IFZW INTERNATIONAL

High Quality made in Zwickau

Fagdager for Krematorier – Bodø 20.-21.November 2025

CONVERSATION OF CREMATORIA FROM CATEGORY 2 TO CATEGORY 1

Salten Krematorium Bodø - Project

Presenter: Aline Schleif

Project Timeline

01

Before Project Start

Preparation Phase

Week 01–36, 2023

02

Project Start

1st -5th Construction Phases

Week 37, 2023 – Week 03, 2024

03

In Operation

Start of Operation

Week 04, 2024

Project Timeline

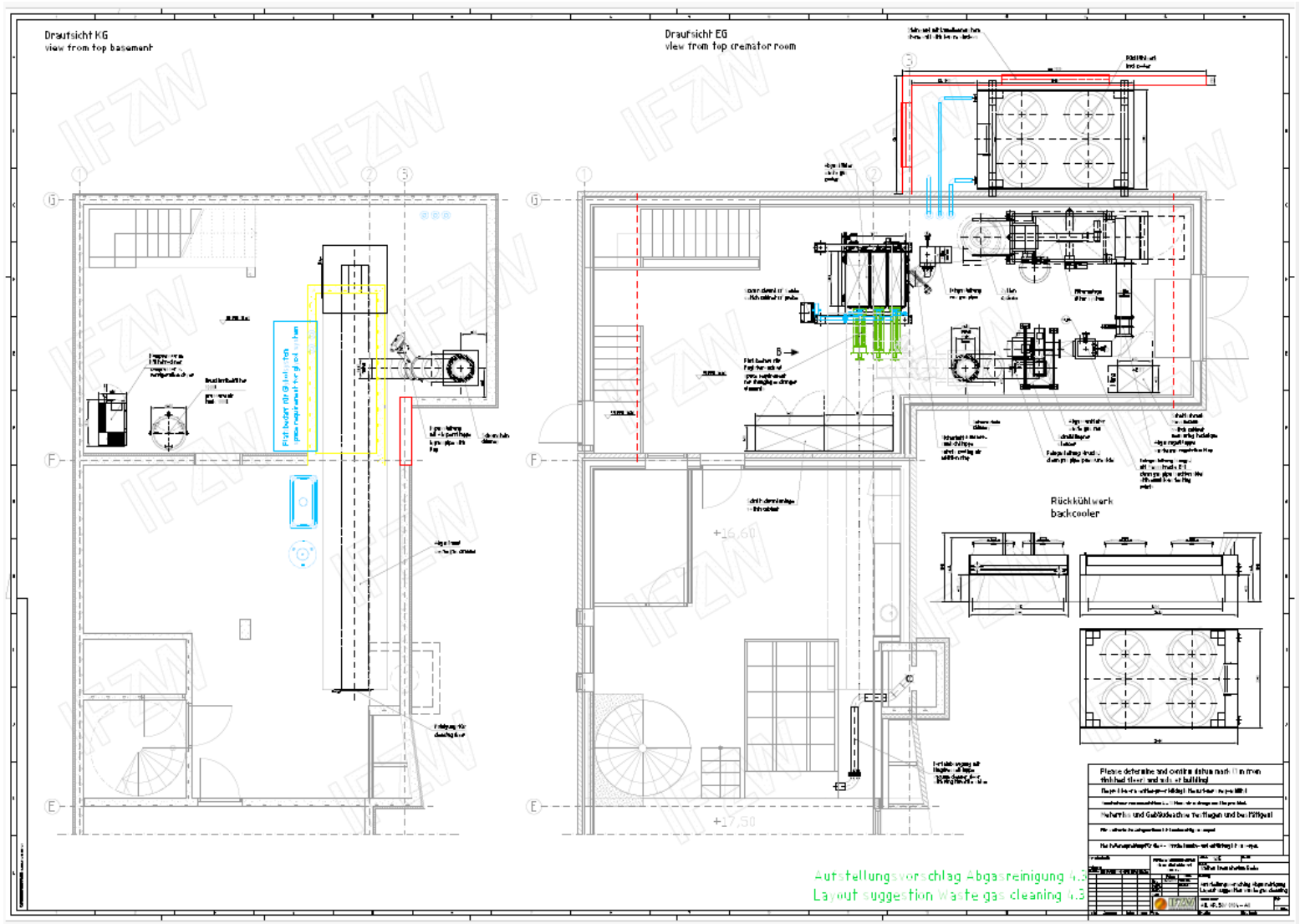
01

Before Project Start

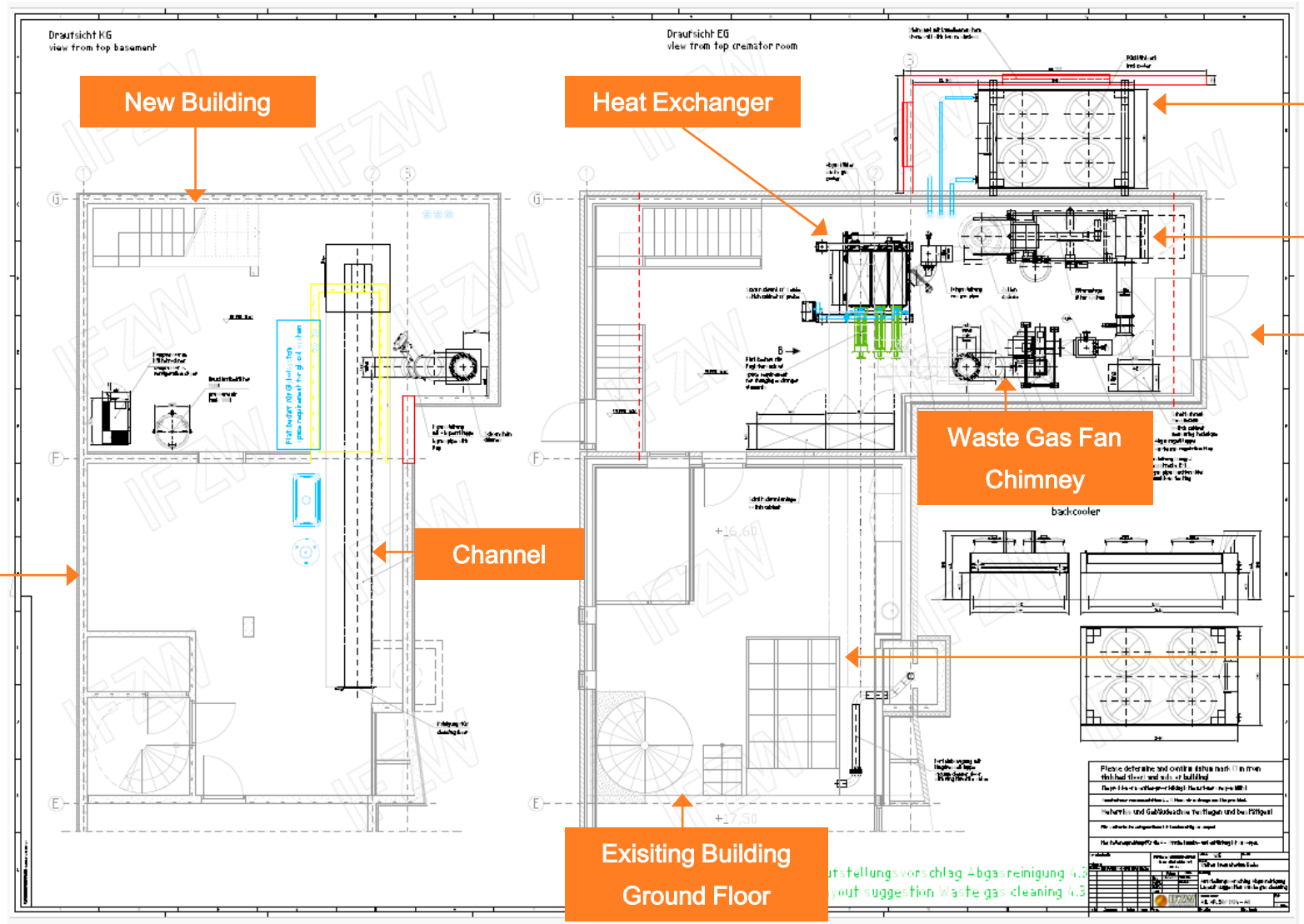
Preparation Phase

Week 01–36, 2023

Before Project Start – Layout plan



Before Project Start – Layout plan



New Building

Heat Exchanger

Back Cooler

Filter

New Building Ground Floor

Waste Gas Fan Chimney

Existing Building (Basement)

