intelligence

Self learning with validation by Experts

Interface

PC – Mac – Tablet - Android – iOS (dedicated Apps)

Expert Service

Technical expert support available on demand and 24/24





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