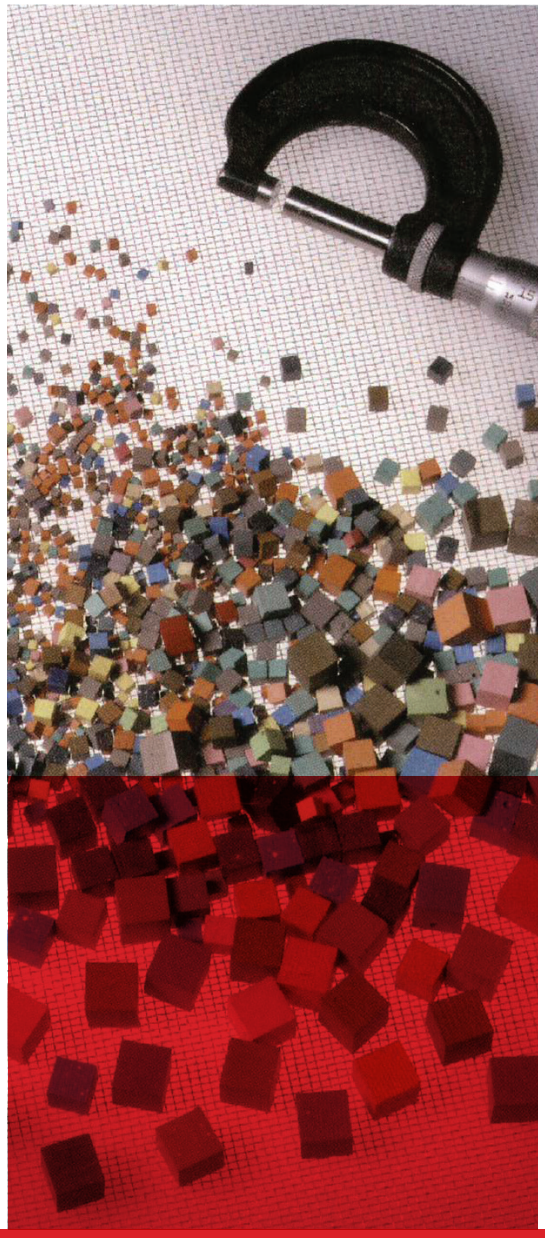
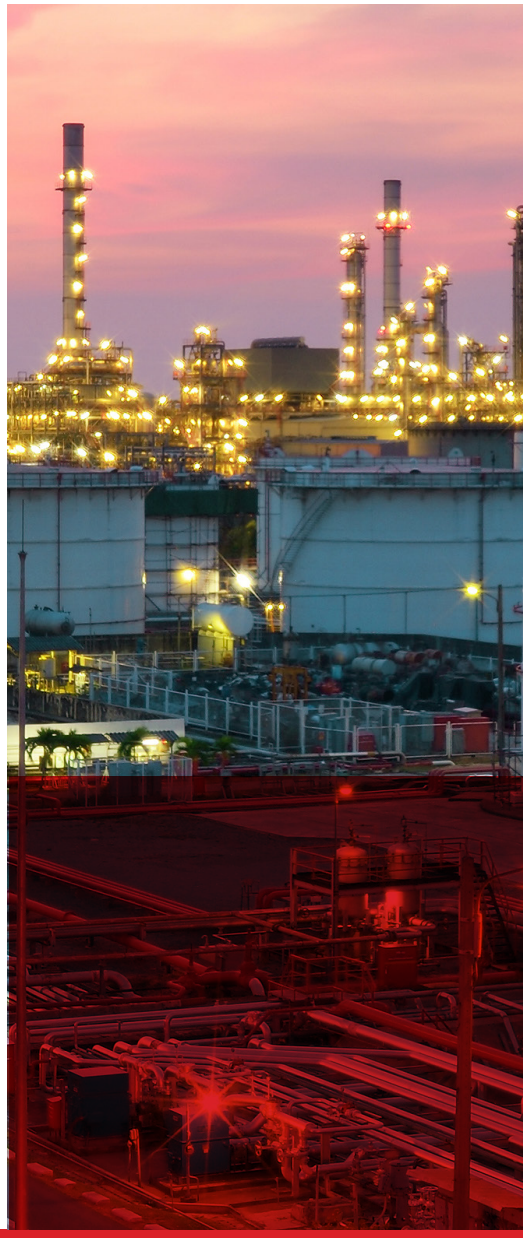
labservices

Density Tracers

OPTIMISING PRODUCT RECOVERIES IN DMS CIRCUITS





The immediate focus of DG Lab Services is the manufacture
and supply of density tracers or simulants to the global mining and related sectors.

DG Lab Services Density Tracers

DG Lab Services Density Tracers are a standard and inexpensive aid to determine whether DMS (dense-media separation) cyclones and other beneficiation plants that exploit density differentials in the processed materials are functioning optimally.

The range of density tracers offered by DG Lab Services are magnetically susceptible in nature. Recovery may be conducted as per the conventional 'visual' route, facilitated by the colour coding of the tracers, or via the use of magnets. Effective recovery is essential when processing precious stones such as diamonds, and other commodities, especially coal.

DG Lab Services Density Tracers are supplied in the form of cubes

- Sizes range from 2.0 mm to 20 mm (within ±0.1 mm)
  0.8 mm and 1.0 mm are available on request
- Relative densities increase in 0.1 intervals from 1.20 to 4.20
  (within ±0.03), with a few available in 0.05 intervals

Inexpensive Industry Aid

- Tracers, which simulate the dimensions and specific gravity of the valuable product, are passed through the process circuit
- The simulated product recovery (the amount of tracer recovered versus the amount introduced into the circuit) is compared with the anticipated recovery
- If necessary, timeous corrective adjustments may be made to the process to restore the expected optimal recovery
- **DG Lab Services Density Tracers are:**
  - Colour coded, according to density and easily recovered from host ore
  - Brightly coloured for visual recovery or magnetically recovered
  - Re-useable, as their robust formulation ensures many passes through a plant
- Strict quality control ensures the tracer particles are an exact size, shape and density
- Stocks of popular ranges are held and special orders processed speedily
- Density tracers are applied worldwide in large and small production plants, laboratories and academic research institutes

Magnetically Susceptible Density Tracer Range

Tabulation indicating
Colour vs Relative Density

4.20	2.75
4.10	2.70
4.00	2.65
3.90	2.60
3.80	2.55
3.70	2.50
3.60	2.45
3.53	2.40
3.45	2.30
3.40	2.20
3.35	2.15
3.30	2.10
3.25	2.00
3.20	1.90
3.15	1.80
3.10	1.70
3.05	1.60
3.00	1.50
2.95	1.40
2.90	1.30
2.85	1.20
2.80	

These colours are a printed approximation of the actual density tracer colours.

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