Channel

Cremator

Exisiting Building Ground Floor

Before Project Start – Inventory 2022

Preparation & Site Assessment

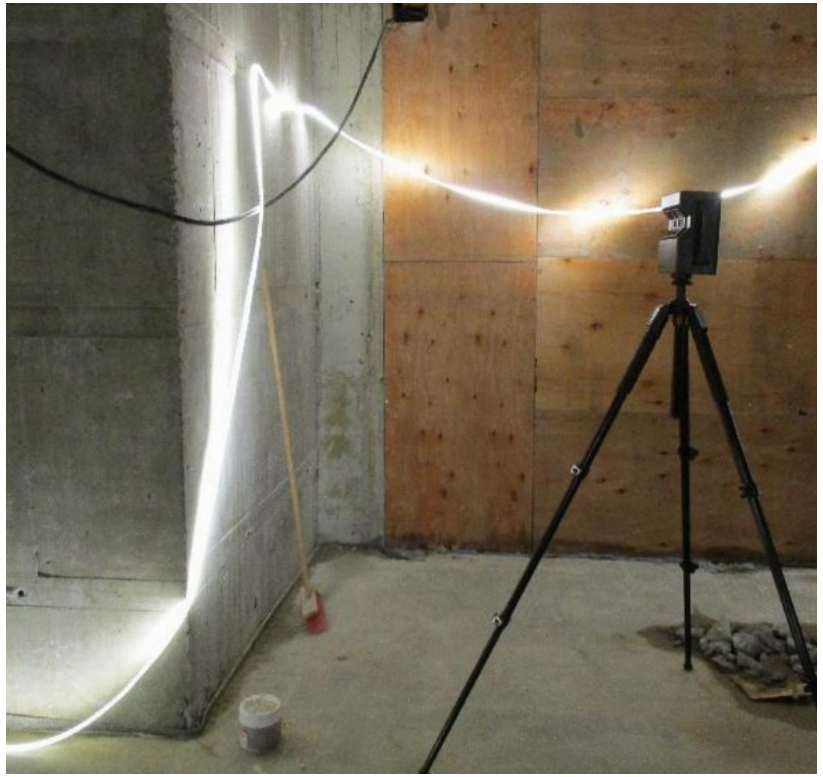
- Comprehensive documentation of existing cremator technology and installed aggregates
- Precise measurement of cremator and technical room, including piping and cable trays
- Detailed photographic documentation of all relevant installations

Before Project Start – Inventory 2022

Preparation & Site Assessment

- Assessment of components for potential re-use
- Inspection of transport routes for delivery, reloading, and storage

Before Project Start – Checking new building week 25, 2023



New Building Assessment

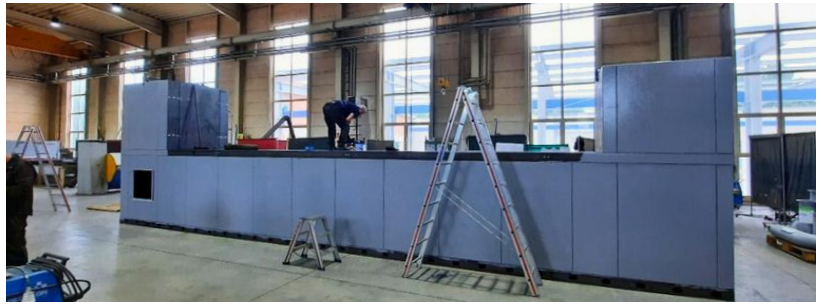
- 3D measurement of the new building structure
- Verification of all wall and ceiling openings

Before Project Start – Checking new building week 25, 2023

New Building Assessment

- Inspection of door dimensions and accessibility for component transport
- Evaluation of available storage areas

Before Project Start – Manufacturing and Purchasing



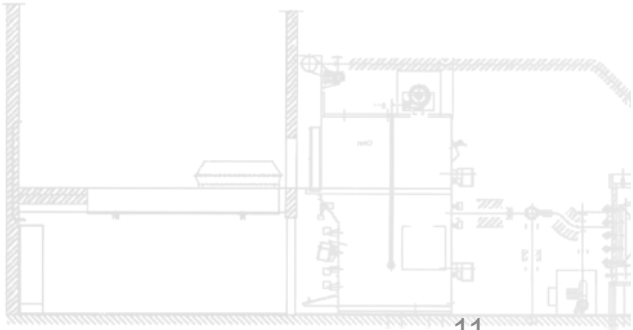
Manufacturing and Purchasing

- In-house fabrication of steel channels, heat exchangers, and piping
- Procurement of filters, fans, measurement and control components, chimney, refractory and insulation materials, and control systems
- Coordination and communication with subcontractors for insulation, cabling, and control systems

