Company introduction

VST ENGINEERING
EXPLOSION SHIELD
Ensure maximum safety of operations, health and human life

Development and production of own protection systems

Secure all types of plants and equipment at risk of dust explosion

Long-term experience with applications of protective systems

Complex solution of dust explosion.

About the company

The VST Engineering company has been providing complete services in the field of prevention and protection of industrial equipment against dust explosion for over 20 years – starting with risk assessments, through safety design and implementation, to regular maintenance of protective systems.

The success of VST Engineering rests upon two main pillars. One is the people, who form the company and who keep growing both humanly and professionally, keep educating themselves, collect experience and search for new ways to improve the services.

The second pillar is our technical equipment, research and development of our own technologically advanced protection systems in accordance with present legal requirements.

Our activities aim for safe operation of industrial equipment without the risk of long term downtimes and economical losses during extraordinary events (which an explosion certainly is). This also secures the primary goal, which is safety of workers.

Everyone in the company constantly strives to keep our technology and services consistently meet all the needs for safety of industrial operations and active business development both within and outside of the EU.

Team VST ENGINEERING
VST SECURES

ALL OPERATIONS
WITH THE RISK OF DUST EXPLOSION

For more information, please visit www.vst.cz/en
Energetics
- Power plants
- Heating plants
- Waste incinerators
- Biofuel plants
- Fuel plants
- Biomass processing
- Cement works

Food industry
- Breweries and malt-houses
- Sugar factories
- Candy and cookie factories
- Instant product factories
- Bakeries
- Distilleries
- Liqueur distilleries
- Milk driers

Chemistry and pharmaceutics
- Polystyrene units
- Plastics factories
- Fertilizer units
- Powder dye and pigment factories
- Sludge processing
- Drug production

Woodworking industry
- Paper mills
- Pellet factories
- Chipboard factories
- Furniture factories

Automotive and aviation
- Production of car parts
- Production of plastic moldings
- Casting treatment
- Tire production
- Powder paint shops

Agriculture
- Mills
- Grain cleaners
- Post harvest grain lines
- Fodder mixers
- Tobacco industry
- Rendering plants
VST SECURES ALL DEVICES WITH THE RISK OF DUST EXPLOSION
Grinding, mixing and crushing
- Mills
- Crushers
- Grinders
- Pressers
- Mixers

Filtration
- Filters
- Cyclofilters
- Electrofilters
- Industrial vacuums
- Aspiration

Separation and sorting
- Screeners
- Separators
- Sieves
- Cyclones

Transport
- Screw conveyors
- Redlers
- Elevators
- Schaftless conveyors
- Powder ducts

Storage and drying
- Silos
- Tanks
- Scales
- Dryers
- Milk driers

Other
- Mixers
- Malaxers
- Rotopulsers
- Reactors
- ...
VST PERFORMS

ALL ACTIVITIES
OF DUST EXPLOSION PROTECTION

Risk assessment

- Determination of explosion characteristics of dust
- Operation inspection
- Classification of zones in potentially explosive environments outside and inside the plant
- Assessment of ignition sources
- Design of preventive and organizational measures
- Determination of requirements for machinery and electrical equipment Identification of high-risk devices

Security designing

- Selection of the most appropriate security for the device
- Determining the amount and location of security components
- Application of protective systems
- Determination of explosion relief areas
- Determination of requirements for pressure resistance of individual devices and their interconnection

Do you act responsibly?

Do not expose your employees to the risk of explosion and do not risk losing your good name. Explosion is not only a theoretical risk and protection against it is a sign of a high level of responsibility and an appropriate approach to ensuring safe operation.
Calculations of pressure resistance

- Ensuring the geometry of the device under consideration
- Creating 3D models
- Finite Element Method (FEM) simulation
- Assessment of current pressure resistance of the device
- Design of modifications to increase it

Installation

- Own security protection systems
- Project documentation
- Preparation of the installation technology
- Supply of protective systems
- Installation of protective systems
- Commissioning and trial operation
- Operator training
- Accompanying documentation and handover

Revision and service

- For all supplied protective systems
- By VST trained personnel
- Periodic revisions
- Warranty and post-warranty service
- Pressure tests

Technical support

- Training
- Consultation
- Seminars
VST MANUFACTURES

ALL PROTECTIVE SYSTEMS
TO SECURE AGAINST DUST EXPLOSION

ANTIDET Dumper
Protective system for one-way separation of the explosion

ANTIDET Dumper is a passive backdraft valve, which is closed by pressure of explosion itself and thus prevents the transmission of the explosion by inlet pipes.

ANTIDET Barrier
Protective system for separation of the explosion

ANTIDET Barrier is an active system, which adds the extinguishing agent from active elements into the protected pipes upon detection of accompanying phenomenon of explosion (flame, pressure), thereby stopping the spreading of the flame into connected equipment.
**ANTIDET Suppressor**

*Protective system for suppression of the explosion*

ANTIDET Suppressor is an active system which adds the extinguishing agent from active elements into the protected pipes upon detection of accompanying phenomenon of explosion (flame, pressure), thereby suppressing the explosion.

**ANTIDET Relief**

*Protective system for the explosion venting*

ANTIDET Relief is a passive anti-explosion membrane, which upon opening relieves the explosion from the protected equipment.

**ANTIDET FQ Relief**

*Protective system for flameless venting of the explosion*

ANTIDET FQ Relief is a passive anti-explosion membrane fitted with a bin, which extinguishes the flame of a relieved explosion.

**ANTIDET Flap**

*Protective system for separation of explosion in both directions*

ANTIDET Flap is an active system, which closes the protected pipes upon detection of accompanying phenomenon of explosion (flame, pressure), thereby stops the transmission of explosion into other equipment.
The mission of **VST**

The goal of the VST ENGINEERING company is to be a reliable, long term partner in the field of protection of industrial operations. Explosion is not only a theoretical risk and protection against it is a sign of a high level of responsibility.
OUR REFERENCES

We appreciate any cooperation and thank to all of our customers for their trust. We always make maximal effort to create and maintain a long-term partnership.

Selected references by field of work

**Energetics**
- Veolia
- ČEZ
- Plzeňská teplárenská
- Žilinská teplárenská

**Breweries**
- Plzeňský Prazdroj
- Budějovický Budvar
- Heineken
- Staropramen

**Chemistry and pharmaceuticals**
- Synthos
- Synthesia
- Lovochemie

**Other**
- CIUR
- AERO
- ...

**Sugar factories**
- Krajowa spolka cukrowa
- Südzucker
- TTD Tereos

**Food industry**
- Mondelez
- Ferrero
- Nestlé
- Karlovarská Becherovka

**Automotive**
- VW
- ŠKODA
- BMW
- Bridgestone
NEW FACE OF VST ENGINEERING

Top of the line products and professional services are necessary for any successful company. However business strategy, competitive struggle and, above all, the customers, all require a corresponding company presentation, in other words a solid, unmistakable and clearly visible face of a company.

For this very reason, we here at VST ENGINEERING agreed to create a new company identity, which corresponds to our field of work, abilities and successes.