

Air Classifier

What is it used for?

- ❑ It allows separating powder materials depending of particle size
 - ❑ A controlled-speed flow of air is passed through the powder extracting the fines from the flow
 - ❑ Feed and air flow speed can be adjusted to modify the separation limit between the fine and coarse (rejected) fractions
 - ❑ Calibration curves can be defined for each material relating the classifier speed with the separation limit

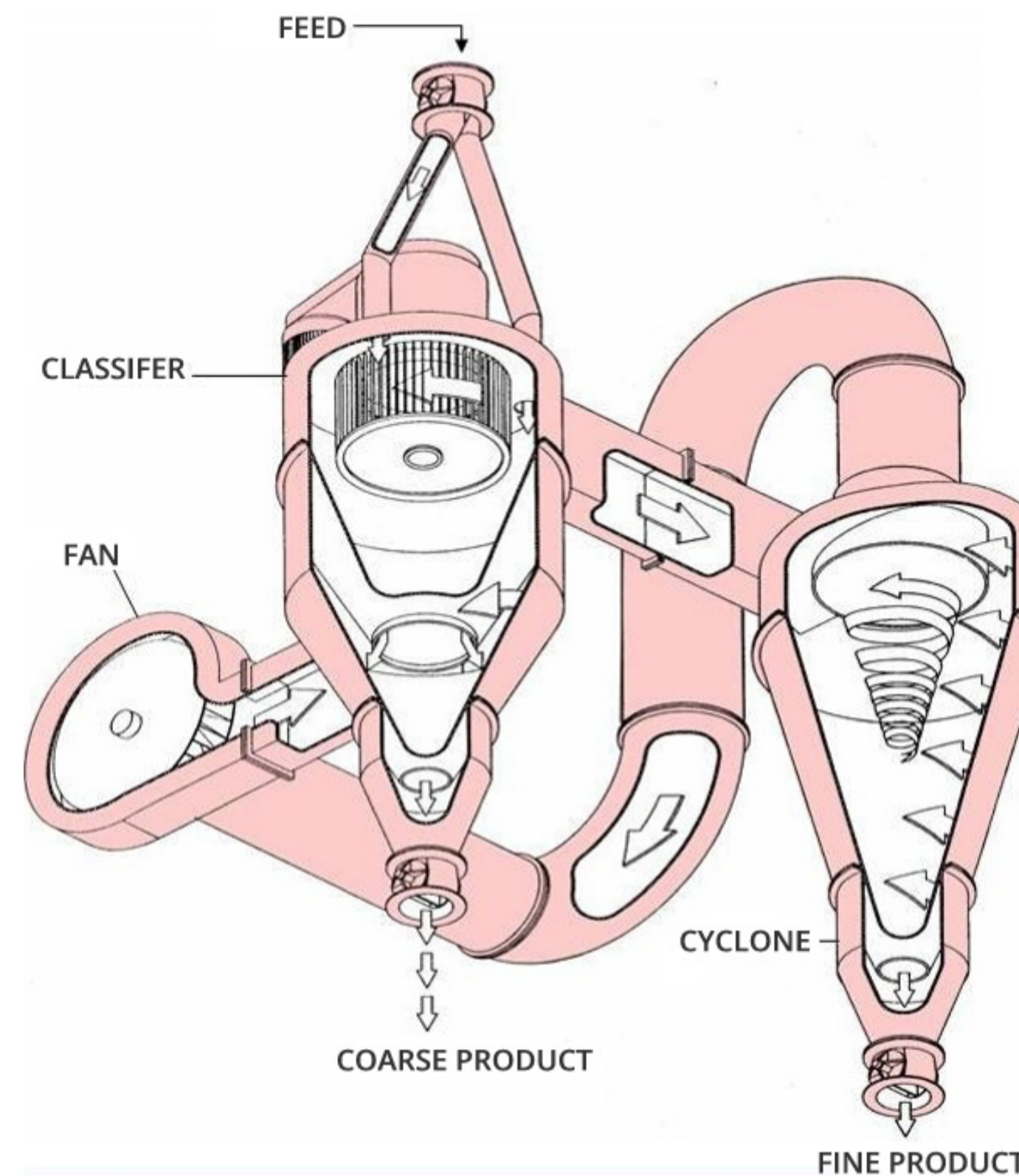


Diagram of operation of air classifier

Applications

- ❑ Control of grinding process by extraction of the coarse (rejected) fraction
- ❑ Separation of different minerals with different sizes in an intermixed powder