Before Project Start – Mounting Cantilever

Cantilever Installation

- Installation of cantilever by the customer to enable roof closure before the end of the summer season



Project Timeline

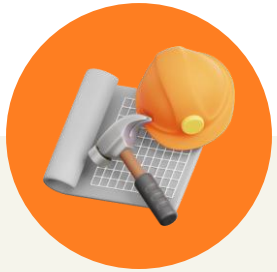
02

Project Start

1st -5th Construction Phases

Week 37, 2023 – Week 03, 2024

Project Timeline



1st Construction Section: Week 37–39, 2023

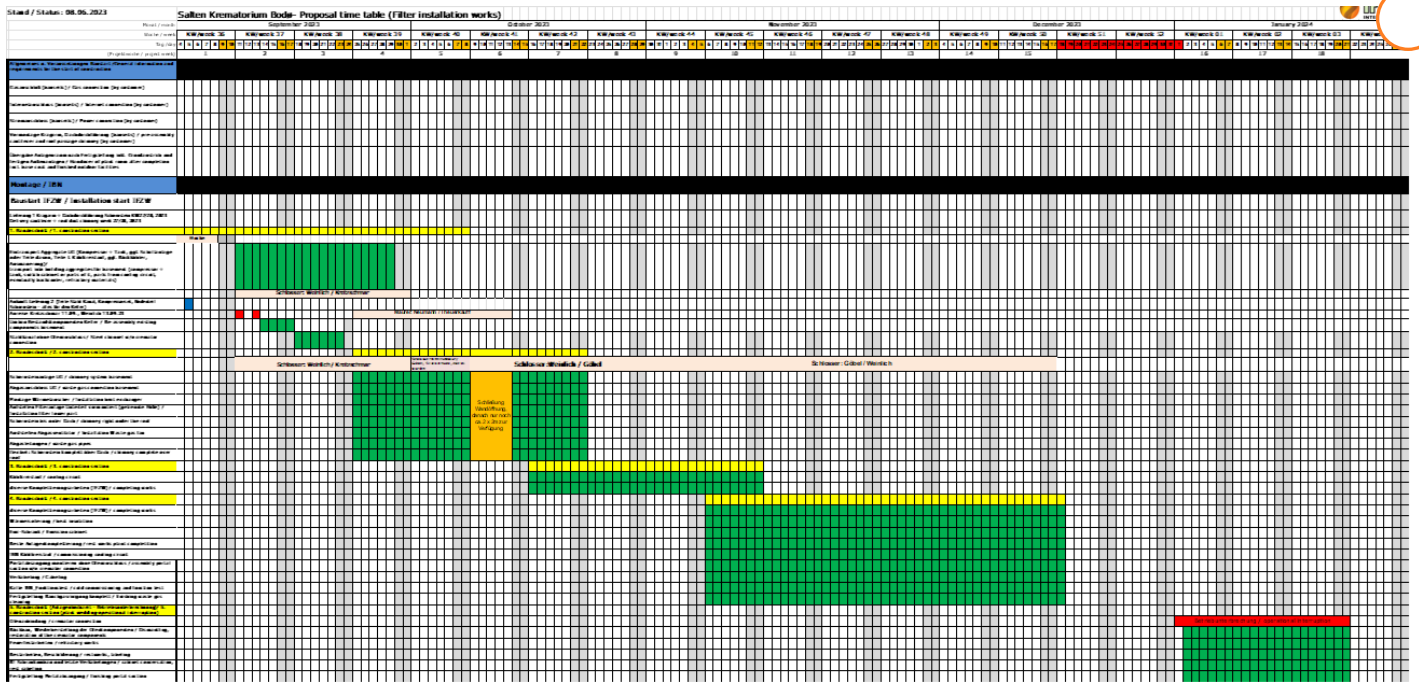
2nd Construction Section: Week 39–42, 2023

