professional solution for the coke-oven plants
When it is said a professional partner...

is a trustworthy, first-class, reliable and professional partner

The firm position on the market stands on the sturdy basis of many years’ right-minded work and on flexible and active approach to the solution of each commercial case. We are a trustworthy, first-class, reliable and professional partner for the investors.

The strategic target of DALSELV DESIGN is to become the leader and respected, reliable and serious partner not only in the Czech Republic, but also on the world markets, in particular on the territories of the middle and east Europe. Besides the revamp, modernization and using environment friendly system of the coke-oven batteries, we are capable to assure on turn-key basis for our potential customers also the equipment of joined workshops of the coke-oven batteries connected with the storage, with the preparation of coal charge and coke screening.
DALSELV DESIGN – is a dynamic engineering firm with the team of experienced specialists in the field of the project and design activity in the coke-making industry focused on the equipment for coke-oven plants, coke-oven batteries and coke-oven machines. Harmonized in detail technical, production and administrative background makes possible to assure complex orders “on turn-key” basis, starting from the elaboration of the project and workshop documentation through the manufacture up to the supervision on the sites.

And always with the responsible and individual approach to any customer, whom we offer a professional partnership, high expertise and certainty of maximal flexible and at the same time innovative thinking.
in the branch of coke-oven plants offers

the elaboration of the Basic Engineering and workshop drawings of the coke-oven batteries process equipment and their coke-oven machines,

• the supplies of complete coke-oven batteries including coke-oven machines, or complete reconstruction of the coke-oven battery,

• the supply of new or reconstructed pusher cars and planners,

• the supply of new or reconstructed charging cars,

• the supply of new or reconstructed pusher cars and stamping cars,

• the supply of new or reconstructed gas transfer cars

• the supply of new or reconstructed guiding cars

• ecological equipment for coke-oven battery,

• coke-oven plant coal and coke services.

We get down to every task as to the challenge! As the organizer of the projects in the field of the construction and the reconstruction of coke-oven units, or their parts, in the framework of the industrial investment construction we use the effectiveness of synergy effects and verified results of science and research.
REFERENCE
Not overlooked signature of

A typical, by a steady hand made signature of the DALSELV DESIGN firm is under major orders mentioned in the reference sheets.

- At the present time DALSELV DESIGN is a participator in several other tenders not only at home, but also abroad.

The designers, project engineers and organizers of DALSELV DESIGN participated in the past in the realization of many orders in the area of the reconstruction, modernization and using of environment friendly systems of coke-oven batteries for the Czech metallurgical plants, such as Třinecké železárny, ArcelorMittal and OKK Ostrava, or for the Slovak, Rumanian and Ukrainian coke-oven plants. Advanced in years experience in the field is our the biggest motto!
COKE-OVEN PLANTS

For the industrial, and in particular metallurgical production, the coke is necessary for its specific properties. Coke is made in the coke-oven batteries and their separate chambers by heating of the coal charge through the heating wall to temperature over 1 000°C without air access.

These classical coke-oven plants produce coke for:
- blast furnaces
- cast houses
- special workshops
- heating plants
- households

As production requires, the size of separate chambers is chosen (in particular height) and number of the chambers connected in the blocks. The number blocks of coke-oven battery is given by production time and the other conditions.

The greatest difference between the coke-oven batteries with loose operation and stamping operation is in the way of the coal mixture transportation to coking chamber.

Loose operation:

CROSS SECTION OF THE COKE-OVEN BATTERY – LOOSE OPERATION - description

The “charging car” travels on the floor of the coke-oven battery that takes coal mixture in the coal tower to the bunkers and fills it through the feeders and tight piping (telescopes) into coking chamber with the so-called filling holes. For evenness of the coal charge layer the planning of coal layer is performed with the equipment placed on the pusher car, and by this planning the space is formed for withdrawal (exhaust) of gasses caused at coking process (moisture evaporation, heating, carbonization) into the other equipment and this raw coke gas is transferred by piping into chemical part of the coke-oven plant.
Stamping operation:

CROSS SECTION OF THE COKE-OVEN BATTERY – STAMPING OPERATION - description

At this operation the coal charge is taken from the coal tower into the bunkers of the “pusher and stamping car“ traveling on the rails on the machine side of the coke-oven battery. The coal block is made in the stamping box by the stamping machine with sizes necessary for correct function at the next process of coking. This coal block is charged with the help of the charger into coking chamber.
The coke-oven batteries are built from the brickwork:
- classical brickwork for the areas with normal temperature
- refractory brickwork for the parts with high temperature

Joint, interconnection and bond are ensured by mechanical and process equipment of steel structures type that ensure cohesion and the brickwork shape stability in the cross and longitudinal direction.

