

integrated solutions

in mineral beneficiation plants

Thermo
SCIENTIFIC

integrated sampling and analysis solutions in mineral beneficiation plants



A Trusted Partner

Our innovation and commitment to the minerals industry make us your integrated solutions partner. Our technologies, engineering experience and process knowledge provide you with “end-to-end” solutions that improve quality and efficiency as well as save you time and money.

The central part of our offering is our sampling solutions with integrated analysis. We then tailor these solutions to your specific needs. We also provide engineering design support for your project development.

We offer expert knowledge, innovative Thermo Scientific instruments and comprehensive service from the feasibility stage all the way through to operational beneficiation plants.

A comprehensive range of Thermo Scientific elemental and particle size analyzers for mineral beneficiation and flotation plants, coupled with leading sampling systems, provides an integrated solution that maximizes availability and accuracy with minimal head loss.

Our Capabilities in Beneficiation Include:

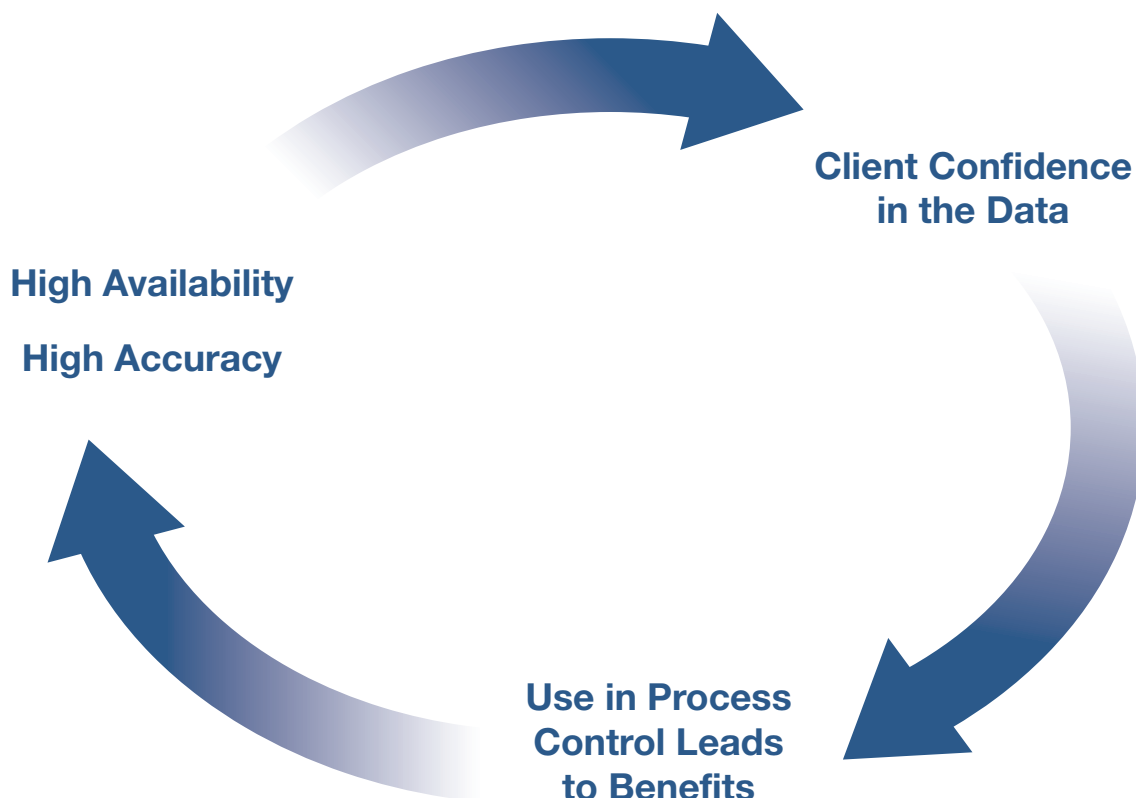
- Elemental Analysis—X-ray Fluorescence (XRF) and Prompt Gamma Neutron Activation Analysis (PGNAA)
- Particle Size and Moisture Analysis
- Metallurgical Slurry Sampling integrated with specialized process solutions in collection, transfer, screening and distribution
- Other Sampling Solutions (Gravity, Pressure Pipe, and Launder)
- Density and Level Measurement

Our analysis and sampling systems can be configured for all plant sizes; to meet technical constraints and to provide the lowest total cost of ownership

Our instruments supply reliable and accurate process data, providing the critical input to the process control system, which leads to improved recovery, lower costs and environmental compliance.

This allows operators to optimize their process, while serving as a foundation for significant savings and improved profitability.

Thermo Scientific Critical Process Information



providing end-to-end solutions in mineral beneficiation plants

for Engineering, Project Management
and Consultancy Companies

The Power to help you Profit

During the project development phase, we offer a range of solution options to meet a plant's requirements for integrated analysis and sampling.

Our unique approach to slurry sampling means lower head loss across the sampling stations that leads to lower construction costs.

Our flange to flange design enables you to save on design hours as we take design responsibility from inlet to outlet, providing the highest level of process functionality at the most competitive cost.

