Lookup chart to find maximum possible water recovery through dewatering.

Cake moisture (%w/w)
- 10%
- 15%
- 20%
- 25%
- 30%
- 35%

y-axis: Percentage water recovered from slurry to filtrate (%)

x-axis: Percentage solids in feed (%w/w)
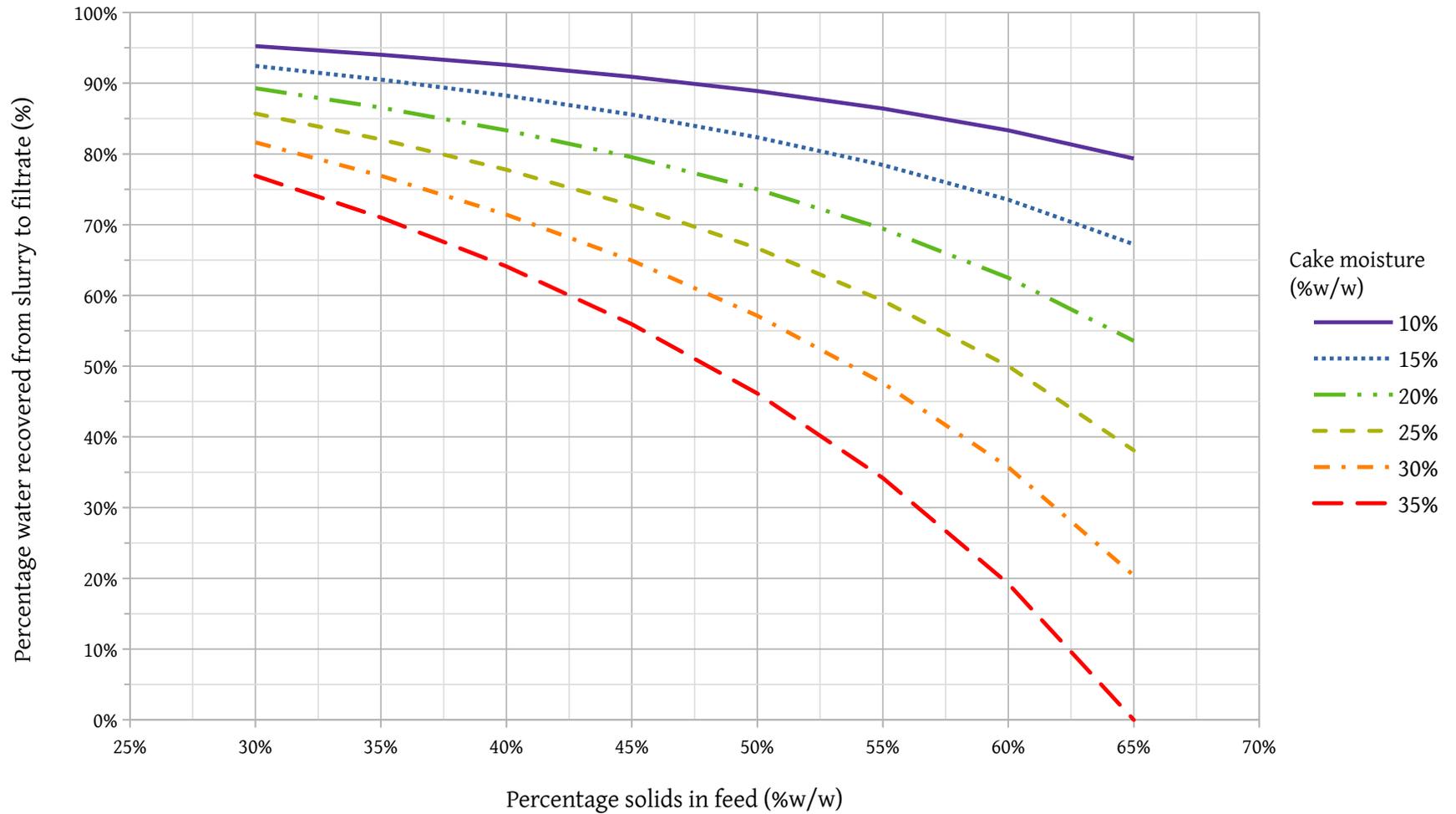
Operating Manual

1. Find **Percentage solids in feed** on horizontal x-axis. This may be ~35%w/w for unthickened tailings or >60% w/w

2. Select Curve that best matches **Cake moisture**

3. Read **Percentage water recovered** from z-axis line.

s	Mass Fraction of solids in slurry	%w/w
M_s	Mass of solids in sample of slurry or filter cake	kg
M_l	Mass of liquid in sample of slurry or filter cake	kg
slurry	...in slurry	
cake	...in cake	
M	Moisture content of a filter cake (mass ratio)	%w/w
R	Recovery of liquid in slurry to filtrate	%

Cake moisture (%w/w)
- 10%
- 15%
- 20%
- 25%
- 30%
- 35%

$$s = \frac{M_{s,slurry}}{M_{s,slurry} + M_{l,slurry}}$$

$$M = \frac{M_{l,cake}}{M_{s,cake} + M_{l,cake}}$$
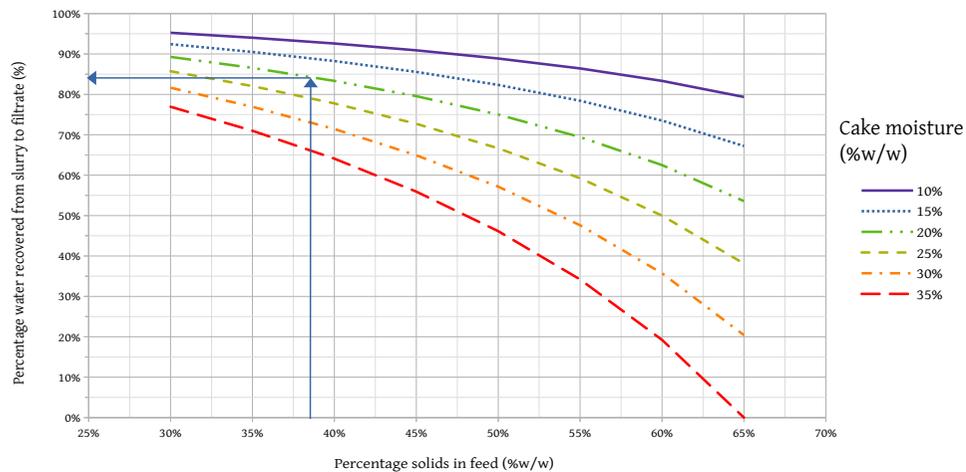
4. For example, above. Starting with 39%w/w slurry and, via thickening and filtration, reaching 20% cake moisture, gives (maximum) water recovery of 84%.

$$R = 100 \times \left(1 - \frac{s \cdot M}{(1-s)(1-M)}\right)$$

Note: This tool is intended to help perform quick assessments of the maximum amount of water that could be recovered from a tailings stream through dewatering. It does not take into account losses to leakage or any water that may be consumed in running the filtration plant.