The process equipment contains also not only special equipment, for instance the doors, risers, receivers (take-off gas bins), special fittings and the like, and also pipe systems of various media.

The mechanical process equipments for both types of coke-oven batteries are similar, or the same, of course, as per dimensions and size of the chambers. The differences are in the coke-oven machines that ensure the coke-oven battery operation, including environmental requirements on the operation.
The coke-oven machines for loose operation:
- Pusher cars planning
- Charging cars
- Coke guide cars

The coke-oven machines for stamping operation:
- Pusher and stamp charging car
- Coke guide cars
- Gas transfer cars or machines for the CB top handling

The other complexes:
- Charge preparation
- Coke quenching
- Coke service
- Chemical part of the coke-oven plant
We collaborate

In turn-key projects in the field of the coke-oven batteries reconstruction and modernization we collaborate with the leading companies and suppliers that operate not only in the Czech Republic, but also abroad.

QUALITY
Unexceptionable question of quality

In order to assure the best possible quality of services for our customers and at the same time to reduce negative impacts at the very most on environment and people health, our design office and the realization team are governed in quality management by the requirements of three standards ČSN EN ISO 9001:2009, ČSN EN ISO 14001:2005 and ČSN OHSAS 18001:2008.

Thanks to obtained certificates, the firm DALSELV DESIGN manages well to fulfill set aims – the customer’s satisfaction, protection of environment, health and safety!

Implemented Quality System, experience, high proficiency and qualification of our designers and realizing workers, and with the application of the most advanced computer techniques and technologies create the best presumptions for coming of our firm to home and European market.

We collaborate

In turn-key projects in the field of the coke-oven batteries reconstruction and modernization we collaborate with the leading companies and suppliers that operate not only in the Czech Republic, but also abroad.
We are a member of the Czech coke-oven plants society.

The innovative approach requires new knowledge, the experience exchange and also the actual information in the science and research. That is why not only the firm DALSELV DESIGN, but also some of our individuals – the designers, project engineers and realizing workers are the member of the Czech coke-oven plants society that associates the coke-oven plants specialists from the Czech Republic including foreign ones and the Czech and foreign companies.

The Czech coke-oven plants society was established in 1993 as a „civil society“ of the specialists, the work of which has to do with coke making and processing of chemical products of carbonization.

Its role is to create conditions for open exchange of the standpoints and experience and together with the presentation of new technical knowledge to contribute in searching solutions of outlined problems.
Design office of DALSELV DESIGN has at the disposal equipment for work in 2D and 3D. For the drafts and elaboration of the drawings in 2D now we have at our disposal the workplace equipped with well-tested and broadened program Autodesk AutoCAD LT 2010. For more sophisticated process units there is a base for the elaboration of the drawings with 3D models done in the program Autodesk Inventor. Own copying center meets high requirements and enables a maximal flexibility.

Engineering services are offered not only in the firm registered office that provides a perfect background and sufficient space, but, if needed, directly at the customer. We use in work not only our experience, but, of course, also modern technologic and PC equipment.
Our team of the top-ranking experts will solve professionally and immediately also the most complicated tasks. In project and design and in the implementation of the coke-oven machines we are not that is to say the beginners! The customers know for many years not only our faces, but first of all our perfectly done work! We have experience and excellent results, nevertheless we do not take it easy. We follow new trends in the field of coking equipment, we are interested in the innovations in technologies, we acquaint with the development in the production or coke handling. We participate in the fairs and exhibitions and special seminars and conferences. And our team of course is constantly educated, and also in world languages.

We will be your support and consulters in all phases of the project, from the first drafts up to its completion.
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