

# SNCR-DeNOx Equipment

Z 2864



## 1. Complex SNCR-DeNOx Equipment Offer

DSD-Dostál, a.s. offers a complex delivery of in-house manufactured and engineered DeNOx equipment, based on selective non-catalytic reduction (SNCR) using ammonia water (24.5%), injected in a place with optimal temperature field and suitable combustion gas composition.

The offer covers technology measurement, injection nozzles location design optimization, delivery of machine equipment in the contracted extent, including project of machinery and electric equipment, supervision of installation, commissioning, operators' training, guarantee and post-guarantee service including spare parts supply.

## 2. Purpose of SNCR-DeNOx Equipment

The system of non-catalytic reduction of nitrogen oxides is currently effective and investment-wise interesting technology for reduction of such emissions. In EU Countries, in compliance with the legislation in force from 2016, the emission limit for nitrogen oxide (NOx) of max. 500mg/Nm<sup>3</sup> - 24 hours moving average, will be in force for cement works. This limit is unreachable without additional or purpose-installed technologies, e.g. SNCR-DeNOx. Normally achieved value of NOx emissions is in the range of 800 to 1000mg/Nm<sup>3</sup>. Even with technological measures of the Low NOx burner type the NOx emission value below 800mg/Nm<sup>3</sup> is difficult to achieve in the long term.

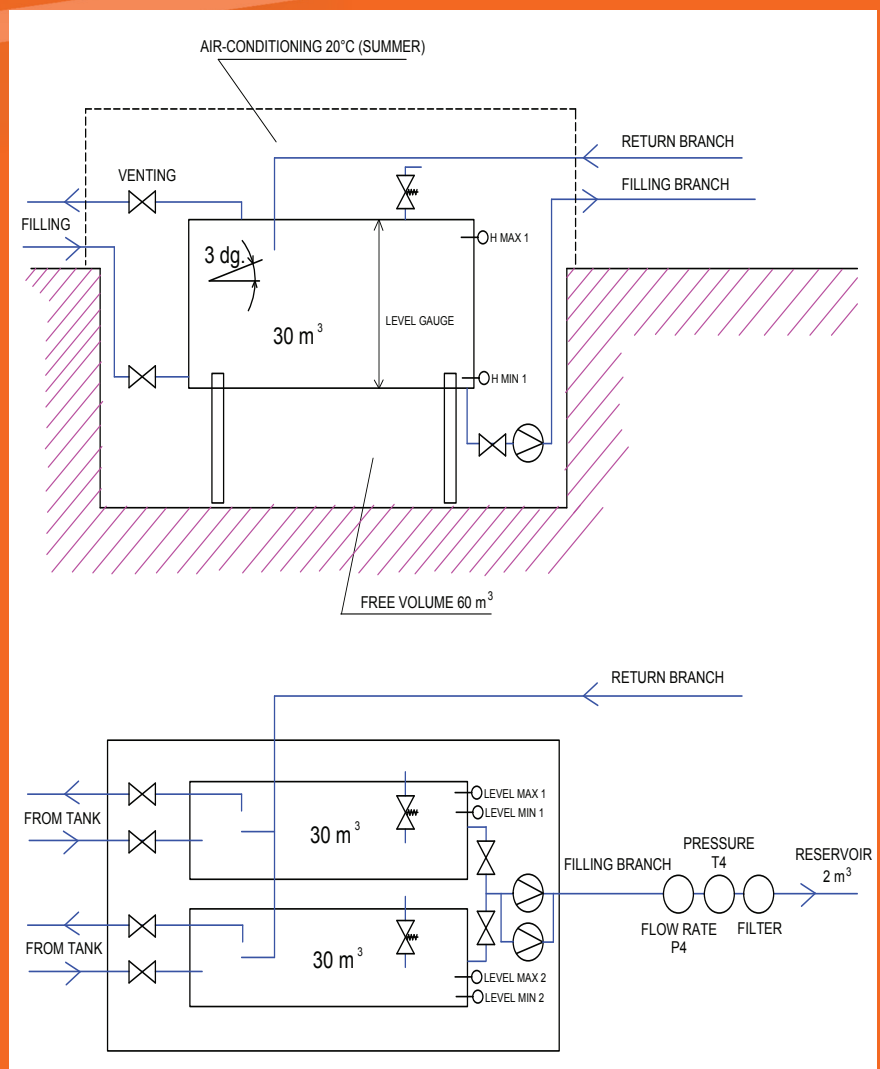
The offered SNCR-DeNOx equipment represents a minimal disruption of the current technology.

In real life it means installation of atomizing nozzles and thermometers on locations with optimal temperature profile, installation of distribution and control unit, installation of main and operational reservoir of ammonia water, pressurized air source, technological distribution systems of reduction media and pressurized air. The cooperation of the Customer during completion of the analysis of gases with NH<sub>3</sub> emission measurement and connection of communication between the SNCR-DeNOx unit with NOx + NH<sub>3</sub> analyzers and technology control system is expected. The technology can be applied in plants such as cement works, power plants, heat-generation plants and waste incineration plants, where the suitable temperature profile is available due to technology, i.e. 850-910 °C in waste gas piping behind the main energy source.