Lab-scale air classifier at LMC

One example of results

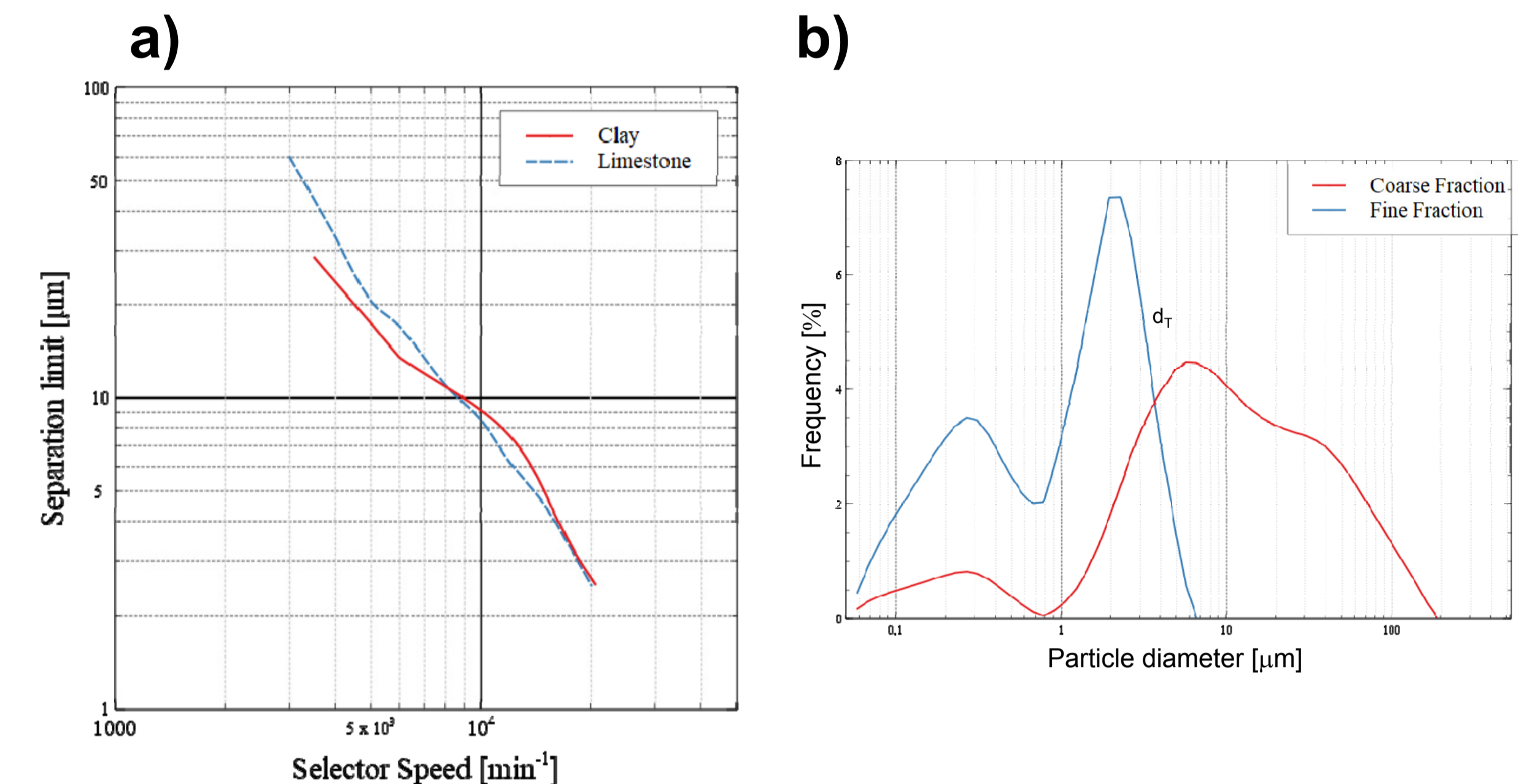


Fig. 1 a) Calibration curve of calcined clay and limestone (separation limit as a function of the classifier speed) and b) example of separation limit between fine and rejected fraction

