

New Chromite Source Shows "Excellent Results"

Oregon Resources Corp. reports it is proceeding with its development of a mineral-sands mining operation in southwestern Oregon, from where it expects to process and produce chromite sand for the U.S. metalcasting market. ORC recently completed and announced test results on its garnet product, and has now completed a report compiled from the test procedures and results on the chromite product.

These tests produced "overall excellent results and confirmed the unique characteristics of the ORC chromite sand compared to a South African chromite product," according to a statement by Resource Finance & Investment Ltd., a Bermuda-based holding company that owns ORC. Reportedly, underground mines in South Africa are the only current source of chromite for domestic metalcasters. The ORC site is a surface-mining enterprise.

Chromite is used to produce high-quality alloy steel castings because of its chilling effect and its resistance to metal penetration. Backers of the new project say their product has advantages over the South African product that include "improved heat-transfer characteristics" that "can modify and improve the surface characteristics of specialty steel or iron alloys." They contend their chromite is "much finer, and is naturally rounded, giving the material excellent strength, when used both on its own as well as in a mixture with materials such as zircon." Consequently, it is ideally suited as a foundry sand for heavy castings. In addition, owing to its fineness, castings are also much smoother, as the molten metal does not infiltrate into the sand.

The Oregon deposit is called "extensive," consisting of an unconsolidated mixture of chromite, zircon, garnet, ilmenite, magnetite and other commercially valuable minerals. Chromite and garnet make up close to 70% of the valuable minerals in the ore.

The site has been mined for various minerals for

decades, and was even the source of chromite from higher-grade deposits during the 1940s. In the late '40s the U.S. Bureau of Mines estimated the location offered 8.9 million tons of heavy-mineral sands with an average chromite content of 12%. In 1991, after drilling and sampling, ORC proceeded to develop the site as a source of mineral sands. The presence of minerals other than chromite at the site means that ORC will have multiple markets for its products.

Daryl Hoyt, president of Foundry Sand Technology, supervised the comparative study of ORC chromite sand for core and casting qualities versus two currently available chromite sands. Hoyt also authored a comprehensive report on the comparison.

"These comparisons were performed at the University of Northern Iowa, and other reputable laboratories, and

include complete chemical analyses of the base mineral sands, their particle size distribution, AFS GFN, pH, ADV (acid demand value) base permeability, surface area, coefficient of angularity, bulk density, pyrometric cone equivalent values, as well as photomicrographs of

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the individual size fractions for all of the sands evaluated. Comparisons of core tensile strengths, scratch hardness determinations, core permeability, core density, and many more core sand analyses were performed," stated Resource Finance & Investment, in a release.

ORC expects to have a 10-ton/hour pilot plant in operation this spring to produce over 2.5-ton/hour of HMC (heavy minerals concentrate.) This would be joined in 2007 by a full mineral sand operation to process 400,000 tons/year of ore, including the various heavy mineral constituents.

A presentation on the research will be made at the AFS Casting Congress in April, and an abridged version of the report has been posted online by Resource Finance & Investment. Visit www.resource-finance.com.