

Sodium Ferrite for CO₂ Solid Sorbent



OVERVIEW

TODA KOGYO has developed the sodium ferrite (NaFeO₂) as CO₂ sorbents, capable of capturing CO₂ in the combustion exhaust gas, and recovering CO₂ by heating about 100°C. The sodium ferrite is solid state CO₂ recycling material, contribute to CARBON NEUTRAL.

FEATURES

CO₂ is captured at 0- 50°C, recovered upon heating about 100°C, i.e. material for CO₂ Thermal Swing Absorption (TSA).

CO₂ is captured selectively by chemical absorption, then recovered CO₂ is pure.

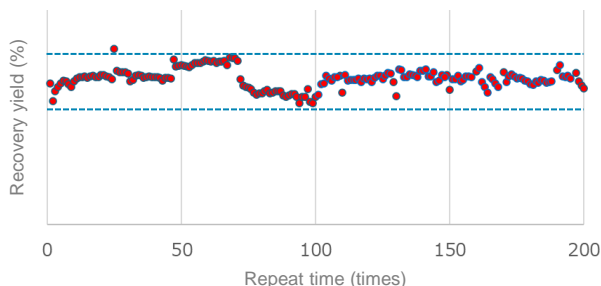
CHARACTERISTICS

【Characteristics】

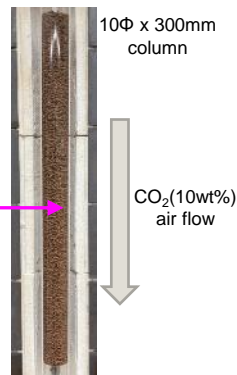
	NaFeO ₂	CO ₂ sorbent (ex.)
Shape	Powder	Pellet
NaFeO ₂ cont.	100wt%	30~70wt%
CO ₂ sorption temp.	0~50°C	0~50°C
CO ₂ desorption temp.	90~120°C	90~120°C
CO ₂ sorption amount	15wt%	2~10wt%

【Durability test of adsorption/desorption performance】

Continuous CO₂ absorption/desorption cycle test was conducted using NaFeO₂ pellet. No deterioration in the performance was observed even after 200 cycles.



CO₂ sorbent (NaFeO₂ pellet)



APPLICATIONS

- CO₂ separation and recovery in the combustion exhaust gas
- Control of CO₂ concentration in the room
- Utilizations of recovered CO₂ for energies, chemicals etc.