3rd Construction Section: Week 42–45, 2023

4th Construction Section: Week 45–50, 2023

5th Construction Section: Week 01–03, 2024

Project Start – Time table

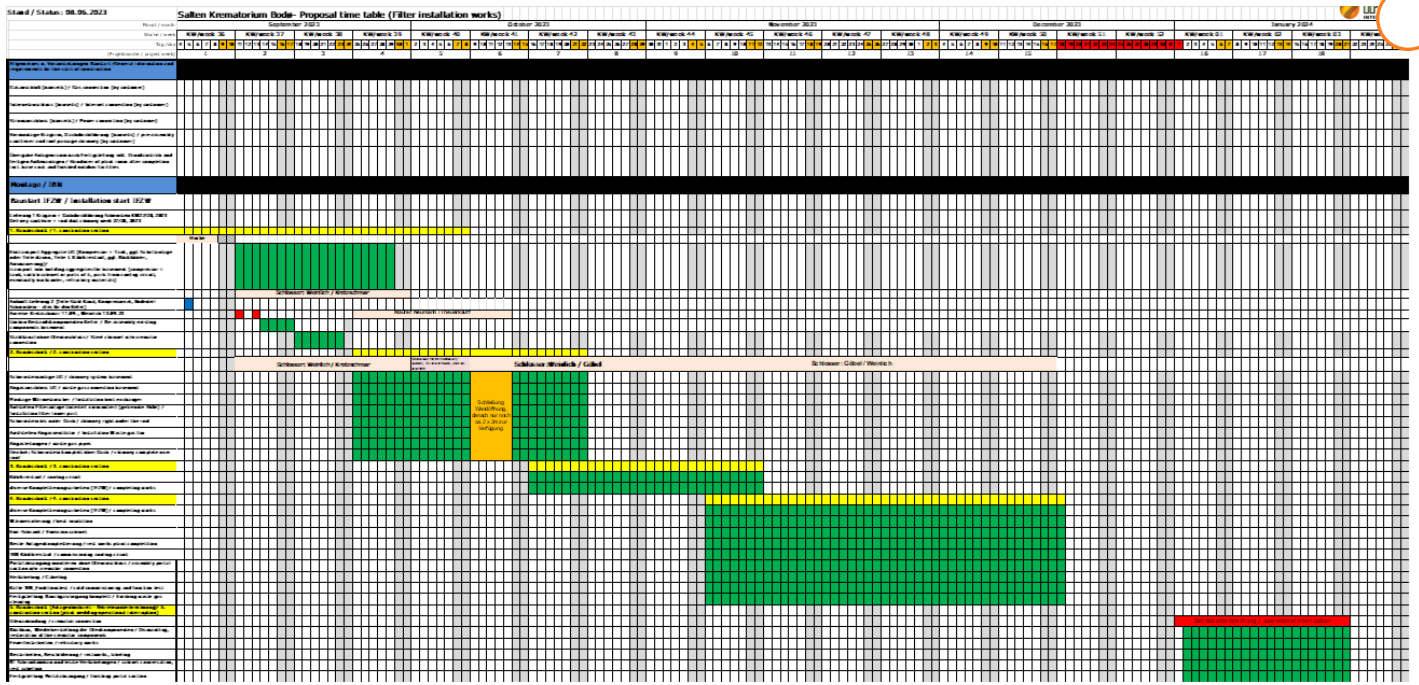


Phase 1: Installation and Preparation

(14 weeks – Cremator in operation)

- Installation of equipment
- Refractory works
- Insulation
- Cabling
- Cold commissioning

Project Start – Time table



Phase 2: Plant Integration

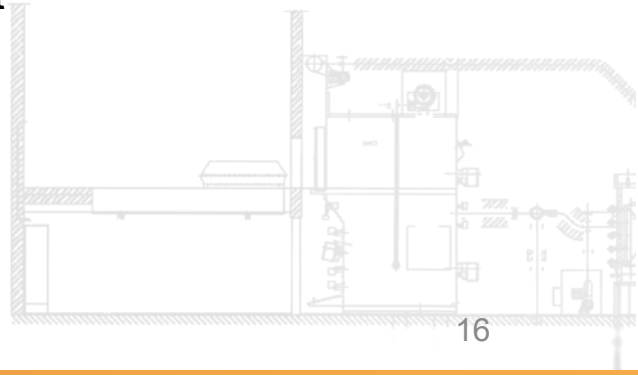
(3 weeks – Cremator out of operation - "Plant Marriage")

- Connection of cremator to the new flue channel
- Integration of the control system
- Final commissioning

Project Start – 1st construction section (week 37-39, 2023)

