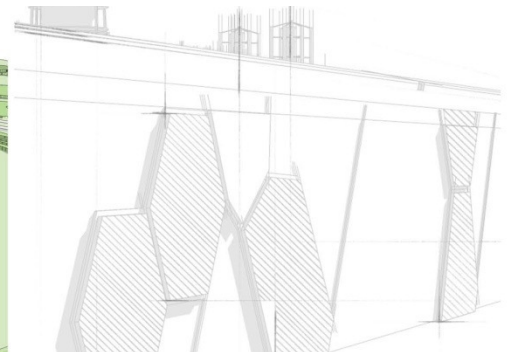
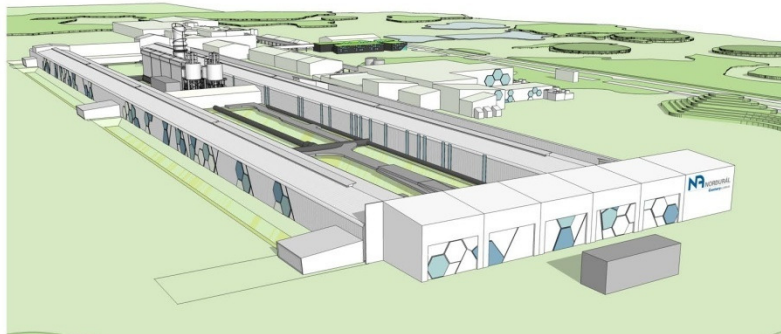


Helguvík Aluminium Smelter



SCOPE OF VERKÍS SERVICES

- Project participation as a leading member of HRV Engineering in an integrated team consisting of the owner and HRV Engineering
- Feasibility study made by the integrated team, including Hatch Associates
- Project management
- Front end engineering and layout planning
- Procurement, including preparing specifications and tender documents, bid review and award
- Contracts management
- Construction management
- Project controls, estimating and planning
- Structural engineering
- Mechanical engineering

DESCRIPTION

The Helguvík aluminium smelter is planned with two potlines, each with 180 reduction pots and associated overhead pot tending machines, alumina conveying system, pot-gas extraction ducts, compressed air pipes and pot control system.

Ancillary facilities include:

- Alumina unloading, handling and storage facilities at the new harbour, including vacuum ship unloader and harbour silos
- Alumina conveying system from the harbour silos to the gas treatment centers
- Gas treatment centers (dry) and associated ducting
- 220 kV gas insulated switchgear substation, plant auxiliary transformers, main distribution system and rectifier transformers with harmonic filters and power factor correction equipment
- Anode rodding and storage facilities, including butt crushing and bath processing
- Casthouse to produce remelt ingots and sows
- Potline service facilities, including pot tending machine maintenance shop, and cathode delining and relining facilities
- Compressor station and associated piping
- Warehouse and workshops
- Administration and personnel facilities

Baked anodes will be imported and spent anodes will be exported, eliminating the need for a green carbon plant and an anode baking furnace.

PROJECT OVERVIEW

Norðurál, a subsidiary of Century Aluminum, plans to construct a 360 ktpy aluminium smelter in Helguvík, Iceland, with a total of 360 reduction pots, using Aluminium Pechiney AP36 technology. The smelter is planned in three stages, with the first 180 ktpy capacity stage being completed early 2011 and the last stage being completed in 2015. The execution plan and completion dates are currently being re-evaluated by the client, Norðurál. Verkís subsidiary HRV Engineering is the main project management and engineering consultant for the project.

CLIENT:

Norðurál Helguvík
Grundartangi, Iceland

LOCATION:

Reykjanesbær/Garður
Iceland

PERIOD:

2006-

SCOPE SUMMARY:

- Number of pots: 360
- Pot current: 360 kA
- Prod. Capacity: 360 ktpy
- 2 potline buildings
- Vacuum ship unloader
- Harbour silos
- Alumina conveying
- Gas treatment centers
- Gas insulated switchgear
- Rectifier transformers and harmonic filters
- Anode rodding shop and butt recycling
- Bath plant
- Casthouse
- PTM maintenance shop
- Compressor station
- Warehouse
- Central workshop
- Vehicle workshop
- Potline office and control room
- Administration building and visitor center
- Fuel and gas storage
- Roads and utilities

