

Bifrost Cave Installation....So Far

Agenda



- 1 Prep-work and IRR
- 2 Arrival
- 3 Install Process
- 4 To come....

2020-09-11 PRESENTATION TITLE/FOOTER

Waste Hand||ng EUROPEAN SPALLATION SOURCE E05 Red sklps Installation and field support Date: 2020.06.26 E04 Truck Entrance Entrance 3,8 x 3,9 m Based on the Integrated Schedule up to October 2020 Rigging tool containes Protected area (site visitors) Forklifts entrance 3,8 x 3,9 m Door E03-L2 ads foiniture a. vge area Bunker steel structure storage area E03 Door E03-L1 Truck Entrano 4,00 x 4,80 m Sample Environment Bunker feedthrough Chopper workshop 420 m2 VACUUM GROUP 200 m2 ° F01 NNX tip-coss working is starged and Vaste Handling E02.1 Green blns NSS Electrical works Truck Entrance 3,8 x 3,9 m NMX exp. cave Hotworks area Skanska area Door E02-L2

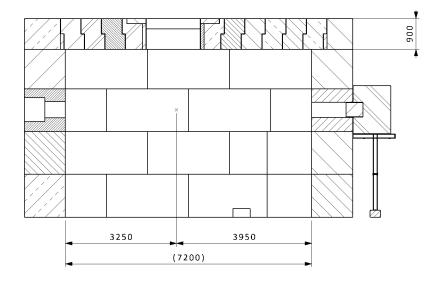


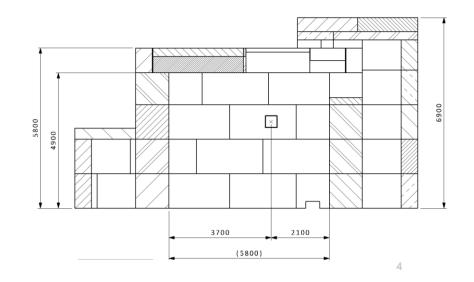
Introduction & Concept of Operations



General Dimensions and Basic Design

- Internal dimensions of;
 - o 7.2m along beam path
 - 5.8m perpendicular to beam path
 - 4.9m internal height
- o In general, wall thickness required is 1.2m
- Formed through uni-layer of blocks
- Roof thickness is 0.9m and primarily one layer Z beams





Prep-work and IRR

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- IRR occurred on the 1st July
- Smooth meeting and good alignment
- Contractor (MICO) encouraged to use scaffolding (not lifts) and RAMS transferred to template
- Chemical data sheets and Covid points added
- RAMS signed off on the morning that work began
- SAM marked out SP, Beam Axis and Internal Corners
- SAM laid fiducial nests for the future network
- We then laid tape outlining position
- Fences brought over to designate working area
- Rigging support procured through BMS
- Deliveries logged at the gate
- Pre-registrations and inductions booked
- Boards added to E04 room







Arrival

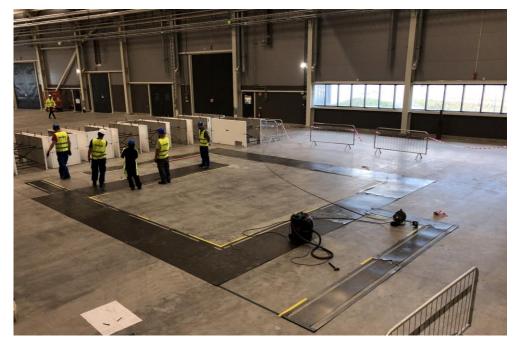
- Inductions in English (or translated) Tuesday 0800
- Czech team arrived on 25th August
- 2.5 hours taken to fix
- Inductions
- Access cards
- PPE
- Car registration
- Lockers/caravan (Not ready in time)
- E01 Key
- Contractors aimed to meet all necessary stakeholders (HEAB, Sydsten etc.)
- Rushed and intense time
- First delivery at 1100 Partially blocked route







- Truck unloaded via E01 crane
- Stencils laid down on floor and floor measured
- Holes and troughs drilled through stencil
- Scans of concrete performed rebar
- Anchors installed with brackets
- Grounding checks amendments made
- Sealing foam added
- Blocks installed from highest point (8mm difference)
- 1st row completed, bolted and sealed off
- Decommissioning features added
- Casting process begins in two phases
- And repeat....





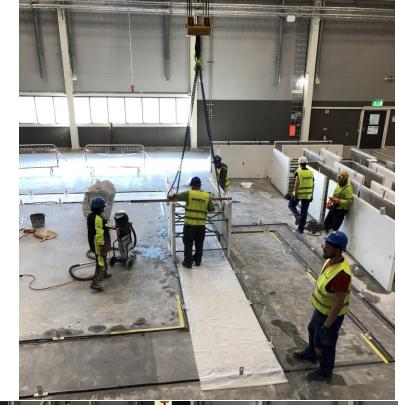
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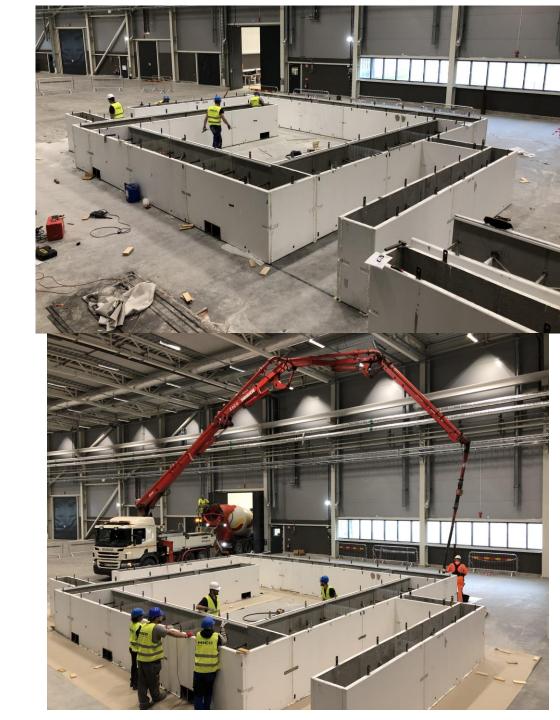
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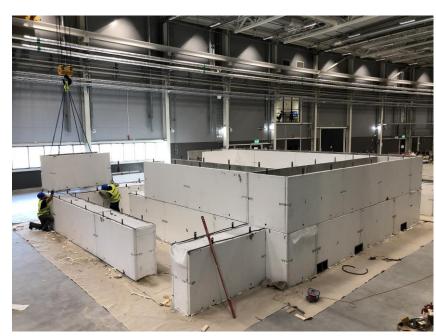
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2020-09-11 PRESENTATION TITLE/FOOTER 12

To Come...

- Now completed 3 of 5 wall layers
- Pre-cast elements include;
- Beam Stop
- Cable covers
- Internal plinths
- Labyrinth roof
- Roof pieces
- Trial fits conducted
- Work commences again 28th September