Integrated Flexible Solutions
Increased Functionality

Savings on Design Hours
Lower Plant Construction Costs



providing end-to-end solutions in mineral beneficiation plants

for Mining Companies (End Users)

Lowering Cost of Ownership

We provide a solution package that lowers costs and increases profits.

Our customized designs flow from the earliest stage of feasibility into the operating phase, enabling critical and timely process analysis into your process control system; whilst offering the lowest total cost of ownership.

High availability and high accuracy from the analysis system allows you to increase recovery, improve final product quality and achieve process gains.

Integrated Plant Efficiency

- Recovery
- Minimized costs
- Final product quality

Increased Profit

Lower Total Cost of Ownership Maintenance/Utility Costs



integrated custom solutions

Our integrated, customized and engineered solutions provide advantages in both capital expenditure and system solution performance. Some examples are:

- Escondida Los Colorados (Phase 3.5), Escondida Laguna Seca (Phase 4)
- Cerro Verde
- Batu Hijau
- Telfer
- PT Freeport Indonesia
- Ok-Tedi
- Lumwana
- Minto
- Oyu Tolgoi
- Peñasquito

Varied solutions provided to these projects include:

- High accuracy
- High availability
- Sampling, elemental and particle size analysis without sample or return pumps
- On-line plant recovery calculation
- Dedicated analysis on critical streams
- Minimum assay update time (for automatic control loops)
- Unique ability to incorporate process functionality (collection, transfer, screening and distribution)
- Ability to sample, analyse and return in limited space – installation layout
- Metallurgical Accounting quality sampling



Global Sales and Service Offices

Our global sales and service network offers regional fabrication and project management that lowers costs for our clients.

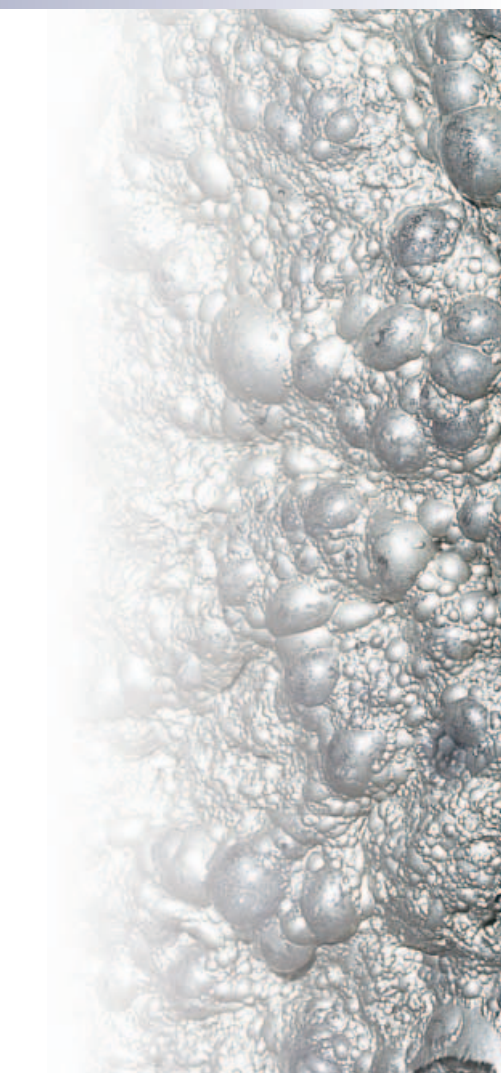
Service and Support

We offer a complete array of services designed to help you gain a competitive advantage. These range from around-the-clock support with guaranteed response times, customized training and a commitment to new performance and technology. Our certified field personnel are available when you need them to ensure your instruments provide the most accurate and available data, helping you optimize your process.

Service Agreement

Invest in peace of mind with a Thermo Scientific service agreement tailored to your individual requirements. Benefits include:

- Reduce Downtime
- Flexible Coverage
- Priority Response
- Parts / Spares
- Established / Forecasted Costs
- Ongoing training



Thermo Fisher Scientific — a global presence



We think globally, and act locally.

Integrated Solutions in Mineral Beneficiation Plants



© 2011 Thermo Fisher Scientific Inc. All rights reserved. Results may vary under different operating conditions. Specifications, terms and pricing are subject to change. Not all products are available in all countries. Please consult your local sales representative for details.

Australia

+61 (0) 8 8208 8200
+61 (0) 8 8234 3772 fax

Brazil

+55 11 2367 2192
+55 11 2367 1112 fax

Canada

+1 (514) 697-2448
+1 (514) 697-2357 fax

Chile

+56 (0) 2 378 5080
+56 (0) 2 370 1082 fax

China

+86 (0) 21 6865 4588
+86 (0) 21 6445 7830 fax

Germany

+49 (0) 208-824930
+49 (0) 208-852310 fax

India

+91 (20) 6626 7000
+91 (20) 6626 7001 fax

Italy

+39 02-959514-1
+39 02-953200-15 fax

Mexico

+52 (55) 1253 9410
+52 (55) 1253 9424 fax

South Africa

+27 (0) 11-822-4120
+27 (0) 11-822-3982 fax

Spain

+34 (0) 91-484-5965
+34 (0) 91-484-3497 fax

United Kingdom

+44 (0) 1788-820300
+44 (0) 1788-820301 fax

United States

+1 (800) 488-4399
+1 (858) 452-9250 fax