## 3. Technical solution of SNCR-DeNOx equipment

The standard SNCR-DeNOx equipment on offer comprises of the following parts:

- The standard SNCR-DeNOx equipment on offer comprises of the following parts:
- storage of ammonia water in reservoirs 2 x (30 to 50)m<sup>3</sup> located in subterranean intercepting trap with closed and safe above-ground part



Ammonia water 24,5% storage

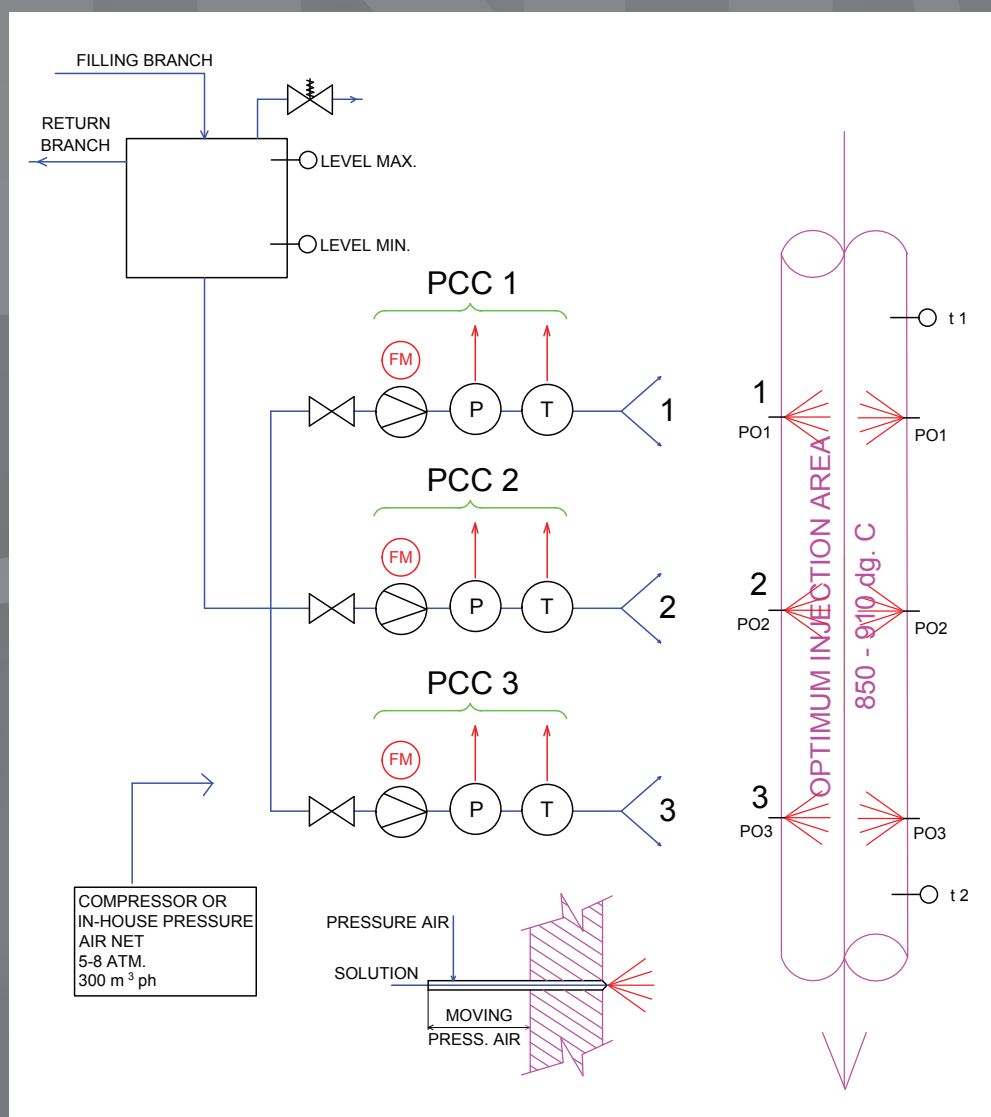
- air-conditioning of ammonia water storage areas
- filling and transfer pumps for ammonia waters
- operational reservoir of ammonia waters with volume of 2m<sup>3</sup>
- triple low-pressure distribution system of ammonia water
- flow-rate measurement in individual branches of the distribution system
- double-media injection nozzles with pneumatic insertion mechanism
- compressor station with air tank and distribution of pressurized air to nozzles
- connecting piping for transfer and distribution of ammonia water
- set of thermometers for sensing of temperature field of the optimal injection point
- set of level gauges and measurement of level in reservoirs
- control system with visualisation
- project and operational documentation

#### 4. Technological services offered in relation with the installation of SNCR-DeNO<sub>x</sub> equipment

- technological measurements and calculation of optimal rating of SNCR-DeNO<sub>x</sub>
- commissioning of equipment and operators' training
- warranty and post-warranty technological service

#### 5. Technical services offered in relation with the installation of SNCR-DeNO<sub>x</sub> equipment

- engineering and preparation of machinery and electrical project
- preparation of documentation for building project
- supervision of installation of machinery and electrical parts of SNCR-DeNO<sub>x</sub> equipment
- warranty and post-warranty technical service



Dosing of ammonia water - injection