Key Activities

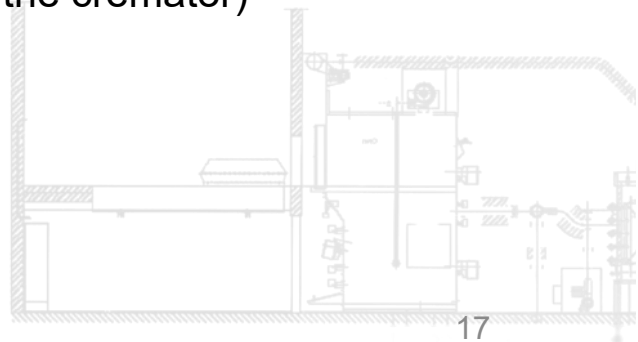
- Transport of all components into the basement: steel cover channel, compressor and tank, parts of the cooling circuit
- Modification of existing fan and piping in the basement



Project Start – 1st construction section (week 37-39, 2023)

Key Activities

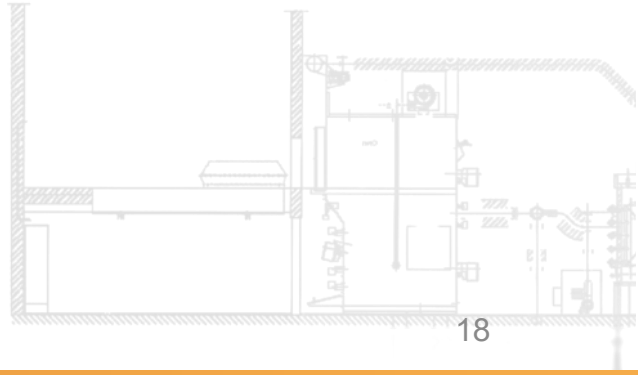
- Transport of all components into the basement: steel cover channel, compressor and tank, parts of the cooling circuit
- Installation of steel channel (not yet connected to the cremator)



Project – 2nd construction section (week 39-42, 2023)

Key Activities

- Start of refractory works in the channel, including waste gas connection to the heat exchanger
- Installation of heat exchanger on the ground floor



Project – 2nd construction section (week 39-42, 2023)

Key Activities

- Start of chimney installation in the basement, with ongoing flexible construction through week 42
- Installation of filter system
- Installation of waste gas fan
- Installation of waste gas piping

Project – 3rd construction section (week 42-45, 2023)

Key Activities

- Installation of the cooling circuit
- Placing back cooler

Project – 3rd construction section (week 42-45, 2023)

Key Activities

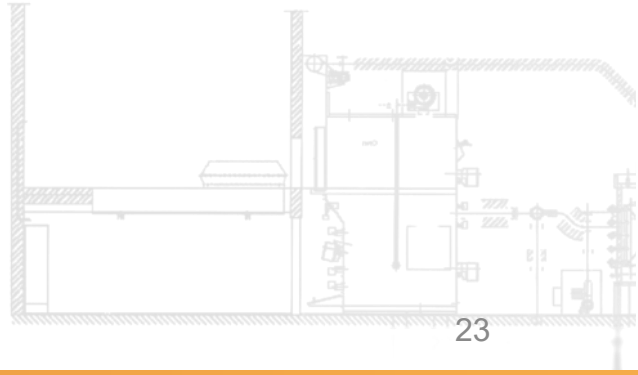
- Start of thermal insulation works
- Completion of remaining construction tasks

Project – 3rd construction section (week 42-45, 2023)

Project – 4th construction section (week 45-50, 2023)

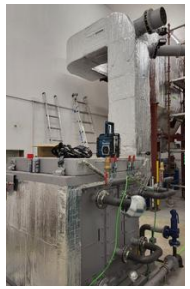
Key Activities

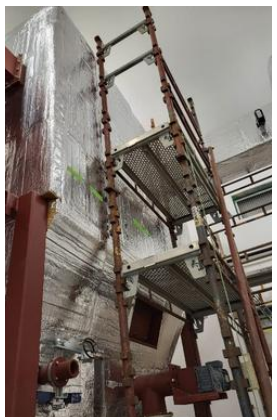
- Execution of thermal insulation works
- Commissioning of the cooling circuit
- Cabling and electrical connections



Project – 4th construction section (week 45-50, 2023)





