Rusmag Project

Asbest, Ural Region, Russia

Minmet Financing Company was developing a magnesium and purified silica production facility, namely the Rusmag Project, in the city of Asbest, located in the Sverdlovsk region of the Ural.

The project utilizes abundant raw materials which exist in the region in the form of magnesium silicate, is highly pure and available at the required size fraction. The Rusmag project has been successful in developing and engineering extractive technologies for the leaching of magnesium silicate ore. This technology has been demonstrated at a pilot and semi-commercial scale in the Rusmag pilot plant, and thus provides the opportunity to extract not only magnesium metal and compounds from the ore, but also silicates.

NOVOPRO was mandated to verify the previous estimated capital expenditure, which resulted in the knowledge that this plant would cost substantially more capital. It was therefore requested that NOVOPRO embark on a value engineering phase, reducing capital where permitted, to attempt to reach as near as possible the previous estimate leading to a revised capital estimation, and completion of the documentation necessary for project financing discussions to proceed with interested equity and debt parties.

The value engineering exercise encompassed all areas of the plant including:

- Leaching
- Carnallite Crystallization
- Silica Precipitation
- Carnallite Dehydration
- Anhydration & Electrolysis
- Spent Electrolyte Handling
- Chlorine Compression
- Hydrogen Production
- Air & N_2 Production
- Chlorine Offgas & Emergency Treatment

CLIENT

Minmet Financing Company

LOCATION

Asbest, Ural Region, Russia

YEAR(S)

2011

PHASE

- Value Engineering on Feasibility Study

MAIN PRODUCTS

22,300 tpy magnesium ingots
30,000 tpy precipitated silica

BY PRODUCTS

19,200 tpy sodium sulphate
11,800 tpy iron pigment

NOVOPRO
Project Development & Management