

"3R" zero emission carbon refinery technology application map 2019

for flexible reductive thermal processing in any range up to <850°C material core temperature.

High temperature reductive thermal processing

450°C - 850°C.

Pyrolysis - Carbonization

Activated Carbon
ADSORBENTS
Virgin & Regeneration

Phosphorus recovery
BIO-PHOSPHATE
ABC Animal Bone Char

High C content
BIOCHAR
Agri & Metallurgical



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Torrefaction
BIO-ENERGY
Torrified Biomass

Brown coal processing
ANTHRACITE
Clean Coal

Pyrolysis oil refinery
RENEWABLE ENERGY
Green electric power

Low temperature reductive thermal processing

150°C - 450°C.

Torrefaction - Thermal Desorption

NOTICE:

Other application areas to
be considered case by case.