

REPORT ON AUTHORIZED EMISSION MEASUREMENT
from the combustion equipment of the boiler house in operation KROMBERG & Schubert,
Kolárovo

Name of the accredited testing laboratory /
authorized person according to § 58 par. 2 letters a)
Act No. 146/2023 Coll. on air protection:

EnviroTeam Slovakia s.r.o.,
Kukučínova 23, 040 01 Košice
ID number: 35957239

Report No.: 03/262/2023

Date: 8. 1. 2024

Company: KROMBERG & Schubert s.r.o.
IČO: 31 398 693

Address: Priemyselný areál 3206
946 03 Kolárovo

Location: Priemyselný areál 3206, Kolárovo

Measurement type: Authorized measurement of the value of the physico-chemical quantity that expresses the emission limit and the value of the related status and reference quantity that applies directly to emissions according to letter a) point 1 of Annex no. 9 of Act No. 146/2023 Coll. on air protection.

Order No.: 48338841

Date: 10.5.2023

Date of the authorized measurement: 4.12.2023

Person responsible for authorized measurement of emissions - leading technician according to § 20 par. 3 of the Act no. 137/2010 Coll. as amended later:

Ing. Martin Hruzík
decision of the Ministry of the Interior of the Slovak Republic on the issuance of the certificate of the responsible person no. 17944/2016 dated 4/4/2016

The purpose of the authorized measurement:

Periodic authorized measurement of data on compliance with the determined emission limit (EL) for CO and NOx as NO2 from combustion equipment with a total nominal heat input of 0.3-15 MW according to § 8 par. 5 letters c) point 1 of the Decree of the Ministry of the Ministry of the Slovak Republic no. 249/2023 Coll.

SUMMARY

Periodic authorized measurement of data on compliance with the determined emission limit (EL) for CO and NOx as NO2 from combustion equipment with a total nominal heat input of 0.3-15 MW according to § 8 par. 5 letters c) point 1 of the Decree of the Ministry of the Ministry of the Slovak Republic no. 249/2023 Coll.

Operation location:	Gas boiler room, KROMBERG & Schubert s.r.o., Priemyselný areál 3206, 946 03 Kolárovo
Operation time:	operation: 24 h/day, 7 days/week, performance seasonal (winter/summer)

	technology: emission multi-mode (power regulation by changing the combustion conditions in the burner); fuel: natural gas diesel (ZPN), continuously variable emissions
Sources/equipment of emissions:	Boilers K1 and K2
Measured components:	NOX as NO2, CO
Measurement result:	mass concentration of the component in the waste gas (OP) in mg/m ³
Emission source/equipment number:	A separate chimney for each boiler

Measured component	N	Average value (concentration) [mg/m ³] ¹⁾	Maximum (concentration) [mg/m ³] ¹⁾	Emission limit (concentration) [mg/m ³] ^{1,2)}	The mode with the highest emissions [Yes No]	Compliance/Non-Compliance Notice ^{2,3)}
Mode of operation:		boiler K1, fuel: ZPN, 63% Qmen				
NOX as NO2	2	62	63	200	no ^{5) 6)}	compliance
CO	2	< DL4)	< DL4)	100	no	compliance
Mode of operation:		boiler K1, fuel: ZPN, 32 % Qmen				
NOX as NO2	2	71	72	200	no ⁵⁾	compliance
CO	2	5	5	100	yes	compliance
Mode of operation:		boiler K2, fuel: ZPN, 60 % Qmen				
NOX as NO2	2	68	68	200	no ^{5) 6)}	compliance
CO	2	< DL4)	< DL4)	100	no	compliance
Mode of operation:		boiler K2, fuel: ZPN, 34 % Qmen				
NOX as NO2	2	83	83	200	no ⁵⁾	compliance
CO	2	20	20	100	yes	compliance

Notes:

1) Status and reference conditions for expression of mass concentration: 0 °C, 101.3 kPa, dry gas, O₂ ref. 3% of the volume

2) Emission limit and conditions of its validity established in Annex no. 4, part V, point 3.2 of the Decree of the Ministry of the Interior of the Slovak Republic no. 248/2023 Coll.

EL compliance requirements: § 19 par. 2 letters a) Ministry of the Slovak Republic decree no. 248/2023 Coll.

3) Number of individual measurements of a specific waste gas component.

4) CO mass concentration values indicated by the abbreviation and symbol < DL are below the detection limit value of the analyzer used (DL = 5 mg/m³).

5) (32 to 63) % of nominal heat input – higher emissions at nominal heat input (Annex No. 2, Part B, seventh point, letter b), point 1 and Part A, ninth point of Decree of the Ministry of the Interior of the SR No. 249/2023 Coll.).

6) The measurement was performed at a lower heat input than the highest (nominal) heat input according to the documentation - notification notice

on the planned date and conditions for carrying out the authorized measurement of stamp. 199/23/100/Amendment dated 30.11.2023 (§ 58 paragraph 5 of Act No. 146/2023 Coll. on air protection and Annex No. 2, Part B, Point 1 of Decree of the Ministry of the Interior of the Slovak Republic No. 249/2023 Coll. from.)

The measurement did not confirm the assumption according to the theory of fuel combustion in the given type of combustion equipment that the highest emissions for NOX are at the nominal heat input