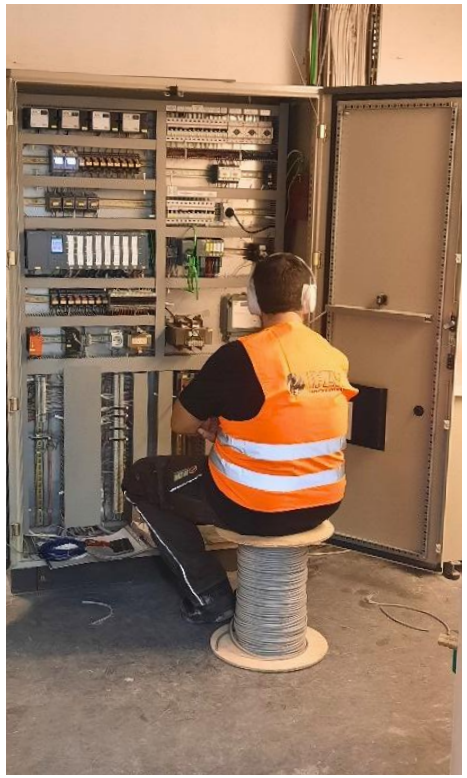


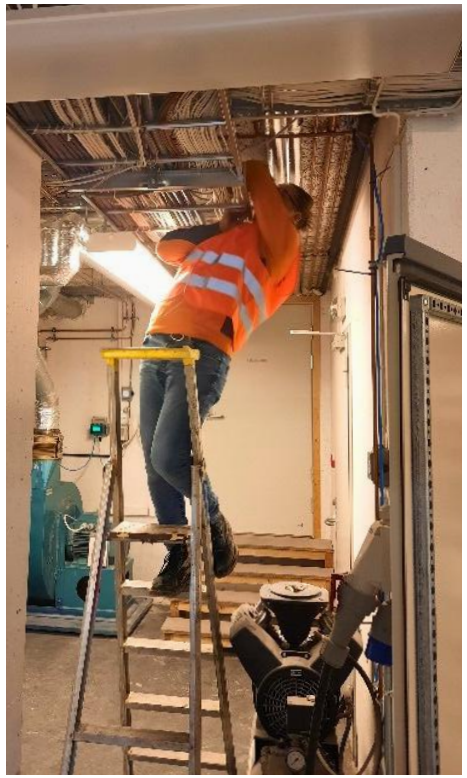

Key Activities

- Cold commissioning activities
- Preparation of the portal suction system

Christmas and New Year Holidays (week 51-52, 2023)

Project – 5th construction section (week 01-03, 2024)





Key Activities

- “Plant Marriage” – crematorout of operation
- Refractory works on the channel-to-crematorconnection
- Conversion and adaptation of the existing switch cabinet
- Recommissioning of crematorcomponents

Project – 5th construction section (week 01-03, 2024)

Key Activities

- Completion of the portal suction system
- Labeling of all relevant components
- Final commissioning

Project Timeline

03

In Operation

Start of Operation

Week 04, 2024

In operation (week 04, 2024)

RAPPORT

Utslippsmålinger ved Bodø Krematorium 2024

SAMMENDRAG

Nemko Norlab har utført utslippsmålinger ved Bodø krematorium. Det er utført prøver av støv, karbonmonoksid (CO) og Kvikksølv (Hg).

Et gjennomsnitt av 3 prøver representerer resultatet av de ulike komponentene. CO er presentert ved 3 ulike midlingstider. Tabell 1 viser en oversikt over måleresultatene, alle resultater er korrigert til 11 % O_2 (tørr gass).

Tabell 1 Oversikt over resultater av de ulike komponentene korrigert til 11 % O_2 (tørr gass).

Komponent	Enheter	Krematorium Målt konsentrasjon	Utslippsgrense Konsentrasjon	Er krav overholdt?
Støv	mg/Nm³	<0,7	150	Ja
CO - 10 min.	mg/Nm³	105	150	Ja
CO - 1 time	mg/Nm³	18,1	100	Ja
CO - 1 kremasjon	mg/Nm³	11,7	-	-
Hg	µg/Nm³	10,7	50*	Ja

** Utslippsgrense for krematorier, kategori 1.*

Utslippsgrense er hentet fra «Forskrift om begrensning av forurensning, Del 3, Kapittel 10. Utslipp fra krematorier, kategori 2».

Questions? Suggestions?

Contact

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