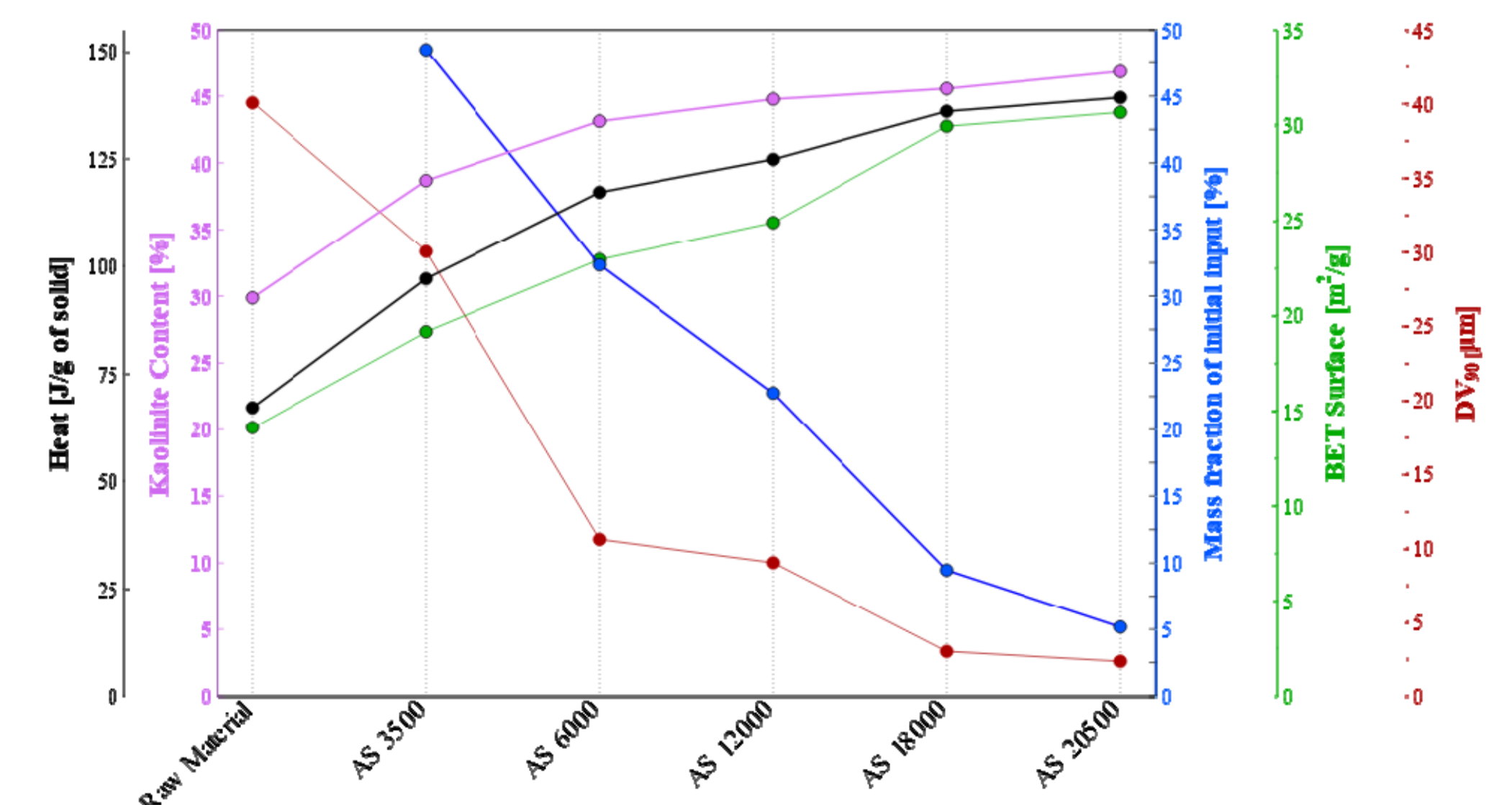


Fig. 2 Calcined clay physical and chemical properties as a function of classifier speed. Results from the fine fraction.